Diet Projects: A Study of Cardiac Rehabilitation Participants Engaged in Changing Dietary Practices

by

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Abstract

Studies have indicated that weight gain, and being overweight, are risk factors for the development of cardiovascular disease. Weight management is particularly intense in cardiac rehabilitation (CR) settings where the majority of participants are medically defined as overweight or obese and often have co-morbid risk factors. CR programs in Canada focus primarily on cardiovascular fitness, but have extended their program interventions to address cardiac risk factor modification, including diet management and weight loss. Health-related research has indicated that on average, CR participants show weight neutrality (no change from baseline weight) upon CR program completion. Prior to this study there was no substantive qualitative data exploring why this occurs. This doctoral study was a concurrent analysis of a larger funded qualitative study that explored the everyday practices of people with heart disease and type 2 diabetes who were participating in one of three large urban CR programs. A total of 33 participants were enrolled in the study (17 men and 16 women). Data was collected through the use of in-depth interviews, an activity journal, and field notes. Data analysis used sociologist Chris Shillings’ work related to body projects and corporeal
realism in order to explore themes related to body size, diet management, and weight loss. Study results pointed to the importance of recognizing the role of social practice in health behaviour change, and the role of social discourses in determining how healthy bodies should look and act. Participants described how their social worlds shaped their eating practices, and relayed accounts of attempting to integrate their CR prescription into their daily routines. These findings suggest that a more nuanced approach to CR programming that takes into account the medical and social influences at work on CR participants while they attempt to modify health behaviours, may further inform the development of future CR weight loss and diet programming.
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Chapter 1
Introduction

1.1 Introduction

In this thesis, I investigate how people with cardiovascular disease and type 2 diabetes mellitus (T2D) approach changing their dietary practices in order to improve their cardiac health. To do so, I explore the experiences of adult men and women with heart disease and T2D who are participating in one of three large urban cardiac rehabilitation (CR) programs in Toronto, Canada. The Canadian Association of Cardiac Rehabilitation (CACR) defines CR as the “enhancement and maintenance of cardiovascular health through individualized programs designed to optimize physical, psychological, social, vocational and emotional status” (2009, ¶ 1). CR programs focus on the secondary and tertiary management of persons who have been diagnosed with heart disease. Although participants within these programs may enter at various trajectories within the illness process, they are most commonly referred to CR after coronary intervention (such as angioplasty), myocardial infarction (MI), or cardiac surgery. CR programs aim to improve cardiovascular fitness, educate participants regarding cardiac risk factor management, and give participants concrete strategies to improve their cardiovascular health.

1.2 The Problem

Weight gain, or being overweight, has been identified within health-related literature as a risk factor for the development of heart disease. Interest in weight management is particularly intense in CR programs where the majority of participants are medically defined as “overweight or obese,” according to a body mass index (BMI) score of 25 and 30 respectively; and most have suffered a significant symptomatic cardiac event: angina, MI, heart failure, or cardiac surgery (Foster et al., 2007). Despite on-site weight loss interventions that focus on behavioural and lifestyle changes, patients in CR, on average, show weight neutrality (no change from baseline weight) at the end of the program (Bader et al., 2010; Foster et al., 2007). This is thought to be problematic because this patient population is at a potential risk of re-developing cardiac disease from “obesogenic” or weight-related co-morbidities, such as T2D, increased cholesterol, and hypertension (Savage
Ades, 2006). CR programs focus primarily on cardiovascular fitness, rather than weight loss, but studies have shown that exercise alone (without diet management) has been relatively ineffective in producing substantial weight loss in persons with cardiovascular disease (Savage & Ades, 2006). Weight loss interventions that focus on diet management and exercise are particularly important for CR participants with T2D because these interventions may further regulate glucose levels, decrease abdominal adipose tissue accumulation, and improve atherogenic dyslipidemia (Lavie & Milani, 2005).

Although the majority of Canadian CR programs have extended their program planning to address issues related to weight loss, diet management, diabetes education, and smoking cessation, along with physical exercise counselling, only modest reductions have been seen in BMI upon program completion (Foster et al., 2007; Lavie & Milani, 1996; Cheuk-Man, Sheung-Wai, & Chu-Pak., 2003; Bellg, 2003). Previous research has shown that there is decreased adherence to CR programs at the 3- and 6-month marks (Thompson, 1995; Bellg, 2003; Paquet, Bolduc, Xhignesse, & Vanasse, 2005). Non-adherence to CR programs can be attributed to participants accepting their condition and knowing their physical limitations, as opposed to making further efforts to modify their health habits through the process of CR (Paquet et al., 2005). The cardiac event that precipitates CR is often seen as an acute event, rather than a symptom of a chronic condition (p. 573).

1.3 Body Projects

Many CR weight-loss interventions resemble and align themselves with what sociologist Chris Shilling (2003) refers to as body projects: processes in which the body becomes an enterprise to be worked on, altered, and brought in line with a developing conception of self (p. 187). More specifically, participants’ concept of self becomes equated with health. Therefore, CR participants work on their bodies not just to improve their health and decrease their risk for coronary artery disease (CAD), but to also reclaim their social position as a healthy individual. Often, the focus is placed on altering the body in ways that are observable to others. Failure to lose weight is highly visible, such that one potentially becomes a “failed body project,” which Elliot (2007) argues is a term that can equally be positioned with the narrative of the “failed citizen” (p. 134). Though CR participants may
aspire or attempt to modify their weight and health practices, both their successes and failures are highly visible to other CR participants, CR staff, and other people within their lives. One’s ability to modify health practices is contingent not only on the ability to follow a weight loss and exercise program, but to also integrate these new practices within one’s daily social life. As a result there has been a call for CR programs to adapt a holistic focus that includes attention to the emotional and social dimensions of cardiovascular risk modification (Leighton, 1998; Donker, 2000; Paquet et al., 2005).

In this thesis I challenge traditional approaches to weight and diet management within biomedical frameworks of care to take a more nuanced approach, which takes social interaction and the complexity of our biology into account. In order to do this I integrate sociologist Chris Shilling’s theoretical conceptualization of corporeal realism to uncover the multi-dimensional nature of the human body within both its biological and social contexts. I then extend this theoretical position to further explore the complex and stratified nature of the body-society relationship, within the context of health behaviour change, and call for the integration of inter-disciplinary perspectives within CR programming.

1.4 Organization of Thesis

This thesis begins in chapter 2 with an examination of the literature on body size. Though dieting, food selection, weight loss, and weight gain are all relevant to the issue of weight neutrality in CR settings, wider conversations pertaining to body size continue to be the impetus for biomedical approaches to the topic. Therefore, this conversation begins by framing obesity within its clinical parameters and linking weight gain as a risk factor for T2D and CAD. However, biomedical research in particular creates representations of weight gain and obesity, which have permeated social norms regarding what a healthy person should look and act like. Therefore, the second part of the literature review focuses on how prevalent biomedical perspectives pertaining to the body serve to position individuals socially.

I contrast this scientific discourse with literature stemming primarily from the humanities and sociology in order to provide differing perspectives related to the phenomenon of weight gain. These alternative approaches seek to articulate how biomedical narratives related to obesity and its potential risks to health influence individuals’ perceptions related to their
bodies, as well as enact aspects of stigmatization focused on weight difference. A third and relatively small area of the literature pertaining to body size focuses on the embodiment of weight gain. This is a significant area of future study because it helps us to understand how individuals come to recognize their weight gain as problematic to their health as well as wider theoretical issues related to the embodiment of body size.

While this wide body of research calls attention to the biomedical, social, and embodied aspects of body size, what is notably lacking in the study of weight gain is a perspective that is able to integrate and interpret all three of these areas simultaneously. More specifically, perhaps the study of body size should be approached through an interdisciplinary lens able to address the complexity of the topic as well as the body-society relationship itself.

In seeking to describe the multi-dimensional nature of the human body, and to articulate a study for the body-society relationship within the context of health behaviour change, chapter 3 turns to scholarship on the body within the social sciences. In my review of the literature related to body size, I demonstrate how the study of weight gain has remained isolated within disciplinary perspectives. I contend that the challenge to the study of weight gain lies in the ability to theoretically conceptualize the multi-dimensional nature of the human body (within its physical, social, and embodied characteristics).

In order to develop this framework of study, I begin with an examination of material-corporeal (or embodied) sociology. Within this framework the term material refers to the substance of the human body itself, while corporeal describes the varying structures/elements that constitute the material body (for example, organs, genes, etc.), or influence it (for example, social roles or social structure), as well as individuals’ experiences related to having a body. Throughout this study I turn to Chris Shilling’s social theory of corporeal realism, focusing on his articulation of the body as a source of society, a location for the effects of society, and as a means of positioning individuals within their social worlds. In order to further understand the role of the body-society relationship in health behaviour change, I argue that realist perspectives, particularly those rooted in material-corporeal sociology, can provide insight about how individuals in CR operate within their social worlds to improve their health.
Chapter 4 focuses on the methodology and methods used in this study, beginning with a discussion of the ontological and epistemological tenets of the study design. Since this study was a separate analysis of the data set from the CIHR-funded study titled: Gender and Co-morbidity: Everyday Tactics for Balancing Diabetes Self Care and Cardiac Rehabilitation, I will also demonstrate the purposeful methodological decisions made to ensure methodological coherence between both arms of the study. The section on methods includes a description of the research setting, research questions, sample, data collection, and analysis. Finally, the ethics review process is discussed and key methodological issues related to reflexivity and rigor are raised.

Chapter 5 provides the first of two findings chapters of this study. In this chapter, I theoretically engage with the sociality of eating within the context of health behaviour change, and most importantly, I pose the question of how people respond when they are faced with changing their eating practices within various eating communities. I explore participants’ personal and communal relationships with food, and argue that disrupting how we eat also disrupts our social interactions, restructures how our social activities unfold, changes previous food identities and roles, and in some cases actually breaks social relationships apart. Participants changing their diets in CR encounter many of these relational challenges and while they may demonstrate the knowledge required to make these changes, they remain vulnerable in their efforts because of the role the social world plays in diet adherence.

In the final findings chapter, chapter 6, I extend the previous study of the role of sociality in diet change from chapter 5 to include how participants not only physically, but also socially, attempted to restore their health through diet change. To do so, I explore Shilling’s concept of the body project by identifying the individual diet projects participants engaged in to make their health changes, thus showing the complex relationship between self and health. Using two prominent areas of focus, diet change and weight loss, I aim to show how participants related to their chronic conditions, what they chose to work on within their diet projects, and how they determined the success of their efforts. What is increasingly clear within this chapter is how social perception is intrinsically bound to health outcomes. By this, I mean
that participants desired to demonstrate both a physical and a social reclamation of their health through diet change.

In chapter 7, the final chapter, I consider the broader implications of my research for the study of the body-society relationship and health behaviour change within CR settings. I begin by addressing each of my research questions posed within this study. Then I return to the literature in order to contextualize my findings and offer insight into future areas for study. The strengths and limitations are discussed as well as the implications of this study for future research, policy, practice and education within the field of CR. I close by considering the wider theoretical implications of this work for the study of material-corporeal sociology.

The central argument of this thesis is that the body-society relationship has a significant role in the adoption of health behaviours. Concepts such as adherence are not just contingent upon people’s abilities to understand the information provided to them in CR, but also in their abilities to integrate this information into their social worlds and also recognize how their illness conditions impact their body and their health.
Chapter 2  
Literature Review

2.1 Introduction

The discussion of how to approach the problem of weight neutrality in CR programming begins with a review of the literature related to body size. Although dieting, food selection, weight loss, and weight gain are all relevant to the issue of weight-neutrality, wider conversations pertaining to body size continue to be the impetus for biomedical approaches to the topic. Popular culture frequently utilizes the term “obesity epidemic” to describe what is perceived as a rapid increase in rates of obesity within modern culture. Current approaches to body size within the literature uncover the reproduction of this narrative through both health and social discourses. This literature review will approach these discourses related to weight gain and body size within three major sections. The first section examines health-related literature positioning weight gain/obesity as a clinical construct. The studied relationship between weight gain, T2D, and CAD is explored in detail. Current approaches to weight management within CR settings are highlighted. The second section turns to literature within the humanities and focuses on the bodily and social implications of labelling a person as obese. Weight gain and obesity elicit particular social scripts pertaining to the body, and often result in stigmatization of people based on their weight difference. Many of these perceptions are fuelled by health narratives pertaining to weight gain, which, in turn, dictate social conversations of what a healthy body should look and act like. These conversations result in people being socially positioned based on the appearance of their bodies. In the final section I examine a relatively small, but equally important, aspect of the literature that highlights individuals’ experiences of weight gain and the embodiment of body size. What is revealed throughout this literature review is that the study of weight gain remains isolated within disciplinary perspectives primarily situated within the sciences and humanities. This may be problematic for the continued study of body size because this current approach within the literature negates the inherent complexity of this topic. I begin this literature review by situating the language to address weight gain and body size that I will use throughout this study.
2.2 Language Surrounding Weight Gain

Historically those who gain weight to the point of “fatness” have been labeled as obese. The etymological source of the word “obesity” stems from the Latin term obesitas meaning “fatness, corpulence” and from obesus “that has eaten itself fat” (Online Etymology Dictionary). Despite social fluctuations in acceptance or stigmatization of obese bodies, the term “obese” has continuously garnered negative connotations. This can be traced back to the 1st century CE when natural historian Pliny the Elder described animals with a (very) fat abdomen (termed obesissimus) as “less clever.” In high modernity, the term “obesity” is identified in relation to both the biological body (as an excess of corpulence due to varying lifestyle and organic factors that potentially puts one’s health at risk), and the social body (as a social epidemic perceived as resulting from late modern culture). The World Health Organization identifies obesity as a chronic disease that results from “undesirable positive energy and weight gain” (1998, p. 6). On the other hand, various sociologists (Gard & Wright, 2005; Campos, 2004) and health scientists (Spark, 2001; Ikeda, 2000) argue against the classification of obesity as disease, because many individuals are able to enjoy a full and healthy life well within the identified parameters of a clinical definition of obesity. Obesity, then, is both a physical state and a social phenomenon, carrying with it many moralized social norms, and those individuals classified as obese are often subjected to stigmatization through numerous clinical and social lenses.

Prior to reviewing the literature it is important to situate the language that I will be using when referring to weight gain within this study. I will use the terms overweight and obese when addressing weight gain as it is clinically constructed. However, it should be noted that there are many implications to using these terms to describe or label individuals. Sociologists (Gard & Wright, 2004; Monaghan, 2005) and fat activists (Evans-Braziel & LeBesco, 2001) suggest that the use of these terms indicates the medicalization of weight difference, further stigmatizes individuals based on body size, and may not accurately reflect how these individuals come to view their own bodies.
2.3 The Biological Consequences of Excessive Weight Gain

In health-related literature, excessive weight gain is associated with increased health risk. Common clinical classifications describing individuals as *overweight, obese,* and *morbidly obese* are utilized by healthcare professionals to describe the effects of weight gain on the material body. Obesity, as clinically constructed, is most often attributed to cases in which energy intake exceeds energy output. The development of obesity has been associated with increased circulating plasma levels of leptin, insulin, and ghrelin, as well as decreased levels of peptide YY (Broberger, 2005; Vendrell, Broch, Vilarrasa, Molina, & Gomez, 2004). However, weight gain is a biologically complex process that stems from multiple genetic, environmental and psychosocial factors. Similarly, an exploration of the genetic structures of obesity may contribute to a better understanding of its pathogenesis, but the multi-faceted nature of weight gain cannot fully be explained by genetic structure alone. Individuals may be genetically predisposed to become “obese” in environments where there is an increase in readily available food, of foods high in fat and simple carbohydrates, of processed or fast food, and where there are limited reasons or opportunities to exercise. Less clear is at what point weight gain becomes a health concern. There are many “obese” persons who are healthy and many “lean” persons who are not (Gard & Wright, 2004; Spark, 2001; Ikeda, 2000). It is important to identify the biological and social factors that contribute to the development of clinically defined obesity, and to determine at what point it becomes necessary for health care professionals to intervene.

To date, most of the literature surrounding the diagnosis of clinical obesity centers on the World Health Organization’s (1998) interpretation and support of the BMI (Appendix A). The BMI is a measure of an individual’s weight in relation to their height. While early studies focused on self-reported surveys, the most recent Canadian Community Health Survey (CCHS) directly measured the height and weight of adult Canadian men and women 18 years and older. The CCHS estimated that 59% of adult Canadians were overweight, and 23% were obese if classified according to BMI (Tjepkema, 2004). BMI is classified into six categories, each representing a different level of health risk (Tjepkema, 2004). Clinical obesity, which represents a BMI of 30 or higher, is divided into three classes, each representing escalating risk: *Class I* (BMI 30-34.9) are those thought to have a high risk of
developing health problems; *Class II* (BMI 35-35.9) indicates a very high risk; and *Class III* (40 or more) indicates extremely high risk of the development of co-morbid factors (Tjepkema, 2004). BMI has limitations as a measurement tool. It does not measure the distribution of body fat, may misclassify adults who have not reached full growth or those who are lean and muscular, may not be accurate for certain ethnic groups, and should not be calculated for pregnant women (Tjepkema, 2004). BMI also does not take into account fitness and heart rate (Oliver, 2006). Sierra-Johnson, Wright, Lopez-Jimenez, and Allison (2005) studied whether BMI influenced survival and recurrent cardiovascular events in cardiac rehabilitation patients, and found that those overweight and obese individuals (according to the BMI) had a higher risk of recurrent cardiac events despite aggressive risk factor modification. Despite the increase in cardiac risk, these same patients did not have significantly higher mortality rates when compared to other cardiac patients within a normal BMI range.

Centrally distributed obesity, defined as a waist circumference greater than 102 cm and 88 cm in men and women respectively (Savage & Ades, 2006), has been identified as a “new vital sign” and an integral component of patient assessment for what Lau (2006) describes as global cardiometabolic risks. Waist circumference measurement is thought to be useful in identifying higher risk cardiac patients, particularly those who have metabolic risk, in secondary prevention settings such as CR (Carroll, Cooke, Butterly, Moxon, Moxon, & Dudfield, 2000). Metabolic risk is associated with the development of metabolic syndrome, which typically encompasses artherogenic dyslipidemia, elevated blood pressure, and elevated blood glucose (Yang, Kuper, & Weiderpass, 2008). Savage et al. (2006) associate centrally distributed obesity with high incidences of lipid abnormalities, insulin resistance, microalbuminuria, and clotting abnormalities. Carroll et al. (2000) further found that there remained a positive association between waist circumference and metabolic risk despite standard cardioprotective drug regimes. Haffner (2006) suggests that elevated liver enzymes, an indicator of a non-alcoholic fatty liver disease, may serve as an additional component of metabolic syndrome and a marker for T2D when used in conjunction with C-reactive protein levels (used to indicate the presence of inflammation within the body). It is important to note that metabolic syndrome is not a specific disease process in itself, but a group of potential risk factors that could possibility contribute to atherosclerotic disease or T2D.
2.3.1 Obesity, Type 2 Diabetes, and Heart Disease

Current health literature on weight gain focuses on quantitative studies linking obesity (with its associated co-morbid risk factors such as left ventricular hypertrophy, diabetes mellitus, hypertension, and hyperlipidemia) to cardiac disease and stroke (Kannel & Wilson, 2002; Bader et al., 2001; Yu, Li, and Lau, 2003; Ades, Balady, & Berra, 2001; Donker, 2000; Lavie & Milani, 1996). Higher body weight is associated with increased all-cause mortality and is thought to be a significant risk factor in the development of CAD (Kolotkin, Meter, & Williams, 2001; Fletcher, Grundy, & Hayman, 1999). Clinically defined obesity is prevalent in CR settings in Canada, where persons with significant weight gain often have greater adverse cardiovascular risk profiles (Bader et al., 2001; Savage & Ades, 2006). On CR program entry, clinically defined obese patients have, when compared to non-obese patients, have a higher prevalence of diabetes, hypertension, lower exercise capacity, greater waist circumference, and lower HDL levels (Bader et al., 2001). The youngest of patients in these programs are often clinically described as “morbidly obese,” and carry the highest risk of further cardiovascular disease (Bader et al., 2001).

Judging from the literature, prior to the mid-1990s, the clinical role of CR programs in treating obesity was limited to increasing exercise capacity. Balady and McInnis (1996) conceptualized obesity as a heterogeneous problem stemming from genetic, biological, and behaviour factors, and critiqued previously published scientific studies for not focusing on overweight patients’ weight loss outcomes after CR. Lavie and Milani (1999) found that obese patients in CR had a greater prevalence of hypertension, elevated total cholesterol, and low-density lipoprotein levels. However, this retrospective study had several methodological issues, and only showed a modest statistical increase of these factors in those individuals identified as clinically obese. CR and exercise training have been shown to improve long-term exercise capacity, plasma lipids, insulin sensitivity, obesity indices, and quality of life improvements, but studies have indicated that exercise alone has been relatively ineffective in producing substantial weight loss in coronary patients (Lavie & Milani, 1999; Yu et al., 2003; Savage et al., 2006). Current approaches to weight loss in CR settings concentrate on diet and exercise programs that are often aligned with behavioural therapy.
Within the literature, there are definite links between T2D and the development of cardiovascular disease. Peripheral and cardiovascular disease are often termed macrovascular complications of T2D, and are linked to other risk factors such as clinically defined obesity and increased LDL levels. Cho et al. (2002) attempted to establish the association between weight change and risk of CHD in diabetic populations. Using the Nurses’ Health Study (a data set of 5,897 women with T2D studied over 20 years) they found obesity was associated with an increased risk of coronary heart disease (CHD), and that weight gain before the diagnosis of diabetes was a predictor for the future risk (and severity) of CHD among diabetic women (p. 1147). Cho et al. (2002) also suggested that the benefits of weight loss be studied in the settings of a future experimental study. Fumisawa et al. (2012) continued to explore the pathophysiological connections between T2D and CHD, finding that non-HDL cholesterol was the most dominant predictor of the development of CHD in Japanese patients with T2D. Masi et al. (2012) noted that insulin resistance, rather than diagnosis of ischemia or left ventricular dysfunction, affected the metabolism and perfusion features of patients with T2D. Along a similar theme of blood glucose regulation and improved heart function, Wu et al. (2012) related the degree of the lowering of blood glucose levels to left ventricular systolic function, and found that long-term control of blood glucose could restore impaired left ventricular systolic function caused by an excessively fast glucose-lowering rate. Therefore, there are significant implications related to controlling T2D to prevent as well as treat CHD. Though weight gain cannot be positioned as an absolute indicator of health or risk for future disease, it can be linked in some cases to insulin resistance, metabolic syndrome, and the development of T2D. The management of T2D is integral for the re-emergence of cardiac health and the prevention of future complications. Blood glucose regulation in particular is a central focus for individuals living with T2D and heart disease. Primary management of T2D occurs through blood glucose regulation, diet changes, and weight loss.

2.3.2 Clinical Strategies for Weight Loss

Individualized interventional strategies for weight loss are often associated with limited success, despite the belief that weight loss diminishes obesity-related medical risks to individual health (Sarlio-Lahteenkorva, 2001). The medical community has responded to
this issue by re-focusing attention on preventive and interventional strategies at the community level through the development of clinical practice guidelines (CPG) that aid primary care practitioners in the diagnosis, treatment, and step-wise management of obesity. The most current “Canadian Clinical Practice Guidelines for the Management and Prevention of Obesity in Adults and Children” (Appendix B) provides prescriptive algorithms for primary care practitioners to diagnose, screen, and monitor patients considered at risk due to their weight gain (Lau, 2006). Weight loss has been associated with improved health profiles in patients with hyperglycemia, hyperlipidemia, hypertension, insomnia, back pain, and shortness of breath (WHO, 1998; Sarlio-Lahteenkorva, 2001). Yet there has been little evidence based on randomized controlled trials (RCT) to support the use of diets other than low-fat diets for weight reduction (Avenell et al., 2004). Despite the benefits associated with weight loss and the fact that individuals lose the most weight in the first 6 months of treatment, the lost weight is often regained within a few years (Meekums, 2005).

Even though there has been a renewed focus on individual readiness to change, as well as screening for depression and psychiatric disorders, current CPGs do not fully address how individuals come to recognize their weight as problematic to their health, or the complexities surrounding food practice and consumption (Heading, 2008; Aphramor, 2005). Delormier, Frohlick, and Potvin (2009) state that behaviour-based educational approaches focusing on nutrition have been met with limited success; furthermore, they advocate for a perspective to address the underlying social relations and collective eating patterns of individuals who are attempting to adapt new health practices. Sociologists Gard and Wright (2005) echo this sentiment, explaining that measuring and classifying an individual’s body weight tells us little about how they got to the point of clinically defined obesity. Dieting itself may be a stressful experience, and extensive weight loss may cause, or in some cases be caused by, health problems. The focus on weight gain and weight loss may contribute to the development of disordered eating habits or unhealthy weight loss strategies (Sarlio-Lahteenkorva, 2001). For instance, there have been links made to heavy smoking and drinking as strategies to promote and maintain weight loss. Interestingly, van Gemert et al. (1998) found that most long-term success with weight loss was achieved in persons who had low self-esteem because they were more likely to comply with medical regimes. A mixed-methods study (consisting of 3 sub-studies) explored the influence of obesity on quality of
life, success and failure to control weight, and conditions associated with sustained weight loss in adult men and women (Sarlio-Lahteenkorva, 2001). Within this study it was found that social environments, gender differences, and identity problems play a central role within the weight loss process. This study highlighted the importance of questioning how the medical model’s classification and treatment of obesity influences and shapes social perceptions of body size.

The “Health at Any Size” movement has sparked debate among health care professionals. Its philosophy of size acceptance without dieting promotes alternative ways to deal with health, and encourages health care professionals to be size-sensitive (Spark, 2001). Size-sensitive interventions include education focusing on low calorie non-restrictive eating plans, enjoyable exercise, weighing patients only when requested by the patient, and focusing on outcomes such as mood, energy, self-perception, and improvements in physiological parameters (Spark, 2001). Strain (1999) argues that this approach has limited clinical trial data and needs to be further studied. To date two clinical trials have been completed focusing on the size-acceptance approach (Steinhardt, Bezner, & Adams, 1999; Dunn, Marcus, Kampert, Garcia, Kohl, & Bair; 1999). In both studies improvements in behavioural outcomes and self-image were noted within the data but there were limited improvements in physiological outcomes such as weight loss, blood pressure, and cholesterol management. This approach to health maintenance does provide an alternative model for managing potential health risks associated with increased body size, but further studies need to be conducted to assess its influence on risk factor modification and long-term cardiovascular outcomes. Along a similar theme, Stevens et al. (2002) explored fitness and fatness as predictors of all-cause mortality and cardiovascular disease in American men and women. Using a sample of men and women from the Lipid Research Clinics study, the authors found that high levels of fatness and low levels of fitness increased mortality from all causes, including cardiovascular disease; in turn, those individuals who were not obese but unfit still carried the same outcomes. However, it was not clear within the data if high levels of fitness alleviated the risks associated with clinical obesity.

In summary, clinically defined obesity can be linked to the development of T2D and CAD in some patient populations. It is important to note that not every person who fits into the
medical classification of “obesity” will suffer co-morbid complications or ill health. Furthermore, there is a lack of longitudinal and experimental studies situating the exact risk of weight gain in both diabetes and heart disease. However, this does not mean that health care professionals should abandon health teaching related to weight loss in the context of cardiovascular risk management. When paired with other risk factors such as dyslipidemia, hypertension, and inactivity, weight gain can lead to pathophysiological changes, such as insulin resistance, and the development of T2D. This is significant because this can lead to macrovascular complications such as CAD.

2.4 Unintended Social Consequences of Highlighting Body Size

The biomedical representation of the “medically obese” body and the language surrounding weight gain and cardiac risk has been a catalyst for the debate on body size, and continues to influence how people’s bodies are perceived by others. The body, when associated with weight gain and therefore medical risk, becomes visible in ways that may actually re-position people socially. There are also varying social scripts related to obesity. These scripts are often shaped by perceptions related to gender, socioeconomic status, and generalized stigmas related to the development of obesity. Often, social perceptions related to body size uncover aspects of the highly hypothesized but under-studied role of the body-society relationship in health behaviour change. For example, that some people are at a higher risk than others to become obese because of their social position or social environments. To be clear, there are differing cultural representations of the “obese” body throughout the world, with some actually allotting obese individuals social capital; however, this analysis of the literature will focus on the representation of obesity within Western culture in order to explicate the pressures faced by Canadian CR participants who are attempting to lose weight for health reasons. In order to deal with some of the unintended social consequences of highlighting body size within biomedical perspectives, I will explore the representation of the “obese” body within popular media and commercial practices related to weight loss in order to explicate how social perceptions related to obesity can serve to position individuals within their social worlds.
2.4.1 Popular Culture, Media, and Commercial Interests Associated with Weight Loss

Popular media, particularly within Western culture, drives cultural perceptions of what constitutes obesity, its risks to society, and the avenues available for individuals who wish to lose weight. Though there are varying representations of the “socially acceptable” body, individuals are highly aware of the visibility of their bodies, whether or not they are able to modify them through weight loss. Contributing to these bodily perceptions is the increased social surveillance of individuals and their weight. This is particularly evident in the “obesity as epidemic” narrative that frequents media sites, informs primary health care, and permeates social policy. The core of an epidemic narrative is the message that anyone can potentially be affected at any time, and that protective or preventative measures are necessary to ensure that one does not become “obese.” Even though the incidence of obesity is rising in late modern cultures, some contest the classification of obesity as a disease or an epidemic (Gard & Wright, 2005). For instance, sociologists have critiqued associated literature that focuses on obesity as an epidemic for containing certain methodological limitations, ambiguities, uncertainties, and contradictions (Gard & Wright, 2005; Monaghan, 2005; Campos, 2004). Lawrence (2004) suggests that there is a tendency to draw on individual and systemic frames for causing the perceived obesity crisis. While these frames may contribute to the rise of obesity within late modern culture, the notion of an “obesity epidemic” itself ultimately relies on particular forms of morality that conceptually weight gain as a type of moral failing.

Labelling individuals ‘at risk’ due to their weight gain potentially reflects on their moral integrity, particularly if the individuals are thought to put their health at risk by their lifestyle. Deborah Lupton (1995) asserts that this risk discourse assumes individuals have universal experiences, and it ignores social differences as well as the ways that individuals come to interpret aspects of risk. Furthermore, there is intense social discrimination and moralizing towards persons labelled as obese, because they are thought to be knowingly putting themselves at risk. Thus, obesity is constructed as both a lifestyle and embodied risk. A lifestyle risk is deemed a threat to the moral integrity of an individual because these risks are a consequence of something a person does (Metcalfe, 1993). An embodied or corporeal risk encompasses the simultaneous presence of existing disease and its potential effects in the
future (Kavanagh & Broom, 1998). While lifestyle risks signal the possibility of future
disease, situating obesity as an embodied risk renders it both a disease that is a threat from
within, and a contributor to future co-morbidities. Focusing on embodied risk can potentially
define who a person is rather than what they do or what is done to them (Kavanagh et al.,
1998). Thorsby (2007) identified how individuals may counter these discourses by finding
other reasons for their weight gain outside of common neo-liberal constructions which
positions obesity as a type of moral failing. These reasons included situating their body as
being prone to weight gain, positioning weight gain as something they have struggled with
since their childhood and identifying life events which disrupted their weight management
efforts. Despite this repositioning of discourses related to weight gain, individuals still face
significant social pressures when attempting to lose weight for health reasons. In the
following section I will address how people become socially positioned because of their body
size and identify wider social structures at work within this discourse.

2.4.2 Consumerism and Weight Loss

Consumerism plays a significant role in body modification through weight loss. Aspects of
consumerism are deeply rooted within social structure. Food is not only a biological
requirement, but also a source of sociality or social interaction, a marker of identity and
lifestyle choices, and reflective of changes in late modern culture (Shilling, 2005). The
biomedical construction of weight gain bleeds into social perceptions of what a healthy body
should “look like,” at times operating to the benefit of “medical and commercial practices
that regulate and profit from bodies” (Monaghan, 2005, p. 310). For example, the diet
industry normalizes dieting practices by focusing on particular risk narratives pertaining to
weight gain. Part of this success is attributed to the prevailing representation of the body as
an object or machine that can be managed or fixed. One discourse analysis by sociologists
Rich and Evans (2005) found that concepts related to “obesity” rely heavily on universal
ideas of optimum weight and a mechanistic view of the body. Yet, the presentation of obesity
as a result of an imbalanced energy ratio assumes that all human bodies adhere to the same
physiological functioning, and does not take into account human differences such as cultural
values, ethnicity, socio-economic class, gender, age, and geographical location (Gard &
Wright, 2005, p. 41). The conceptualization of the body as “a project” to be worked on is a
common theme within health discourses. Sociologist Chris Shilling (2003) extends this study of working to improve one’s body to include both the view that the body is an object to be fixed, and most importantly, that the appearance of the body is tied to an individual’s self-concept or self-worth. Weight loss surgery has manifested as the ultimate body project, in that human anatomy is altered in order to facilitate weight loss so individuals can quickly obtain their “ideal” and “healthy” body.

2.4.3 Body Size as a Means of Positioning Individuals Within Society

The appearance of people’s bodies, particularly in the case of weight gain, can influence how people are positioned within society. In the case of the literature related to body size, three major topic areas emerge for discussion. The first relates to gender, particularly how women’s bodies become socially positioned based on weight difference, with the focus on how feminist perspectives attempt to combat this positioning. Though my focus primarily rests on women’s experiences, the literature also reveals some consistencies and differences within the male experience of weight gain. The second topic area within the body size literature deals with common social perceptions, which have historically equated increased body size with lower socioeconomic status (SES). I access recent systematic reviews studying the relationship between SES and obesity which take into account the changing environments in both developed and developing countries in the last 20 years and also offer a more comprehensive analysis of the complexity of economic and social influences on weight gain in contemporary society. The final topic area subsumes aspects of these previous discussions to include wider aspects of stigmatization related to obesity, and positions social constructions of obesity as the “last acceptable” form of prejudice within modern society. In order to deal with the positioning of the “obese” body, I turn current literature on the stigmatization of people with increased body size and to relatively new area of study called “critical fat theory.” Critical fat theory positions weight gain as a form of resistance to body norms and offers insight into challenging common social tropes surrounding increased body size.
2.4.3.1 Gender

The term gender can be applied in a variety of contexts from sex (i.e. male vs. female), to gendered identities, or expectations of particular gendered roles. The World Health Organization (n.d.) defines “sex as referring to the biological and physiological characteristics that define men and women, while gender refers to the socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for men and women” (para 1). Determining gender involves situating how people’s bodies should look and act. Within this section I draw out examples of the study of gender and body size and contextualize the social implications for both men and women who do not align with prominent social perceptions defining a socially “acceptable” body size. Though there may be differing commentaries on men and women’s bodies in relation to body size within the literature there remains an universal sentiment in modern culture that “fat equals reckless excess, prodigality, indulgence, lack of restraints, violation or order and space, transgression of boundary” (LeBesco & Evans-Braziel, 2001, p.3). Even people who perceive themselves as sympathetic towards fat people can perpetuate the trope of the symptomatic fat body or a body at risk due to its corpulence (p.3). Within this section I focus on both women and men, highlighting prominent work on the subject of body size.

I begin with the study of body size in women, focusing primarily on feminist works challenging normative representations of the “female” body. Through her germinal work, Fat is a Feminist Issue, feminist scholar Susie Orbach (1978,1982) explores the complexities surrounding body modification in women and seeks to understand women’s food practices, while challenging social perceptions that have served to isolate and invalidate women based on their body size. This focus of study has been well represented within a large field of feminist work related to women and body size (Wolf, 1991; Evans-Braziel & LeBesco, 2001; Bordo, 1993). Where Orbach differs from her feminist counterparts is in her psychoanalytic approach to weight gain, which suggests that women unconsciously seek to become fat. This, she argues, desexualizes women’s bodies and puts them at an equal level with men in social settings. Orbach highlights the “thin body” as a way of positioning women in society that puts them at a disadvantage to men. Elizabeth Grosz’s (1994) book, Volatile Bodies, examines how women’s bodies may be interpreted as being more corporeal, more vulnerable
and more natural than men (p.14). Therefore, it is relevant for feminist theorists to confront corporeality in order to also, in turn, confront social constructions of female identity and sexual difference. The female form is positioned in society in ways that influence an individual woman’s understanding of her body size, her ability to modify or change aspects of her body, and the resources that are available to her to do so. As previously discussed, this may occur through popular culture, media, and commercial interests, although changing social roles, ethnoracism, and socioeconomic status also play a large role in positioning women within society.

Changing social roles of women have been linked to changes in body size. On a macroeconomic level, women’s participation in the labour force affects the proportion of meals and snacks that are purchased outside of the home. Women still face income inequality, and may be single parents or have higher incidences of stress than men. These issues in turn may affect food availability, food choices, and eating practices (Blocker & Freudenberg, 2001). Higher incidences of clinically defined obesity have been linked to non-Hispanic black women than to Caucasian women. This has been attributed to genetic factors/low metabolic rates (Blixin, Singh, Xu, Thacker, & Mascha, 2006; Kumanyika, 1994; Allison, Edlen-Nezin, & Clay-Williams, 1997); high incidences of positive body-image in black women (Kumanyika, 1994; Flynn et al., 1998; Blixin et al., 2006); and dietary behaviour influenced by cost, media, and cultural traditions. Such studies highlight the gender and racial disparities that put particular groups of women at a higher risk for obesity-related co-morbidities and stigmatization.

Men face similar issues related to body size, but it is often the management of body size in women and the prevention of obesity in children that receive the most attention (Monaghan, 2008). Men’s bodies in both heterosexual and gay culture are subjected to normalizing bodily discourses and social practices. This occurs through consumer practices, the representation of the ‘fit’ male body in consumer culture, and the increasing amount of research pertaining to the pressures of male-body image within gay culture. Sociologist Lee F. Monaghan (2008) examined the challenges faced by men who were labelled as clinically overweight or obese, and were attempting to lose weight in order to come to terms with societal opinions of their bodies. Monaghan has also studied men’s embodiment, focusing on
overweight and obese men in his study, *Big Handsome Men, Bears, and Others: Virtual Constructions of ‘Fat Male Embodiment’* (2005). Within these studies Monaghan identified typologies of “fat” men as big handsome men, “cuddly” bears, and other fat-friendly supportive positions. He notes the increasing amount of support networks on the Internet between individuals who self-identify as fat. These sites, however, are not preoccupied with politicized social change—unlike second- or third-wave feminist perspectives focusing on body size—but instead are concerned with cultivating relationships with other individuals in the same situation.

### 2.4.3.2 Socioeconomic Status

Sobel & Stunkhard (1989) conducted a systematic review tracing the relationship between socioeconomic status (SES) and obesity within the literature from 1960-1980. Primary findings from this review included the observation that women of lower SES in developed societies had a higher likelihood of being “obese” while men and children had inconsistent findings. Sobel et al. (1989) found that the relationship between SES and obesity was positive in women, men and children of higher socioeconomic status in developing countries (McLaren, 2007, p.29). Ball & Crawford (2005) extended this review to studies conducted between 1980-2002 and suggested, similar to Sobel et al., that primary preventative efforts for obesity be aimed towards the socio-economically disadvantaged. However, this review has been critiqued because of the restrictive inclusion and exclusion criteria rendering the study unable to study patterns of SES and weight change in developing countries (McLaren, 2007, p.30). McLaren (2007) built on the work of Sobel & Stunkhard (1989) to further explore the relationship between SES and obesity within the literature from 1988-2004 taking into account the large scale societal and nutritional changes having to do with economic growth, modernization and globalization of food markets (p.30). SES indicators included, but were not limited to, income, education, occupation, assets and material belongings and other factors which could not otherwise been classified (e.g., subjective social class) (p.31). Rather than classifying individuals in terms of high or low SES in developed or developing countries, McLaren used the 2003 Human Development Index (HDI) assigned by the United Nations Development Program ([www.undp.org](http://www.undp.org)), which ranks countries on a number of attributes including life expectancy, birth, school enrollment and adult literacy, and standard
of living based on gross domestic product (p.30). McLaren observed that there was a gradual reversal of the social gradient in weight gain first described by Sobel & Stunkhard (1989) in that, as one moved from high to medium to low HDI countries, that lower HDI was linked with increased body size and that higher levels of HDI were associated with decreased rates of obesity. However, even though McLaren found the same relationship with obesity and SES as Sobel et al. (1989) she maintained that the divide was not as evident as it was in previous reviews given the increase in obesogenic environments and large-scale social drivers at work (p.33).

Returning to the previous discussion surrounding gender and body size, McLaren (2007) offers insight to the phenomenon of women in higher HDI society’s relationship to body size. Women of higher HDI (particularly within Europe, United States, Australia and Canada) often have a diet characterized by a greater composition of fruit, vegetables, lower-fat milk, and less consumption of fats. Despite the same exposure to obesogenic environments, women in these countries with a high HDI had significantly decreased rates of clinically defined obesity. To explain this phenomenon, McLaren turns to sociologist Pierre Bourdieu’s concept of habitus. Habitus, within Bourdieu’s description, refers to the embodiment of social structure in which the individual’s body becomes a social metaphor for a person’s status (McLaren, 2007). Class, then, is more than economic differences, but instead compromises a constellation of attributes referred to by Bourdieu as “capital” (Bourdieu, 1986). Capital can take on various economic, cultural or social forms. McLaren, then, uses this theory to argue that women of higher HDI, despite their equal risk of gaining weight due to obesogenic environments, are able to keep a thinner body because it is both socially valued and materially viable for them to do so (2007, p.35). The utilization of Bourdieu’s work on habitus opens up the discussion of the relationship between obesity and SES to include wider conversations pertaining to the complexity of this relationship itself. Ulijaszek (2012) critiques the SES construct to a greater degree rendering it “insufficient” in its analysis and approach because the majority of studies connecting SES and obesity do not take into account varying forms of cultural capital related to weight gain. He argues that this is also evident within differing sub-cultures in the US. Like McLaren (2007), Ulijaszek utilizes Bourdieu’s theory of habitus to lend insight into obesity as a form of symbolic
capital, particularly in different cultural groups who grant symbolic or cultural capital to food and weight gain (i.e., African American groups).

Neighbourhood-level characteristics such as the availability of healthy food, the quality of the physical environment, and the area’s SES, have been proposed as explanations of growing obesity rates within North America. An upstream approach to the management of obesity within the neighbourhood context has been suggested through various care frameworks focusing on the characteristics of neighbourhoods with higher than normal obesity rates. However, Black & Macinko (2008) found in their review of literature on neighbourhood determinants of obesity that few studies had tested a comprehensive model of the determinants of obesity, that studies within this area often relied on cross-sectional methods and secondary data, and that further work was needed to parse out the interactions among individual-level characteristics in the neighbourhood context. More study is suggested in order to further understand how health is imparted by the neighbourhood context.

Given the complexity of SES associated by its sheer definition, factors and wider meanings with economic and social forms, more study is required both in terms of its relationship to obesity and the SES context itself. Despite the notion that this area of research will help to better inform health approaches to the increase of obesity rates in late modern culture, this research itself can serve to increase the stigmatization of individuals and their bodies based on their perceived SES class. The final section is related to body size as a means of positioning individuals within society and focuses on how the obesity discourse can result in the recurrent experience of stigmatization for individuals who are considered to be of increased body size.

2.4.3.3 Stigmatization

Rogge, Greenwald, and Golden (2004) refer to obesity as the “last socially acceptable form of prejudice” (p. 301), while Pamela Brink (1994), a nurse academic, observes that obese persons have been framed within two of Erving Goffman’s (1963) three classifications of stigmatization: 1) physical deformities, and 2) character defects. The idea of the obese body as unsightly or revolting is exacerbated by the assumptions that lack of self-control or
laziness contribute to weight gain (Brink, 1994; Puhl, Moss-Racusin, Schwartz, & Brownell, 2008; Carryer, 2001). These assumptions act on and through persons who have been clinically or socially defined as obese. For example, persons deemed obese are subject to stigmatization in retail clothing stores, on airplanes, and other public transportation (Brink, 1994). They may also face challenges when seeking healthcare, because acute care settings may be unable to meet their needs with equipment, or place blame on individuals for causing their medical condition. As a result, persons with increased body size may avoid healthcare services. As a particular example, research has found that women who perceive themselves as fat often avoid gynaecological examinations (Aramburu Alegria Drury & Louis, 2002; Carryer, 2001). Those considered “obese” may, furthermore, avoid social situations and express body image dissatisfaction, which may be associated with depression, social anxiety, low self-esteem, and impaired sexual functioning (Meekums, 2005). Carryer (2001), in her qualitative study focusing on embodied largeness in women, found that the overall quality of life of her participants could be negatively affected for women clinically identified as obese, because these women often expressed that they did not see their lives as beginning until they were thin.

Various studies have implemented interventions to educate individuals, and attempt to reduce aspects of weight bias within society; however, these interventions have met with limited success (Puhl et al., 2005; Puhl et al., 2008). The *Obese Persons Trait Survey* (Stangor, Sechrist, & Jost, 2001) asks participants to estimate the percentage of persons with obesity who possess 20 stereotypical traits. The *Beliefs About Obese Persons Scale* (Allison et al., 1991) measures beliefs about the causes of obesity on a Likert rating scale. Finally, the *Marlowe-Crowne Social Desirability Scale* (Crowne & Marlow, 1960) measures socially desirable response tendencies related to obesity. These tools, however, only serve to measure societal responses to obesity, and do not involve an examination of the complex social processes, reproduced through cultural meanings, which operate on differing levels and across multiple sites.

There is emerging literature surrounding weight gain as a form of social resistance through what has been termed as fat feminism, fat pride, or critical fat theory (Bordo, 1993; Orbach, 1982; Wolf, 1991; Evans-Braziel & LeBesco, 2001). One of the critiques of the existing
literature about body size is that it has not been successful in highlighting how individuals can escape from their social position. This has been attributed to the fact that “coming out” as a “fat person” is not as straightforward as it seems. Samantha Murray (2005a, 2005b), a feminist theorist, attributes this to the complex discourses surrounding body size that constitute us as subjects. She reflects on her own experiences as a “fat” woman and describes times where she felt disconnected from her body due to her own embodiment of social discourses and bodily knowledge surrounding weight gain. In such instances, fat politics can provide communities of support, but they do not serve to dismantle cultural ideals. Sociologist Nick Crossley (2004) furthers this argument by stating that, outside of the small pockets of fat politics or fat pride, there is no evidence that fatness is celebrated in late modern culture; he suggests that in order for weight gain to be counted a form of resistance, thin people should be aspiring to gain weight. While the above perspectives give insight into how the body can become a site for social action, there is little agreement about how one goes about more positively re-positioning individuals with increased body size.

### 2.5 Embodiment of Body Size

There is a gap within the literature with regards to the embodiment of body size, and a limited number of qualitative studies on the experience of people attempting to lose weight for medical reasons. Heading (2008) used semi-structured interviews and visual aids to explore the saliency of food and exercise options in a small rural community in Australia. His goal was to consider how a sociology of embodiment would support public health obesity interventions. Within this article, however, he failed to theorize embodiment and link his findings to a social framework. Interestingly, few participants in his study “self-identified” as obese, according to the WHO clinical guidelines, and had complex explanations for their weight gain. Carryer (2001) explored the psychological and social effects of embodied largeness in women, but concentrated primarily on weight gain as inhibiting and controlling one’s participation in society. Sociologist Nick Crossley (2004, 2006) proposes a type of reflexive embodiment that referred to the “capacity and tendency for individuals to perceive, emote about, reflect and act upon one’s own body; to practices of the body modification and maintenance and to body image” (p. 1). He maintains that weight gain was a gradual change that often went unnoticed. Reflexive embodiment of weight gain
often occurred through episodic periods where an individual becomes aware of her or his body due to a shock event, which forced aspects of an undesirable body into consciousness (for example, a picture of an individual, after weight gain, in a bathing suit). He suggests that part of the complexity of the body-society relationship is that individuals do not maintain a continual reflexivity about their bodies.

Clearly there is a gap in the literature pertaining to the embodiment of weight gain. Though the individual experience of gaining weight is explored, there remains little theoretical exploration of the embodiment and recognition of obesity. Further philosophical and theoretical insights are required to advance this area of study.

2.6 Conclusion

Individuals who have been encouraged to lose weight in order to reduce cardiac risk face many challenges. They become deeply engaged with the medical discourses surrounding obesity and its risk to their health, they are continually aware of the social visibility of their bodies, and they are subject to wider medical and social discourses surrounding their disease. It is possible to study both the health-related and social consequences of obesity without placing them in opposition to one another. This occurs through theory that explores the complexities of the body-society relationship itself, recognizing that both body and society are emergent factors within the phenomenon of body size. Literature surrounding body size and weight loss has primarily focused on the biological body, the effects of sociality on body size, and how the visible social body becomes a location for societal perceptions. Little is known as to how the body “acts” simultaneously in all of these categories, particularly for those individuals who are attempting to lose weight for medical reasons. Therefore, it is pertinent to turn to the topic of diet change as a starting point in coming to understand the multiplicity of issues related to weight loss in CR settings. Rather than situate my work within the phenomenon of obesity, thereby being forced to reproduce biomedical discourses surrounding the body, or alternatively situate my study purely within sociological critique, I have decided to start at the beginning in order to understand the contexts guiding food consumption and how CR frames these activities. To do so, I turn to the sociology of health and illness, more specifically material-corporeal (or embodied) sociology, as a lens to my
work in order to discuss the complexities of both the biological and the social contexts that influence diet change and conceptualizations of body size within our culture.
Chapter 3
Theoretical Foundations

3.1 Introduction

The body-society relationship, a key constituent in health behaviour change, remains highly hypothesized and relatively understudied within health-related disciplines. To situate the role of the body-society relationship in health management, it is imperative to theoretically examine the body and society as emergent factors for the constitution of health practices. As demonstrated in the previous literature review, study of this phenomenon has focused primarily on either the body or society, with traditional health-related disciplines such as medicine placing their study on the former (with the focus on the cure and treatment of the physical body), and sociological traditions (most commonly rooted in medical sociology or the sociology of health and illness) placing their efforts on the latter (taking constructivist and more interpretive approaches to the study of disease).

Nursing as a discipline has made strides in bridging these disciplinary perspectives but has remained mired between these two distinctions, particularly in the study of weight gain/body size. As a result, studies of the body-society relationship in the context of health behaviour change are often reduced to an opposition between naturalism (which does not recognize the effects of society on the human body), and social constructivism (which situates the body as an empty vessel filled by the determining focuses of society) (Shilling, 2005). More recently, sociologists studying the sociology of health and illness have challenged these dualistic terms of reference, and offer distinct theoretical approaches that may be more relevant to the study of the body (Williams, 2003; Benton, 1991; Newton, 2003). To further explore this theoretical shift and its applicability to the study of diet change in CR settings, I turn to social theory focusing on the sociology of the body (Williams, 2003, 2006; Shilling, 2003; Shilling, 2005). It is not my intent within this chapter to negate the importance of positivist, interpretive, or constructivist approaches to the study of health behaviour change, but to instead offer a growing theoretical perspective rooted in realist perspectives encapsulating all these of these paradigms for the study of health behaviour change.
Within this chapter I explain the importance of *material-corporeal or embodied sociology* to the study of health behaviour change, and highlight the use of sociologist Chris Shilling’s theory of *corporeal realism* as a theoretical lens for this study. To do so, it is imperative that I first explain why the field of material-corporeal sociology is relevant to the study of health behaviour change, and then trace the theoretical influences of a corporeal realist perspective. To aid in the understanding of this, the theoretical conversation in this chapter is mapped out in Figure 1.

Figure 3.1  Theoretical Map for the Study

**Material-Corporeal Sociology (Embodied Sociology)**

Overarching theoretical stance situating the following theoretical approaches for the study of the body-society relationship in health behaviour change informs the theoretical positions outlined below.

↓

**Critical Realism (Bhaksar, 1978, Clark et al., 2008)**

Methodological framework positioning the epistemological and ontological tenets of the study. Informs Shilling’s (2005) work on corporeal realism. Two major concepts are utilized from this perspective for the study of the body-society relationship in health behaviour change:

1. Stratification
2. Emergence

↓

**Corporeal Realism (Shilling, 2005)**

Analytic lens for the study of data-epistemological/ontological influences from critical realism, but takes a more focused approach to the body:

1. Body as a source of society
2. Body as a location for society’s influences
3. Body as a means of positioning individuals within their social worlds

**Body Projects**

Shilling’s example of body projects reveals relevant sociological critiques of biomedical approaches to health behaviour change, and provides insight into how the body both influences and is influenced by the social.
The first part of this chapter will situate interdisciplinary approaches within social science and nursing research then move on to define material-corporeal sociology as a field of study, outlining the importance of its emergence within sociological thought as well as its relevance to health-related studies. The second part will draw out relevant sociological critiques of biomedical approaches to health behaviour change and parallel CR interventional approaches with Shilling’s notion of the body project. Finally, the third part of this chapter will focus on the convergence theory of corporeal realism as an alternative lens for the study of diet change and body size within CR settings.

3.2 Interdisciplinary Approaches to Social Science Research

Prior to beginning the discussion of the role of theory within this research study it is pertinent to address the interdisciplinary approach forwarded within this chapter. Thompson-Klein (2007) distinguishes between multidisciplinary and interdisciplinary approaches within social science research. The former refers to approaches which juxtapose separate disciplinary perspectives in a sense adding to the breadth of knowledge on a subject while maintaining separate perspectives and disciplinary elements, while the latter refers to a holistic view or common understanding of a complex issue, question or problem (p.38). Within this study an interdisciplinary approach to the study of diet change is proposed. Though it is evident within body size literature that there is a wide interdisciplinary gap - between biomedical and sociological approaches to the topic, there is an opportunity to bridge these perspectives using qualitative methods. This approach offers an implicit criticism to the state of each of these disciplines while at the same time building an integrative framework in order to advance further study.

Thompson-Klein (2007) proposes the term theoretical interdisciplinarity to describe the combining of conceptual tools with the aim of building a comprehensive general view, theoretical synthesis or integrative framework (p.39). Macro social theory can be considered as a form of theoretical interdisciplinarity. Within this chapter I turn towards a field within sociology that has successfully created new and overarching concepts which subsume theories and concepts of several existing disciplines. My goal throughout this study is to generate further understanding for study of body size through the use of theory and the
engagement of practical examples emerging from CR participants engaged in diet change. In the following section I turn to an emerging field within the sociology of health and illness (formally referred to as medical sociology) focused on material and corporeal sociological concerns pertaining to the human body in order to bridge the disciplinary gap noted in the study of body size and to advance my study of diet change in CR settings.

### 3.3 Material-Corporeal Sociology

Cardiac risk factor modification within CR settings is contingent upon individual efforts to avoid behaviours that may continue to disrupt health and delay the restoration of the “ill” body. Often, there is a sense that controlling or modifying risk for disease can, in turn, rebuild health. Prominent risk factor narratives, in particular those pertaining to the relationship between diet and T2D and CAD, purport that people can not only prevent but that they can relieve and also potentially cure their disease conditions through moderation and control. The physical body is at the center of CR efforts as an object requiring immediate intervention and repair. At times, other factors influencing health behaviour change such as the complex interplay of human agency and social factors are negated within this approach. Therefore, disciplines such as nursing strive to understand both the physical and social factors influencing people who are engaging in health behaviour change. Unfortunately, in the particular context of body size and diet change, many of these approaches remain fixated on the reparation of the body, rather than coming to understand the complexities of the body-society relationship and role of social structure and sociality in adopting new health practices.

Sociology—in particular, the aspects of the discipline that study health and illness—faces different challenges in the study of health behaviour. While there exist prominent sociological studies into the study of health that include empirical studies seeking to observe and measure aspects of health (existing in a positivistic paradigm), a second area of research pertaining to more relative or interpretative perspectives (including a focus on lay experiences and accounts of health and disease causation from the individual perspectives) permeates the sociological literature on health (Williams, 2003; Clark, Lissel, & Davis, 2008). Some sociologists suggest that there are a number of limits and weaknesses when
these interpretive accounts are “accorded ‘privileged’ status because the social world becomes little or nothing more than the (inter)subjective accounts, interpretations and viewpoints of those studied” (Williams, 2003, p. #47). This poses difficulty for researchers who seek to study the body-society relationship because they are faced with two distinct disciplinary perspectives: one focusing primarily on the body at the expense of social or individual experience, and the other focusing on the social construction of health at the risk of completely writing out the body. As Williams (2006) describes, “bodies surprise us, they betray us in all sorts of ways that render our constructions of them problematic” (p. 9). More specifically, this opposition may exist theoretically but it does not function this way within health practice. This first section of this chapter critiques this perceived opposition in relation to the study of body size and diet change, and offers an alternative sociological approach rooted in what has been termed a material-corporeal or embodied study of sociology.

3.3.1 Defining Material-Corporeal Sociology

Without the human body there can be no life or society, because our bodies are a productive source of social and cultural forms through which sociality occurs (Shilling, 2005, p. 30). More simply put by Carolyn Walker Bynam (1991), “what we study-what we can study- is culturally constructed. But we know we are more than culture. We are a body. And, as a body, we die.” (p.20). Williams (2006) describes the need for a material-corporeal project within sociology, which attempts to “marry the biological and the social in a truly embodied fashion” (p. 13). When I refer to the body throughout this chapter, I am speaking about more than just the body as a distinct biological entity; our bodily capacities shape how society is structured, and in turn, the society which we create through our bodies also acts back on us in various ways, sometimes even shaping how we perceive or come to understand our bodies.

Crossley (2004) purports that embodiment is a twin aspect of being and having, we are our bodies (being) but sometimes perceive them as objects that we posses (having). Furthermore, we might experience, in some contexts like illness, our bodies as having been taken away from us (p.2). Material-corporeal sociology seeks to explicate the role of the human body in society within all of these instances. As identified earlier, a prominent challenge to the study of the body through a sociological lens is the resistance to conceptualize the body within its biological or material influences.
Therefore, material-corporeal sociology aims to place the role of the material body in social theory in non-reductionist terms by conceptualizing individuals as embodied social actors, and the body as a multi-dimensional medium for the constitution of society (Benton, 1991; Shilling, 2003, 2005; Williams, 2003, 2006). Within this framework the term material refers to the substance of the human body itself, while corporeal describes the varying structures/elements that constitute the material body (for example, organs, genes, etc.), or influence it (for example, social roles or social structure), as well as individuals’ experiences related to having a body.

The human body within this theoretical perspective is an emergent, socially generative phenomenon that is inclusive of, but also more than, its biological parts. Simon J. Williams (2003) identifies the aim of material-corporeal sociology as “put[ting] minds back into bodies, bodies back into society and society back into the body” (p. 550). The body remains a central and important focus because of its “ontological vulnerability,” and because the “tragic consequences of chronicity, impairment and disease” can contribute to the study of social suffering (Williams, 2006, p. 16). In order to better clarify the complexity of this theoretical field of study, I will illuminate the meta-theory of critical realism. Critical realism or complex realism has been termed as a “third way” to engage in the study of the body-society relationship because it allows researchers to escape from the conversation surrounding the opposition between naturalism and interpretivism (relativism), and enter into what has been termed as a “middle ground” for the study of health and illness (Clark et al., 2008).

3.3.2 Critical Realism

Philosopher Roy Bhaskar argued that, “human perceptions of the world (epistemology) could not be synonymous with the world’s objective state (ontology)” (Clark et al., 2008, p. E68). Critical realism is centered on the ontological claim that “the world exists independently of our thoughts or knowledge about it, and hence the meaning we place upon it” (Williams, 2003, p. 51). More specifically, as Clark et al. state (2008), “complex realism views physical and social entities as having independent existence irrespective of human knowledge or understanding” (p. E68). A critical realist perspective allows for scientific explanation, integration of human experience and constructivist viewpoints, while primarily advocating
that the “complex causes of how and why changes in health or social factors occur need to be understood” (p. E73).

In a critical realist framework, reality is divided or stratified into three domains: 1) the *actual* (events and actions that are more likely to be observed); 2) the *empirical* (fallible human perceptions and experiences, including science) and 3) the *real* (underlying powers, tendencies, and structures, whether exercised or not, that cause events in the actual domain) (Bhaskar, 1978; Clark, Lissel, & Davis, 2008; Williams, 2003; Sayer, 2000). The *real* then becomes whatever exists naturally or socially, and is the realm of objects, their structures and powers (Sayer, 2000). More specifically, social and physical phenomena exist at the level of the real, and behave in particular ways that generate the flux of phenomena that constitute the actual states and happenings within the world (Smith, 2006). These three domains are described as stratified, in that they continually act amongst each other on varying levels.

There are two central tenets of a *critical realist* framework that are useful to the study of the body-society relationship. The first is the critical realist concept of *emergence*. Emergence is a term used to illustrate the ways that two or more components or features of the world may combine to produce a new phenomenon. The body and society are conceptualized as emergent factors that remain separate and cannot be collapsed into each other. This means that the body and society may combine to produce a phenomenon such as weight gain, but they remain two properties that comprise, yet are irreducible to, the phenomena that they in part produce. The second realist concept of relevance to the study of the body-society relationship is that of *stratification*. Central to understanding the body-society relationship is the recognition of the layered or stratified relationships between the human body and social structure. More specifically, within a critical realist interpretation, phenomena exist and operate within layers of reality (previously identified as the actual, empirical, and the real); these layers of reality may generate mechanisms or forces that can shape or condition human activity.

A critical realist perspective argues that, in order to acquire usable knowledge, it is essential to know the mechanisms that produce empirical events (Danermark et al., 2002, p. 22). These events are seldom directly visible and the overall scientific knowledge that we do
attain is fallible and may only be useful under specific conditions (p. 22). Knowledge, then, is considered to exist in both intransitive and transitive dimensions. Intransitive knowledge includes “the mind-independent world this knowledge is about” (Williams, 2003, p. 52). A common example used to describe intransitive knowledge is that of a scientist who produces a result in his experiment by interfering with and changing a natural course of events but, even if he never carried out this experiment, the mechanism would still have been there independent to the scientist or any other human being for that matter (Danermark et al., 2002, p. 22). More specifically, intransitive knowledge stems from the critical realist notion that there is a reality separate of our knowledge of it. Transitive knowledge, on the other hand, includes “our changing, contingent, fallible theories about the world,” constituting the dimension that indirectly connects science with reality (Williams, 2003, p. 52). Scientific results “consist of sets of theories of this independent reality” and “constitute the raw material sciences uses in its practical work”; therefore the aim of science is to “transform theory into a deeper knowledge of reality” (Danermark et al., 2002, p. 23).

Within a realist perspective, no form of knowledge is completely certain; all knowledge contains aspects of fallibility. However, even though knowledge is considered fallible, there are times when some aspects or forms of knowledge are valued over others. Theoretically speaking, a truth of a theory is linked to how accurately it explains the phenomenon it refers to (Smith, 2006). For example, a realist perspective could maintain that, based on rigorous testing and accumulation of scientific evidence, excessive weight gain may lead to cardiovascular disease. This knowledge may take precedence over individuals’ self-beliefs that their history of hyperlipidemia, T2D, and hypertension did not develop as a side effect of their weight gain or diet, and has not contributed to the development of their heart disease. However, a person’s perceptions cannot be entirely discounted or pushed aside, because they heavily influence individual behaviour, and produce variable health-related outcomes.

Realist perspectives offer an alternative form of study for health behaviour change by providing a framework for nurse researchers to explore complex phenomena, such as diet change, from perspectives which recognize the complex interplay between individual, experiential, educational, socio-cultural, and organizational factors (Clark et al., 2008). The body-society relationship has been conceptualized through a realist theory known as
corporeal realism. However, prior to explaining the relevance of corporeal realism to this study, it is important to begin the discussion using sociologist Chris Shilling’s (2003) concept of body projects. This concept provides a relevant frame of reference for current CR programming, and also gives insight into the role of agency and social structure in health behaviour change.

### 3.4 Body Projects

The focus of CR is to restore and rehabilitate the body after a significant cardiac event (i.e., MI or cardiac surgery), or the diagnosis of CAD. CR programming takes a tertiary focus to disease management, emphasizing further risk reduction and encouraging the self-management of cardiac disease and associated co-morbid factors. As with any other biomedical approach to health care, the physical body is at the center of CR’s efforts. Historically, CR’s main focus was on increasing exercise capacity after a significant cardiac event or diagnosis of heart disease, but it now includes comprehensive programming on cardiac risk factor reduction as well. Health, then, is achieved through the adoption of particular behaviour changes (most commonly related to diet, exercise, and weight loss), which combat cardiac risk factors such as T2D, hypertension, hyperlipidemia, and weight gain through the mastery of the biological body. The achievement of health, from a CR perspective, is represented by visible and sustained improvements in biomedical measures related to heart disease.

Shilling (2003) brings forward the notion of *body projects* in order to describe the activities that individuals do for the management, maintenance, and appearance of their bodies in order to adopt particular “self identities.” He recognizes that people develop a practical recognition about the significance of their bodies as a personal resource, and as a social symbol that gives off particular messages about an individual’s self-identity. He purports that this is relevant to individuals in late modernity because it is a common social preoccupation to see one’s body as being in a continual process of becoming.

The idea of the body project in CR is significant for the following reasons. To begin with, the conceptualization of the body project reveals the central focus on the body within CR settings. The body is positioned as an object to be fixed or worked on. Secondly, it outlines
the direct relationship between the body and self-identity because disruptions in health often also incur a disruption in a perceived self. Williams (2006) conceptualizes the relationship between self and identity as a social process that alters through time as bodily contingencies change (p. 11). In the case of people participating in CR settings, their diagnosis of CAD becomes sociologically significant because it: 1) impinges directly on the self; 2) provides signals for identity construction; and 3) acts as a limiting factor for the person living with chronic illness (p. 11). The notion of CR practices as individual body projects provides an opportunity to contextualize health interventions within the context of the body-society relationship. However, it does not provide any theoretical resolution for wider interpretations of the complex and stratified nature of the body-society relationship itself. Shilling (2005) builds on his theoretical work surrounding the body, and proposes a more nuanced convergence theory aimed at studying the body-society relationship. His theory of corporeal realism is outlined in the final section of this chapter.

3.5 Corporeal Realism

A corporeal realist theoretical framework provides a strong ontological starting point for the study of body size, diet, and weight loss because the body-society relationship remains the core problem(atic) (Shilling, 2005). It is a multi-dimensional approach that examines the interplay between social and natural dimensions of human existence, while taking into account the dimensions of ongoing processes that manifest over time. More specifically, it examines the flux of socio-cultural life and its effects on the human body. Biological functioning plays a large role in this process by moulding our natural and social environments in particular ways. For example, social structures are more likely to endure if they have an affinity to the conditions of human embodiment. Society, in turn, acts back upon the body, shaping it in particular ways, and affecting aspects of individual agency. Shilling selects the body as the locus to the body-society relationship because it acts as the source, location, and means of positioning individuals within society. This does not require that society be reduced to the functions of the human body. Instead the body serves as a multi-dimensional medium for the constitution of society, but remains composed of distinctive parts and physiological functions. Society, according to a corporeal realist perspective, consists of economic classes, bureaucracies, legally sanctioned roles, and social
norms that may or may not fundamentally differ from the desires and actions of individual embodied subjects (Shilling, 2005). Social structure, then, plays a significant role in shaping embodied subjects, while in turn embodied subjects also shape social structure.

Shilling’s (2005) theory of corporeal realism is corporeal in that it puts the body at the center of its study with social action and social structure; it is realist in that it is influenced by the meta-theory of critical realism, which is grounded in the ontological position that the world exists independently of our knowledge of it (p. 15). Realist perspectives, in part, aim to uncover the interaction of structure and agency over time (Smith, 2006). Shilling focuses on three elements within this conceptualization of corporeal realism. The first element is that in dealing with the body-society relationship is that we are dealing with emergent causally consequential phenomena (Shilling, 2005, p. 14). Therefore we should not seek to account for the body in terms of purely its social construction or for society in terms of its corporeal construction (p.14). The second element of corporeal realism accounts for the role of a temporal component to social analysis in which accounts for how the body may be generatively associated with the emergence of social structure over time, how established social structures not only form a context for embodied action but how they also have potential to shape people’s bodily actions and habits, as well how embodied subjects reproduce these same structures through their bodily actions (p. 14). Finally, the third element is that a corporeal realism can and should be critical. Shilling critiques Bhaskar’s previous work as being insufficiently attentive to the body (p. 15).

Central to the corporeal realist position is the ontological premise that the human body is a multidimensional site for the constitution of society. Shilling conceptualizes the body as a source of society, a location for society’s effects, and as a means of positioning individuals within their social worlds. These categories highlight the complex relationship between embodied social actors and society, representing an ongoing process that manifests over time. In order to further understand Shilling’s conceptualization of the body, I will examine each of these categories in isolation and provide examples as to how each may contribute to the study of diet change and body size.
First, the body acts as a source for the creation of social life. Shilling recognizes the body as being an active generative phenomenon. Without the human body, there can be no life or no society, because human bodies are a productive source of social and cultural forms through which sociality occurs (p. 30). Furthermore, as embodied subjects, individuals have an internal capacity to make a difference in the mundane aspects of daily life. However, this does not always occur on a conscious level. Conceptualizing the body as the source of society acknowledges that there may be a causal link between the body and social structures through varying unconscious levels. Shilling (2005) uses the example of sociality of eating as a form of bodily engagement with society, because it meets both a biological need that in turn creates and consolidates social relationships (p. 153). For example, individuals become bodily engaged within social practice: they may go for lunch with friends to interact socially, and also to appease their hunger. While eating at the restaurant they may be unaware of the amount of calories they are consuming. This social act may occur daily or weekly, contributing to weight gain over a period of time. This example supports the notion of weight gain as a chronic temporal process that often “creeps up” on individuals while they enact aspects of their daily lives (Crossley, 2004). In turn, weight loss is not a sudden process, but also occurs over time through the modification of daily activities or adoption of new health habits. Therefore, the body as the source of society is significant to the process of gaining and losing weight. However, it may not account for individuals’ recognition of the fluctuation of their weight, or form socio-cultural perceptions surrounding body size.

The body also serves as a location for the structural properties of society. Social structure or cultural symbols may be inscribed onto bodies. Bodies become prime locations for economic, cultural, and social structures (Shilling, 2005, p. 31). Though the embodied characteristics of humans build society, society possesses the power to “react back” upon these bodies (p. 10). This may occur through the validation of particular bodies, appearances, habits, or actions while labelling others as deviant. Shilling (2005) suggests that recognizing the body as a location implies that there is also a causal link travelling from society to the body, not to the extent that the body becomes a social construct in itself, but that people are encouraged to act with their bodies in certain ways rather than others. For example, if eating constitutes a source of sociality, Shilling (2005) would also argue that, in the act of eating, there is embodiment of wider social structures. This can be attributed to the
range of foods available to human populations, the social norms that shape levels of individual consumption, and the fact that there are no biological restrictions on where and with whom food can be eaten. Even hunger and appetite can be so deeply affected by societal norms of body image that it can affect individuals’ relationships with food (Shilling, 2005). Weight gain is something that is “not felt from within but perceived from without” (Crossley, 2004, p. 243). Part of the recognition of weight gain occurs through other people’s perceptions and comments, through viewing the body as an object in mirrors or photographs, in attempting to fit into or wear particular types of clothing (e.g., bathing suits), or finding that one does not fit into “normal” clothing sizes. The body then is not only receptive to society, but individuals may feel socially isolated based on their body size.

Finally, the body can also be conceptualized as a vital means through which individuals are positioned within and oriented towards society. How individuals respond to society can reform their bodies in ways that either reproduce or transform social structure, or helps them to gain social acceptance or become more distanced from social institutions. This is evident in individuals who have been labeled as “obese” who often cannot find proper seating on public transportation, may have to shop at alternate stores for clothing, or feel highly visible while in social settings (for example, fast food restaurants) that are thought to encourage their body size. The process of eating itself can become re-positioned in relation to wider social environments, as is demonstrated through the wide range of responses to fast food culture or the response of alternative food movements such as organic farming (Shilling, 2005). Eating also serves, cross-culturally, as a way to integrate communities of people by acting as a central mode of interaction, thereby aligning itself with particular aspects of class and status, or severing individuals from their social milieu (Goffman, 1983; Bourdieu, 1984). The body then is not only receptive to society but also potentially constrained by the parameters of its social environment (Shilling, 2005).

Shilling’s (2005) use of corporeal realism strives to achieve a balance between the body acting within these three identified areas. He conceptualizes the body as a vehicle of being in, experiencing, and creating the social world in which we live. However, human bodies need to be further defined through a sociological lens that acknowledges their three-fold character as a source, location, and means of positioning individuals within society. This is
by no means a prescriptive process. It involves studying the body as simultaneous biological and social phenomenon that constructs and is constructed by society. Therefore a corporeal realist study of people who are attempting to lose weight for medical reasons would focus on these three areas while accounting for their stratified relationships.

3.6 Conclusion

Realist perspectives can inform the study of health behaviour change by allowing for multiple perspectives to emerge that describe the complexity of phenomena such as weight gain. Simultaneously, they also allow for the recognition that diseases, such as CAD, are not just cultural constructions but rather physiological conditions related to a combination of genetics and health behaviours. However, it is important to note that individual agency and social structure play significant roles in how people come to understand diseases such as CAD. The complex nature of chronic disease can be described as a stratified relationship between the biology, society, and individual experience. The notion of a body project provides a relevant framework for the discussion of health behaviour change, and the complex nature of changing one’s body for health reasons. Therefore, it is a useful tool for structuring individual accounts pertaining to diet change. However, a corporeal realist perspective can potentially uncover not only individuals’ understandings of diet, body size, and their relationship to their “ill” bodies, but also the complexity of the body-society relationship itself by providing examples of how individuals may be positioned within broader social contexts because of their health care decisions.
Chapter 4
Methodology

4.1 Introduction

This study explored the experiences of individuals enrolled in one of three large urban CR programs who were attempting to re-achieve their cardiac health through dietary change. The theoretical work of sociologist Chris Shilling (2005) was employed to analyze themes of food practices, weight loss, and diet management within CR settings. In this chapter I will highlight the methodological considerations of this study, and speak specifically to recruitments, setting, sample, data collection, data analysis, study rigor, reflexivity, ethical considerations, privacy and confidentiality, and potential risks and benefits to participants.

This doctoral study analyzed sub-themes related to food practices, weight loss, and diet management within the data set of a larger funded qualitative study titled: Gender and Co-morbidity: Everyday Tactics for Balancing Diabetes Self Care and Cardiac Rehabilitation (hereby referred to as the funded study). This study was a Canadian Institute of Health Research (CIHR)-funded qualitative project that examined how CR participants combined self-care for T2D with new health behaviours recommended by CR programs. The goals of the funded study were to:

1. Elicit participants’ descriptions of the everyday social and material circumstances in which they combine diabetes self-care and CR.
2. Identify the contextual barriers and resources encountered by participants as they strive to combine diabetes self-care and CR.
3. Identify strategies used by participants to overcome barriers or access to resources.
4. Compare male and female participants’ everyday circumstances, barriers, resources, and strategies (Angus, 2006).

I was hired as a doctoral trainee on the study and was part of the core research team. I contributed to the project by interviewing participants, attending all team discussions, and assisting in the analysis for the funded study. Since the study focused on people with T2D...
and CAD, both risk factors associated with weight gain, it was appropriate to explore the experiences of weight loss, weight gain, and diet change with the data. As the funded study progressed it was clear that there were prominent and consistent themes emerging surrounding diet, food, and weight loss that warranted dedicated, theoretically driven exploration and analysis. At the beginning of my doctoral program I had an interest in the social responses towards individuals who were deemed “fat” or “obese”. During my work within the funded study I noticed, along with the others on the core study team, that from the beginning there were many detailed discussions about food and eating practices to the extent that there was enormous potential for a dedicated analysis. The principle investigator (who was also my doctoral supervisor) and I negotiated this analysis as a doctoral study. I started my own work with the data set about halfway through the data collection for the funded study. The purpose of this doctoral study was to explore how CR participants with T2D respond to suggestions for and education about diet change. The study approached this specific analytic focus with the following research questions in hand:

1. How do CR participants describe the significance of food to their health?
2. How do CR participants attempt to restructure their eating habits to enact dietary changes?
3. What are CR participants’ descriptions of personal, partnered, and community relationships with food?
4. How do CR participants attempt to navigate diet changes within different social contexts?

In order to address these research questions, purposeful methodological decisions were made within my study design. The following section highlights how I designed my doctoral study to complement both the philosophical and theoretical considerations of the funded study, while at the same time ensuring that my theoretical lens would elicit a more nuanced analysis of dietary change and weight loss in CR settings.

4.2 Methodological Considerations of the Study

Methodology within qualitative research is a comprehensive approach in which the research design, questions, and analysis align closely with foundational theoretical/philosophical
assumptions of the study design (Hesse-Biber & Leavy, 2006, p. 36-37). Often, methodology is described as a bridge between theory (ideas) and method (doing), offering consistency and coherence throughout the entire research process and “serving as a strategic but malleable guide throughout the research experience” (Hesse-Biber & Leavy, 2006, p. 36 in Kramer-Kile, 2012). Thompson-Klein (2007) reminds us that methodology is influenced by the purpose and goals of the study, the problems and questions that are addressed, the actors who are involved, allegiances to particular research traditions, methodological preferences, institutional settings, and the interdisciplinary approach that is being practiced (p.42). The first part of this chapter deals with the methodological decisions made within my study design. Because this study unfolded as an analysis of consistent themes within a larger data set, it is important to articulate how this study design aligned with the methodology of the larger funded study. To begin, I will highlight the epistemological and ontological foundations of my study, and contextualize why these choices complemented the funded study design. I will then outline the recruitment strategies for the funded study, provide a description of the research setting, articulate sample size determinants, and then provide a description of the participants. Data collection techniques will also be identified and explained. Finally, I will speak to my analysis of the data in light of the methodological considerations of the study.

4.2.1 Articulating Epistemological and Ontological Concerns

Prior to speaking to the specific methodological choices made within my study design, it is important to identify the epistemological and ontological foundations, and to contextualize the methodological fit of my work within the context of the funded study. Purposeful decisions were made regarding the choice of my theoretical lens in order to complement the funded study design, and extend my analytic approach to the data. The funded study design employed a qualitative approach informed by the meta-theory of critical realism. A critical realist stance within qualitative research supports the epistemological stance that participants are knowledgeable about the practices of their social worlds and embedded (often implicitly) within their accounts is information about these worlds (Archer, 2003). Thus, participants’ narratives are indexical to these social contexts in which both the researcher and the participant are located.
I was able to apply and in some sense refine, the meta-theory of critical realism used in the funded study by drawing from theoretical perspectives related to the social theory of the body. As discussed in the previous chapter, this doctoral work is based on corporeal realism, a social theory guided by a realist ontology focusing on the body-society relationship. Social theories such as corporeal realism can be utilized to justify a methodological approach to a phenomenon (Sandelowski, 1993). Realism provides both a framework for the research design of this doctoral study, and a lens to focus my analysis of the funded study data. However corporeal realism itself, as with critical realism, does not constitute a research method, but rather has methodological and theoretical implications for research (Clark et al., 2008). This theoretical approach to the data provided a unique opportunity to focus on the complex relationships between the human body and society in individuals who were attempting to modify pre-existing health behaviours. Therefore, a corporeal realist study of diet practice and body size seeks to articulate the embodied relationships between individual behaviours that shape material bodies, the social relationships that regulate social bodies, and broader social norms that serve to include or exclude individuals from society.

Corporeal realism is grounded in the ontological assumption that the human body is a multi-dimensional medium for the constitution of society. The human body is recognized as a biological organism, a site of embodied experience, and a vehicle for social practice. A corporeal realist perspective maintains that the human body is the core and the catalyst for the body-society relationship, in that society cannot exist without the human body. Corporeal realism draws primarily from two central tenets of critical realism to highlight the complexity of the body-society relationship: emergence and stratification (discussed in chapter 3). Shilling (2005) recognizes the ontologically layered character of the relationship between structural forces (institutions and roles that constitute society) and embodied social actors, by using the realist principle of stratification to come to understand the interaction of the human body within society over time.

Corporeal realist and critical realist perspectives are ontologically compatible because they similarly conceptualize a reality that is partially and imperfectly knowable depending on the positioning of the knower. Both accept that this ontological stance enfolds constructivism and relativism but also directs attention to extra-local phenomena that may exert influence on
individual contexts. Central to both of these perspectives is the ontologically stratified character of the relationships between embodied social actors, structural forces, and the institutions and roles that constitute society (Shilling, 2005). Realist approaches to nursing research advocate that the complex causes of how and why changes in health or social factors occur need to be understood. This understanding includes dimensions of context (social and physical environments), as well as characteristics of the individual interacting to influence health in order to design interventions to improve health (Clark et al., 2008, p. E73). Both allow for the discussion of the biological body within social theory. However, a corporeal realist lens may offer a sharper frame of analysis for themes related to body size because it:

1. Focuses specifically on the body-society relationship, allowing for an exploration of how these two emergent factors combine to produce phenomena such as body size or perceptions related to diet and health.

2. Provides an avenue in which to explore how individual decision making and social structure shape the human body.

3. Explores how individuals come to understand the relationship between health and their diets.

The remainder of this chapter addresses the study procedures and methods used, beginning with a description of the research setting, recruitment strategies, and the study sample.

### 4.3 Setting, Recruitment and Sample

#### 4.3.1 Setting

CR is an outpatient interventional program focused on secondary and tertiary management of individuals with heart disease. Individuals who are living with heart disease or thought to be at an increased risk for developing heart disease are often referred to CR through their cardiologist, family doctor, cardiac surgeon, or any other physician that may feel that the individual would benefit from heart education (St. Michael’s Hospital Cardiac Rehabilitation Centre, 2011). The focus of CR programs is on the modification of cardiac risk factors through behavioural change and educational support. Historically, CR programs have
focused primarily on cardiovascular exercise outcomes, but they now include interventions focused on dietary management, weight loss, smoking cessation, psychological support, and the management of co-morbid factors, along with exercise. It has been found that individuals who participate in CR programs after the initial treatment of a cardiac condition decrease their mortality by approximately 25% (CACR, 2009; Heart and Stroke Foundation of Canada, 2011). However, only 30% of eligible participants enroll in Canadian CR programs.

Participants for this study were recruited through one of three large urban CR programs in Toronto, Canada including: St. Michael’s Hospital Cardiac Rehabilitation Centre; Cardiac Rehabilitation and Secondary Prevention Program, Toronto Rehabilitation Institute; and Women’s Cardiac Health Initiative at Women’s College Hospital (see Appendix H for Program Descriptions). The three programs varied in regards to aspects of program delivery but remained the same in terms of program focus (See Appendix H for detailed descriptions of each program). For example, each CR program primarily focused on building exercise capacity and provided additional education regarding cardiac risk factor management. Table 4.1 below compares and contrasts the three CR programs used for this study. A major difference to note between the programs is that the St. Michael’s Hospital program was a home-based program. Participants did not attend on-site programming but instead were provided with educational information and an exercise prescription to follow. They completed their CR education and exercise at home and checked in at the 3-month, 1-year, 2-year, and 5-year marks. The Women’s College Hospital and Toronto Rehabilitation Institute CR programs were conducted on-site at each of the respective institutions. While participants were provided with educational material to take home and were also encouraged to complete aspects of their exercise prescriptions at home, the majority of both the Women’s College Hospital and Toronto Rehabilitation Institute CR programs were conducted on-site under the supervision of health care professionals. The length of the programs also differed (see Table 4.1). However, despite the differences in aspects of program delivery, participants in all programs focused on increasing exercise capacity, risk factor modification, and diabetes management. Furthermore, systematic views pertaining to the overall effectiveness of secondary cardiac prevention programs demonstrate that CR outcomes do not differ between programs (Clark et al., 2005). Additionally, the funded study was primarily concerned with people’s everyday practices of incorporating CR education and prescriptions,
not with the programs themselves (Angus, 2006). A significant part of these everyday practices for CR participants was the integration of new health practices related to diet and weight loss. The data set revealed extensive accounts of participants’ efforts to manage their diabetes and heart disease through dietary change.
Table 4.1 Summary of CR Programs Used for the Study

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Program Entry Criteria</th>
<th>Program Length</th>
<th>Program Focus/Location</th>
<th>Program Referral</th>
<th>Focus of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>St.Michael’s Hospital, Cardiac Prevention &amp; Rehabilitation Centre</td>
<td>Men and women with established coronary heart disease (program not taking individuals at risk for heart disease at this point)</td>
<td>5 years total</td>
<td>Home-based program</td>
<td>Cardiologist, family doctor, cardiac surgeon, or any other physician who feels individual will benefit from CR program</td>
<td>Home-based exercise plan Information provided regarding: -Healthy eating -Weight management -Stress management -Diabetes -Smoking -Blood pressure -Cholesterol management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schedule of visits: Initial visit, 3-month visit, 1-year visit, 2-year visit, 5-year visit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women’s Cardiovascular Health Initiative, Women’s College Hospital</td>
<td>Women with existing or potential heart disease</td>
<td>3-6 months depending on chosen program</td>
<td>Site-based program with home-based options</td>
<td>Physician referral—referral form available on website for participant to download and take to physician</td>
<td>-Risk factor management -Nutrition -Women and heart health -Menopause and heart health -Support -Principles of self-care -Mood matters (cognitive behavioural therapy) -Cardiac medications -Heart health at home and away -Smoking cessation therapy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toronto Rehabilitation Institute, Cardiac Rehabilitation Program, Rumsey Centre</td>
<td>Men and women with history of: - heart attack -cardiac surgery -angioplasty -angina -or at high risk of heart disease</td>
<td>6-12 months</td>
<td>Site-based program with home-based options</td>
<td>Physician referral—referral form available on website for participant to download and take to physician</td>
<td>-Personalized exercise program -One-to-one counselling and group sessions with a psychologist, social worker and dietician -Educational lecture series for family and friends -Diabetes, exercise and healthy lifestyle program</td>
</tr>
</tbody>
</table>

4.3.2 Recruitment Strategies

The funded study recruited 17 men and 16 women (17 women were interviewed but one was withdrawn from the study because it was revealed that she had type 1 diabetes and did not meet inclusion criteria) who were enrolled in one of three large urban Cardiac Rehabilitation
programs. Criterion sampling, a sample technique focusing on the selection of participants according to one or more criteria aligned with a particular theoretical or substantive relevance, was used (Angus, 2006). On recruitment to the study participants met the following criteria:

1. Enrolled in the cardiac rehabilitation program for 1-3 months.
2. Diagnosed with CAD.
3. Diagnosed with and taking medication for T2D
4. Willing and able to participate in qualitative interviews in English.

Study recruitment occurred through the CR programs. An information flyer (Appendix E) was posted where CR participants would see it, and the study was announced by the CR staff at the beginning of program meetings. Potential participants were asked to contact the principal investigator (Dr. Jan Angus) by phone if they were interested in learning more about the study and their eligibility to participate. All participants who agreed to be in the study went through a process of informed consent (Appendix D), and were informed that they could leave the study at any time. The study protocol was approved by the ethics boards at each of the respective programs, as well as through the University of Toronto.

4.3.3 Description of Sample

All participants were in the early stages of learning and incorporating CR practices into their daily lives. This allowed the researchers to capture and explore the initial problems faced by participants in regards to health behaviour change and self-care management of their chronic illness conditions. As demonstrated in Table 4.2 below, on average women within the study had been living with T2D for 7.2 years, while the average for men was 10.5 years. The majority of the participants had previously attended diabetes education clinics. Interestingly, not many of the participants had access to weight support management at the time of the study. The sample demographics varied across characteristics such as marital status, ethnicity, employment, and age (Table 4.2). First, 56% of the women in the study were married/living with a spouse, while 44% lived alone (identified as single, widowed or divorced). The majority of the men within the study (87.5%) were married/living with a spouse, and only two men lived alone (one was widowed and the other was divorced). This
was significant as social relationships influenced the uptake of dietary changes significantly. Secondly, the majority of participants within the study (13 women and 9 men) identified as immigrating to Canada. This finding is not unexpected in a diversely populated city such as Toronto, although it is noteworthy that all had resided in Canada for at least 20 and as much as 60 years (Seto Nielson et al. 2012). This was significant for various reasons, as this characteristic of the sample group influenced aspects of the interviewing process and there may have been specific anxieties and potential vulnerabilities arising from the interview context. These potential influences within the study interview will be discussed in section 4.4.2 in this chapter. Thirdly, many of the women within the study were employed or volunteered, while the majority of the men were retired. The time available for dietary change was significant for study participants. Finally, the study participants’ ages ranged from 52-69 years for the women and 53-79 years for the men. Surprisingly, the women within the study were not noticeably older than the men given the literature which states that women develop heart disease later in life. More specifically, research has shown that women typically develop manifestations of coronary heart disease (CHD) about 10 years later than men (The National Coalition for Women with Heart Disease, 2011). Perhaps, contributing to this characteristic of the sample group, was that several women within the study had strong family histories of heart disease and were diagnosed with their first myocardial infarction at a young age. Also, it should be taken into consideration that women with coronary artery disease have a higher morbidity and mortality rate than men despite the fact that women have a lower prevalence of CHD (The National Coalition for Women with Heart Disease, 2011). More to the point, women with significant heart disease may have not survived their initial or subsequent cardiac events and were thereby not referred to Cardiac Rehabilitation.
Table 4.2 Demographic Data of Participants for Funded Study

<table>
<thead>
<tr>
<th>Gender and Co-Morbidity Sample Description</th>
<th>Women (n=16)</th>
<th>Men (n=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (range years)</td>
<td>(52-69)</td>
<td>(53-79)</td>
</tr>
<tr>
<td>Married</td>
<td>N=9</td>
<td>N=14</td>
</tr>
<tr>
<td>Living with spouse</td>
<td>(56%)</td>
<td>(87.5%)</td>
</tr>
<tr>
<td>Single/Divorced</td>
<td>N=7</td>
<td>N=2</td>
</tr>
<tr>
<td>Widowed/Living alone</td>
<td>(44%)</td>
<td>(12.5%)</td>
</tr>
<tr>
<td>Employment Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Full time</td>
<td>N=4 (25%)</td>
<td>N=5 (31.25%)</td>
</tr>
<tr>
<td>• Disability/Casual</td>
<td>N=3 (19%)</td>
<td>N=2 (12.5%)</td>
</tr>
<tr>
<td>• Part time</td>
<td>N=1 (6%)</td>
<td>N=0</td>
</tr>
<tr>
<td>Volunteer/Other:</td>
<td>N=2 (12.5%)</td>
<td>N=0 (0%)</td>
</tr>
<tr>
<td>• Unemployed</td>
<td>N=0 (0%)</td>
<td>N=0 (0%)</td>
</tr>
<tr>
<td>• Retired</td>
<td>N=6 (37.5%)</td>
<td>N=9 (56.25%)</td>
</tr>
<tr>
<td>Canadian-born</td>
<td>N=3 (19%)</td>
<td>N=7 (44%)</td>
</tr>
<tr>
<td>Immigrant</td>
<td>N=13 (81%)</td>
<td>N=9 (56%)</td>
</tr>
<tr>
<td>Attended diabetes education clinic</td>
<td>N=12 (75%)</td>
<td>N=10 (62.5%)</td>
</tr>
<tr>
<td>Average Number of Years with Diabetes</td>
<td>7.2 years</td>
<td>10.5 years</td>
</tr>
<tr>
<td>Access to Weight Support Management</td>
<td>N= 4 (25%)</td>
<td>N= 3 (19%)</td>
</tr>
</tbody>
</table>
Morse (2000) recommends that qualitative researchers determine sample size by reflecting on the overall scope of the study, the nature of the topic, the quality of data, the study design, and the use of shadowed data. Often it is said that the broader the research question, the longer it will take to reach saturation of the data. The funded study data set yielded rich and detailed accounts of themes related to diabetes self-care practices, CR education, diet, weight loss, and exercise. The research goals for this doctoral study were based on theoretical sampling of the data, and explored emerging themes related to diet change, food practice, and weight loss. All of these topics reflected common areas of discussion and concern for the study participants. Within qualitative research design 33 participants could be considered a large sample, particularly within a data set such as this one, collected by per participant in-depth interviews. One of the most significant factors within this sample, confirming that the size was adequate, was the evidence of shadowed data within the transcripts. Often participants spoke not only to their personal experience, but also to the experience of others, in terms of how their own experiences differed from or resembled others’ experiences. Shadowed data is helpful because it provides direction for theoretical sampling, and provides to clues to help enhance analysis (Morse, 2000, p. 4).

4.4 Data Collection

Data collection for the funded study involved two in-depth interviews (each interview was 60-90 minutes in length), an activity journal completed by each participant, and reflexive field notes completed by the interviewer. All interviews were audio-recoded and transcribed; each transcription was checked against the recording to ensure accuracy.

4.4.1 In-Depth Interviews and Activity Journal

Interviewing participants, by asking them to talk about their life experiences, provided a way of generating empirical data about individuals’ social worlds. Qualitative interviews are social encounters in which knowledge is co-constructed through an active process between interviewer and participant (Holstein & Gubrium, 1997; Hesse-Biber & Leavy, 2004). In-depth interviews aim to explore the complexity of meanings and interpretations by using open-ended questions to elicit anecdotes and detailed description (Liampittong & Ezzy, 2005; Miller & Crabtree, 1999). In this section I will outline the focus of the two in-depth
interviews used for the study. I will also speak to the limitations of qualitative interviewing in general and within the context of this study, and highlight how discourses to which participants had been inculcated during CR may have been activated during some points of the interview.

Two in-depth interviews were completed for the study. The first interview was scheduled at a time that was convenient for each of the participants after they completed the process of informed consent for the study. Interviews took place on-site in a private room/office at the CR program or in the participants’ homes (if they preferred). The interviews were 1-2 hours in length. The first interview began with “grand tour” questions that encouraged participants to describe their history of diabetes and heart disease, biographical features of their lives, everyday routines, occupations, and practices within their homes. This approach enabled participants to begin with familiar, easy-to-discuss topics, while providing the interviewer with valuable background information (Holstein & Gubrium, 1997; Fontana & Frey, 2000). A topic list was used to guide the first and second interviews (Appendix 1); topics ranged from diabetes management and self-care, CR goals, participants’ biographical histories of heart disease and other health problems, complexities of self-care with multiple health problems, current experiences in CR, and discussion of points made in the activity journal (within the second interview). The first interviews established rapport between interviewer and participant, and helped familiarize participants with the logics of qualitative interviewing.

The second in-depth interview occurred one month after the first interview (there were some participants who had interviews later than one month due to vacations or time away). After the first interview, participants kept an activity journal for 7 days. The participants were instructed to start their journal on any day of the week, and to write in either point form or full sentences. They were encouraged to write down activities related to CR and health routines, diabetic regimens, activities that they may have completed or chose not to complete on any given day, as well as how they felt physically and emotionally. The activity journal was used as an elicitation tool in the second interview to help to gain a more detailed description of the participants’ daily routines. It was not analyzed, but was referred to during review of the interviews. The second interview provided an opportunity to discuss the
activity journal, and to gain further insight into issues of the greatest importance from the participant’s lifeworld. Issues arising from the first interview were also explored in more detail, as were questions focusing on the CR program. Some of the topics discussed in more detail within the second interviews included daily diabetic self-care practices (for example, diet and blood glucose monitoring), weight loss management strategies, eating and food practices, exercise regimes, as well as barriers and facilitators that participants faced while adapting to new health behaviours. If a participant did not complete their activity journal prior to the second interview they were encouraged by the researcher to recount the events of a typical day in terms of their health management.

4.4.2 Potential Factors Influencing the Interviews

Despite the varying forms of knowledge that can be revealed through interviewing, there are also limitations as to what can be “known” or said within a qualitative interview. The social and political location of the research may also further influence the interview process as well (Guillemin & Gillam, 2004). I will speak to these influences within three contexts: 1) how participants may have interpreted aspects of the interview, 2) the influence of my dual role as a researcher and cardiology nurse during the interviews, and 3) specific anxieties and potential vulnerabilities of participants during the study interviews.

To begin with, some participants questioned the focus and intent of the research interview. They were concerned with what would be asked during the interview, how to answer the questions, and with whom the information would be shared. Because this study was aligned with CR programming it was important for the researchers to differentiate the study and their own affiliations from the program itself. This occurred through the process of informed consent and through continual conversations with participants regarding the intent of the study throughout the interviewing process. As the interviews progressed, participants developed comfort with the conversational nature of qualitative interviewing and gained more confidence in sharing their experiences with the researchers.

However, it is important to note what shapes the knowledge gained through qualitative interviewing. For instance, the wording of questions or the non-verbal stance of the interviewer during the interview may have shaped (unintentionally) how the participant
formed the answer to a question (Grant, Rohr & Tobin Grant, 2012). Initially, participants are faced with the task of comprehending and interpreting the meaning or purpose of the questions posed during the interview. Often, they are asked to reproduce past experiences or dates, and they struggle to provide the “correct answer” to an interviewer’s question (Grant et al., 2012). This may lead to participants giving answers that they think the interviewer wants. Grant et al. (2012) suggest that these answers may be influenced by social desirability, gender dynamics, or power differentials between the participant and the researcher. Merry et al. (2011) also note that age, culture, religion, ethnicity, appearance, interview environment, and real and perceived differences in power or knowledge can also influence the dynamics of an interview. I speak specifically to the potential influence my dual role as a clinician and a researcher may have had on the participants during the interviews in section 4.7 of this chapter. Therefore, the answers provided to questions within a qualitative interview cannot be taken as “objective statements” divorced from the interview context.

It is important to explore in more detail the potential anxieties of the participants during the interviews. A high number of participants within the study disclosed their immigrant status. Though all of the participants immigrated to Canada more than 20 years ago, it is important to reflect on my role as a researcher situated within a majority cultural group interviewing non-majority cultural groups. Merry et al. (2011) suggest that research participants with immigrant status may be at risk of not understanding the purpose of, or their purpose in, the research study. They may also feel intimidated in relation to the research process or concerned that their participation within the CR program may be jeopardized if they do not participate within the study. Within the study interviews, time was spent with each participant explaining the focus and intent of the research study. It was made clear that participation was voluntary (and they could stop participating at any time) and not aligned with their participation within the CR program. Time was taken during the interviews to establish trust and rapport with each participant. This occurred by explaining how confidentiality would be kept during the study, specifically how names and personal identifiers would not be shared outside of the research team. Additional time was taken to explain the consent form in more detail and to answer any questions. Participants were also able to determine where and when the interview would take place.
The interview guide contained a mix of open-ended questions and probes designed to enhance participants’ responses (Guillemin et al., 2004). Specific care was taken in regard to obtaining responses when sensitive topics came forward, particularly if the participant expressed discomfort or gave a modest response to a specific question (for example, at some points in the interviews some of the male participants may have been asked about erectile dysfunction). When introducing a sensitive topic the interviewer obtained process consent. For example, we first asked the participant if it was alright if we discussed sexual health issues such as erectile dysfunction. This process was followed for all participants in the study. Often, the interviewer also provided an introduction to the topic and explained why the question was being asked. Although all of the participants who identified as immigrants within the study spoke English as an additional language throughout the interviews, analysis focused on the meaning of source language rather than verbatim translation.

4.4.3 Field Notes

Rapley (2004) recommended that researchers write up notes on the interview encounter, noting both pre- and post-tape talk alongside the interviewer’s observations of the interviewing process, and their reactions throughout the interview. The interviewers completed reflexive field notes after each of the interviews. These field notes included the interview setting, particularities of the setting (particularly if it was in the participant’s home), the appearance of the participant, any aspects of non-verbal communication arising from the interviews, and any other thoughts the interviewer had before, during, and after the interview. The reflexive field notes maintained both a descriptive and interpretive focus on the events as they occurred. The field notes also served to inform the analysis because they were read alongside the interview transcripts. The field notes also dealt with comparative points, especially later on in the study, and guided questions that were asked in future interviews.

4.5 Data Analysis

Qualitative analysis is an ongoing process that starts from the first interview. I concurrently collected and analyzed data with the core research team of the funded study. This emergent process led to familiarity with the similarities and differences among interviews, while at the
same time directing future interviews towards topic areas that may have been missed, or areas that needed to be explored in more detail (Morse et al., 2002). Qualitative analysis is an iterative process that entails both an understanding of how to approach large amounts of data, and of how to generate concepts and themes while determining why patterns and outcomes have occurred (Ritchie & Lewis, 2007). It is important to note that the process of analysis does not occur in a social vacuum, but is influenced by the epistemological, ontological, and theoretical assumptions of the researcher (Mauthner & Doucet, 2003). Corporeal realism served as both a theoretical and analytical lens for my doctoral work.

I employed a three-phase analytic structure to qualitative analysis that included data management, descriptive accounts, and explanatory accounts (Ritchie et al., 2007). This was an iterative process that worked in-depth in each of these phases. During the first phase of data management, I attempted to reduce the data and make it more manageable by generating themes and concepts. To begin with, I wrote reflexive notes for each participant focusing on the themes of body size, weight loss, weight gain, diet strategies, and food practices. A significant part of the conversation during the interviews was situated in the management of T2D and CAD. Following this exercise, I mapped out the specific themes arising on large charts that contained the rudimentary theme, sub-codes and definitions, and sample quotes from participants. These charts focused on diet management, blood glucose regulation, weight gain, and exercise. I used these charts to organize the emerging themes as well as to help organize the conversations with my supervisor during the analysis. As time went on these charts became more nuanced, and I applied a corporeal realist lens to the data. More specifically, I looked at the thematic categories in regards to how participants spoke about their bodies and experiences of navigating their social worlds.

The next phase to make use of the synthesized data was to prepare descriptive accounts (Ritchie et al., 2007). Descriptive analysis includes the actual words used by participants, and the content of their accounts to help to clarify phenomena. Specific explanations of the social world, participants’ beliefs, personal circumstances, or specific behaviours can be reflected within specific typologies. Within this stage of analysis I attempted to identify how participants referred to the body-society relationship. Explanatory accounts were developed at the later stage of qualitative analysis. Patterns were sought within the data, as were
explanations for their occurrence. In this stage of analysis, I attempted to address the stratified nature of the body-society relationship of participants’ narratives and themes that emerged from the study data.

Throughout the iterative process of data analysis, it is also important to think theoretically, but not to seek to interpret the data purely from a pre-chosen theoretical perspective (Hammersley & Atkinson, 2007). Although corporeal realism served as an ontological starting point and guided specific methodological choices in the context of this doctoral work, there was always the chance that the emerging data would not “fit” within this theoretical lens. Therefore, I ensured that theory development started with the data, and then moved towards broader theoretical understandings that were well developed, informed, and consistent throughout (Morse et al., 2002). In order to further describe this process I turn to Danermark et al.’s. (2002) discussion of theoretical sampling. As stated earlier, qualitative analysis is an inductive process. As conceptual categories (or themes) are generated throughout the analysis, they should express the meanings within the data. Therefore, theory should fit the data rather than the data fitting the theory (Danermark et al., 2002, p.130). As the analysis progressed it was clear that a corporeal realist theoretical stance was dense enough to integrate multiple data from different situations pertaining to diet change. As questions arose from the analysis itself, the theoretical perspective within this study was more rigorously explored. Theoretical resolution was reached when the data no longer provided new knowledge relevant to the themes arising, while at the same time these thematic areas remained well grounded within the data.

## 4.6 Rigor

Whereas validity was once seen as a term primarily belonging to quantitative methods, some authors have adopted it again into qualitative methods on the premise that to validate is to investigate, check, question, and theorize (Kvale, 1989). Validity should be re-conceptualized according to the particular form of qualitative inquiry, and strategies for ensuring rigor should be built into the qualitative research process with the goals of finding plausible and credible explanations (Sparkes, 2001). More specifically, within qualitative research validity is often demonstrated through personal and interpersonal reflection, and
methodological coherence, rather than the overall influence of the methodology itself (Reason, 1981). Throughout the study I used verification strategies outlined by Morse, Barret, Mayan, Olson, & Spiers (2002) which included: investigator responsiveness, methodological coherence, appropriate sampling, collecting and analyzing data concurrently, thinking theoretically, and developing theory. Verification, which Morse et al. (2002) define as a “process of checking, confirming, making sure and being certain” (p. 5), is a continuous process. Verification strategies help the researcher identify when to continue, stop, or modify the research process in order to achieve reliability, validity, and ensure rigor.

The first strategy was that of investigator responsiveness, which involves the researcher’s ability to use verification strategies to determine reliability and validity of the study as it evolves (p. 5). This involved listening to the data, not working solely from previously held assumptions or theoretical frameworks, and an ability to move beyond the technicalities of data coding. As I engaged with the analysis of the data, I reflected on the theoretical fit of the data, and let go of my own presuppositions about the topic at hand, keeping in mind that qualitative research evolves and changes as it progresses, often presenting new topic areas and insights. Therefore, as thematic categories emerged within the data I ensured that these themes closely correlated and expressed the meaning of the data rather than the data adapting to previous interpretation or predefined theoretical categories (Danermark et al., 2002, p. 130).

The second verification strategy I utilized was that of methodological coherence. This involves the researcher remaining close to the chosen methodology by remaining sensitive as to how the data fits with the research questions and theoretical framework. If the data that emerge cannot be situated within the initial research questions, the researcher may need to refine the questions in order to more rigorously explore the data. I refined my research questions during the analysis to more rigorously explore the data that emerged regarding concepts pertaining to food practices and food relationships. My initial research questions focused on how individuals with heart disease accounted for their body size, the decisions strategies and practices participants used for weight loss and diet management, and a potential gender analysis related to body size, weight and diet management. During the analysis it was clear that a deeper approach needed to be taken to explore the sociality of diet
change as well as significant aspects of participants’ overall diet planning. I chose to look at wider themes related to the relationships between food and health, the restructuring of diet change as a wider concept, personal, partnered and community relationships with food and the complexity of navigating diet changes within differing social contexts. Two of Shilling’s (2005) discussions pertaining to eating communities and diet projects emerged as relevant frameworks in which to further explore and contextualize the emerging themes within the data. I was able to more rigorously explore the data and address more comprehensive themes examining the body-society relationship.

The third verification strategy involves choosing an appropriate sample for the study by choosing participants who best represent or have knowledge of the research topic (Morse et al., 2002, p. 6). The funded study accrued a large qualitative sample (33 participants with a total of 66 interviews). This sample is reflective of CR participants who are often managing other co-morbid risk factors, such as T2D, hypertension, and hyperlipidemia, which may stem from body size. All participants were attempting to change their health practices to manage their heart disease, and thus could be regarded as knowledgeable about the adoption and integration of new health behaviours.

The fourth verification strategy is to collect and analyze data concurrently in order to form a relationship between what researchers already know from the data, and what they in turn need to know. Diet and weight maintenance emerged as themes within the initial interviews of the funded study. The study team was able to build upon these themes as part of the interviewing process. I was also involved in the ongoing analytic discussion surrounding the data set. The final verification strategy of thinking theoretically and developing theory has been addressed within the first part of this chapter under the epistemological and ontological concerns of the study (see section 4.2.1).

### 4.7 Reflexivity

Reflexivity is a deconstructive exercise on the part of the qualitative researcher to locate the intersections of the author, other, text, and world (Macbeth, 2001). The concept of reflexivity has traditionally been situated on matters related to social location, theoretical perspective, researchers’ emotional responses to the respondents, and the need to document the research
process (Mauthner & Doucet, 2003). Within this section I will speak to aspects of reflexivity within the context of this study. To begin with I will address the implications of my dual role as a researcher and a clinician. Then, I will discuss how reflexivity was addressed within the study team meetings and finally, I will speak to how I maintained reflexivity during the analysis of the study findings.

For the majority of my nursing career I worked and taught within the area of cardiology; this experience shaped how I initially approached the interview process and informed my approach to the study in different ways. In this section I reflect on my dual role as a clinician and a researcher specifically within the interviewing process. At the beginning of the study it was challenging not to position the interview as a clinical encounter. For example, it was evident during points of the interviewing process that I was asking some of my questions through a clinical lens. Participants reacted to this by providing direct answers surrounding their care regimes and attempted through their dialogue to show that they were compliant with their CR programming. This happened in the first interviews I completed for the study. My supervisor and principal investigator for the study gave me feedback on my interview transcripts, and participated in reflexive discussions with me as I identified patterns that were emerging within my interviews, particularly patterns where I shifted the interview towards a clinical focus rather than further exploring the meanings behind participant accounts. This feedback helped me to change my interviewing approach in subsequent interviews. Sometimes my clinical knowledge was helpful in that I could approach specific contexts within the interview and explore them in more detail. For example, one participant spoke extensively about HgA1C levels. I was able to explore her understanding of this medical test and apply it to wider contexts of her diabetes management. At other times, participants were distracted from the interview itself and sought medical advice or knowledge. In these instances I adhered to ethical principles within the research process. I outline an example of one of these situations within section 4.8 of this chapter.

During our funded study group meetings we were encouraged to reflect on difficult situations, and I was able to obtain feedback from the study team regarding these instances of complexity or discomfort within the interview. The study team also documented in reflexive field notes our responses and feelings during the interviews. These notes described the
research settings, as well as any specific thoughts or feelings that the interviewer had at the time of the interview. As a team we also recognized that while our research participants may never be completely known to us, it was possible “to grasp their articulated experience and subjectivity through the research encounter” (Mauthner & Doucet, 2003, p. 423). Also, through a critical realist lens, there are limits as to what can be told to the researcher during the interview process because people are only partially conscious of how they are situated within the social world because many of the contexts in which we live are deeply embedded within our daily social practice.

To some extent, the relationship that I had with the funded study team, as well with as my supervisor, shaped the methodological, theoretical, epistemological, and ontological contours of my thinking and dissertation (Mauthner & Doucet, 2003, p. 422). Exposure to critical realism and ethnography caused me to gravitate towards complementary theoretical perspectives that allowed me to remain ontologically committed to the funded study design, while in turn providing opportunities for further exploration and study. The intellectual development of my research was also connected to the interpersonal, political, and institutional contexts within the University of Toronto Lawrence S. Bloomberg Faculty of Nursing. The majority of the faculty who were engaged within qualitative research had strong theoretical backgrounds within the humanities and social sciences. Our doctoral seminars led by the Dean of Nursing focused on complex methodological issues within research design. I also connected with a core group of doctoral students from both nursing and sociology who had an advanced interest in social theory, philosophy, and qualitative research design.

A key component of maintaining reflexivity during my data analysis was allowing for and creating dedicated time, space, and contexts in which to be reflexive (Mauthner & Doucet, 2003, p. 425). I kept a reflexive log pertaining to each of my participant’s transcripts, had regular meetings with my supervisor during the analytic phase of my work, and continually revisited my theoretical framework. I was aware of the ontological and epistemological assumptions within my theoretical framework, and attempted to be reflective in how I positioned and interpreted participants’ accounts during the analysis. However, at times the particularities of my personal biography as a registered nurse in cardiology needed to be
reflected upon during the analysis, especially in instances where I found myself positioning participants as being “non-compliant” with their CR prescriptions, or “naïve” to the effects of their disease on their bodies. For example, some participants interpreted their blood glucose levels as improved when they were still critically high. My theoretical perspective, which drew from realist ontology, allowed me to recognize that at times some forms of knowledge may be privileged over others, though all sources of knowledge should be accounted for and ultimately all forms of knowledge contain aspects of fallibility (Danermark et al., 2002). However, no matter how reflexive researchers try to be, their “intentions, emotions, psyche and interiority are not only inaccessible to the reader of their research, they are likely inaccessible to the researcher herself” (Grosz, 1995, p. 3 in Mauthner & Doucet, 2003). Therefore, there are aspects of my own self, which I may not have been reflective about, that influenced the research process.

4.8 Ethical Considerations

Gillemin et al. (2004) distinguish between two different dimensions of ethics within qualitative research: procedural ethics and ethics in practice. Procedural ethics refers to the approval process from a relevant ethics committee to undertake research involving humans, while ethics in practice encompass the everyday ethical issues that arise in the doing of research. Within this section I will highlight the steps taken to gain ethics approval for this study, outline the consent process used, and highlight some of the ethical issues that arose during the study itself.

To begin with, ethical approval for the funded study was obtained from each of the three CR program research ethics boards, as well as from the University of Toronto research ethics board. The informed consent process was used for each participant interviewed for the funded study. Informed consent served to provide information about the research that helped to inform the participant’s decision to be in the study, while also ensuring that participants understood the information given to them and that their participation was voluntary (Silverman, 2000). The research team members for the funded study obtained consent, and provided time for the participants to ask any questions. Participants were provided with a copy of the consent form. Consent forms were stored in a locked filing cabinet separate from
the study data in the principal investigator’s office. For this doctoral study, ethics approval from Mount Royal University was also completed, through a data-transfer agreement, in order to store de-identified transcripts on a secure server and within a locked filing cabinet in my office. Yearly updates were completed within the ethics process. Interviewers were prepared to provide contact information to participants if the participant seemed to need further support from the CR psychologist or medical team. A process for support and referral for participants, if required, during the study was also outlined within the ethics documents for the funded study. The research team consisted of registered nurses who were could direct participants to available supportive services if required. The recorder could also be turned off to protect confidentiality of the participant of others. Process consent was obtained during the interviews.

There are also times within the research process when the researcher is in the field and difficult or unexpected situations arise (Gillemin et al., 2004). The researcher may be forced to make immediate decisions about ethical concerns, or determine that they or the participant may be at risk for harm (p. 273). This is referred to as ethics in practice whereas the researcher demonstrates an ability to acknowledge the ethical dimensions of practice, recognize ethical dilemmas as they occur and respond appropriately (Guilleman et al., 2004, p.9). During one of my first study interviews a participant asked me and my supervisor to help him interpret a printed sheet listing his wife’s blood results. In this instance we spoke to the confidentiality of his wife’s health records and explained that questions should be referred to her primary care provider. However, the incident also opened discussion of important particularities of caregiving in this man’s marriage. Subsequent dialogue about his own worries for his wife’s health and the intricacies of serving as translator and cultural intermediary for his immigrant was explored further within the interview.

4.9 Privacy and Confidentiality

Privacy and confidentiality of the participants was considered from the process of informed consent, through the data collection process, during the analysis, and to the presentation of the findings. Within the consent form there was a specific section pertaining to confidentiality explaining that every effort would be made by the research team to preserve
the confidentiality of the participants, and that the team would not share any information with anyone involved in the participant’s care. A pseudonym and/or study number (i.e., MP1) was assigned to each participant. This pseudonym/study number was used to identify the participant on all documents related to the study, transcripts, audio files, publications, or public presentations. The real names of the participants were on the informed consent forms that were kept in a locked cabinet in the office of the principal investigator of the study. Alongside these transcripts was a master list of the participant names and study numbers. This information was kept separately from the data as to ensure the confidentiality of the participants. The transcripts were also edited to remove any identifying data (i.e., common names, street addresses, and institutions such as hospitals or places of employment that could link the transcript back to the participant). Audio-recordings were erased on completion of the study analysis. Transcripts, activity journals, and field notes will be retained for 7 years and then destroyed.

4.10 Potential Risks and Benefits

The informed consent form outlined that participants would not benefit immediately from participating in the study, but that their contributions may influence CR programming in regards to better supporting people who must combine multiple health behaviours and routines. There were no obvious harms associated with taking part in the study, other than the involvement of time, and possibly transportation to the interview; however, the researchers made efforts to interview the participants after their program activities or in their homes. Participants were told that they might find it uncomfortable to discuss some of their experiences. In some instances participants shared particularly painful experiences. When this occurred the interviewer turned off the audio-recording device and gave participants time to express their feelings. Participants were then asked if they wanted to continue on with the interview; all participants who faced this situation expressed a desire to keep going and were made aware that their personal disclosures would not be incorporated into the transcripts. Participation in the study was voluntary, and participants were informed that they could withdraw from the study at any time without out any negative consequences.
4.11 Summary

The methodology within this study employed a corporeal realist perspective informed by the tenets of ethnography to explore the role of body-society relationship in dietary change. A total of 33 participants (17 men and 16 women) were recruited through one of three large urban CR programs. Participants took part in two in-depth interviews and the completion of an activity journal during the first 1-3 months of their CR programs. An analytic approach to the data set was employed using the approach outlined by Ritchie et al. (2007) and guided by realist theory. Ethics procedures were followed throughout the study, and participant confidentiality and privacy was maintained. The study yielded no harm to the participants. Next, I present the first of two findings chapters from my analysis.
Chapter 5
Eating Communities

5.1 Introduction to the Findings Chapters

The next two chapters focus on the findings from the study. Both chapters highlight the role of the body-society relationship in diet change (Table 5.1). Within this first findings chapter, I describe how eating shaped and was shaped by participants social worlds. I begin by exploring different relationships with food, the specific identities associated with food, and the varying food practices that emerged as a result of these same relationships and practices. All of these factors contributed to the formation of communities of eating. Eating communities played a central role in the adoption of new dietary practices because individuals engaged in dietary change had to make the decision to disrupt their community participation in order to improve their health. This chapter demonstrates how our bodies act as a source of social practice, as well as how our practices, in turn, come to position us socially through these same activities. The influence of sociality, particularly sociality structured around food, should not be underestimated for CR participants attempting to change their diet practices.

In the second findings chapter, Diet Projects, I explore in more detail how participants came to understand their bodies when engaging in diet change. A central conversation focuses on what constitutes the re-emergence of health for people living with T2D and CAD. It is evident within this chapter that social perceptions of health strongly influence how participants take up their diet changes, and that their bodies become a location for social preoccupations with health. Participants positioned their efforts in differing ways in order to address these perceptions. However, there was also a realization that their efforts to improve their health through diet were ultimately constrained by the chronic nature of their conditions. I have outlined the major themes and sub-themes addressed in both findings chapters below (Table 5.1).
Table 5.1 Themes and Subthemes in Findings Chapters

<table>
<thead>
<tr>
<th>Eating Communities</th>
<th>Diet Projects</th>
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<tbody>
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<td><strong>I. Food Relationships</strong></td>
<td><strong>I. Looking Forward, Looking Back</strong></td>
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<tr>
<td>a. Social Relationships <em>with</em> Food</td>
<td>a. Looking Forward</td>
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<td>b. Social Relationships <em>and</em> Food</td>
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<tr>
<td><strong>II. The Sociality of Food</strong></td>
<td><strong>II. Missions</strong></td>
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<td>a. Food Identities and Food Practice</td>
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<td><strong>III. Decisions about Community Membership</strong></td>
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<td>a. Informing the Community</td>
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<td>b. Disconnecting from the Community</td>
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<td>c. Maintaining Community Practice</td>
<td>b. Moralization of Health</td>
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<td></td>
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**5.2 Tracing Communities of Eating**

Within this first findings chapter, I will further explore the role of sociality for the study of diet change. I will do so by examining the creation and maintenance of various food relationships, identities, and practices that served to form and maintain communities of eating for participants in CR programs. The disruption of these food relationships and practices is significant for individuals who are attempting to change their diets for health reasons.

Throughout this chapter, I trace the persistence of eating communities through participants’ accounts of changing their eating practices, and highlight the challenges they faced in making these changes. I will also discuss the pressures faced by CR participants in maintaining community membership when engaging in dietary changes.

Prior to demonstrating the various food relationships, identities and practices found in the data it is important to contextualize my use of the term *eating community*. Pasi Falk (1994) describes eating communities as “social systems which ‘ate into’ and ‘filled up’ the bodily identities of its members via the organization of food, ritual and other cultural activities” (p. 155). Historically, according to Falk, communities of eating signified common practices of food being shared within groups. For example, people ate alongside each other, using their
hands, sharing plates, and in turn building intimate relationships with those they shared food with. He critiques modern food practices for shifting the focus from collective food practices to isolated forms of eating whereas food is no longer a primary tool of sociability but rather a resource affording individuals symbolic capital. Shilling (2005) extends Falk’s argument by suggesting that eating in modern culture lacks the social connectedness it once had because food has become a marker of individual rather than collective identity (p.155). More to the point, according to Shilling (2005), what people eat has become more important than who people eat with. This critique is significant for the study of diet change because people engaged in dieting (particularly those individuals who are living with chronic illness) are faced with the increased pressure of making the right food choices. The individualization of food practices and the responsibility for individuals to control and modify their food practices is evident within medical approaches to diet change. However, despite the pressure placed on individuals to improve their health, people continue to struggle with implementing new diets. Therefore the pressure to improve oneself is not often not enough to ensure dietary adherence. It is important, then, to explore other factors influencing dietary uptake in CR settings. Within this chapter I will argue that people are not detached from eating communities, as Falk and Shilling suggest, and that these same communities of practice significantly impact people’s efforts at dietary change. It is important to note that I am using the term “community” in a broad sense to describe a group of people who share common characteristics, interests and practices surrounding food. In some cases, these communities of eating may perceive themselves as distinct from larger society (i.e. cultural groups).

Within this first findings chapter I aim to demonstrate that CR participants belonged to various communities structured around food. These communities occurred within a variety of social contexts. Communities of eating were formed through the engagement of food relationships, identities and practices. At times, people developed strong relationships with particular foods, in some cases affording the food anthropomorphic characteristics. This was evident in participants who did not have strong social relationships with others. More commonly, people used food to foster and sustain social relationships. These social relationships may have been with friends, families, significant others, workmates or formal social groups (i.e. church groups). Therefore, participants’ accounts described membership in several eating communities at once. As participants attempted to modify their eating
practices for their diabetic and cardiac health, each community presented differing supports and challenges. While participants described the desire to improve their health, their efforts were continuously influenced and in some cases constrained by their social relationships. Therefore even though participants recognized the need to improve their health they underestimated at times the influence their social relationships had on their ability to change their eating practices.

Three primary themes influenced the development of eating communities for participants within the study: food relationships, food identity, and food practice. Though these themes are presented separately within this chapter in order to highlight central areas for discussion, they remain highly interconnected in nature. As well, all of these themes are simultaneously influencing the development and sustenance of eating communities in differing ways. After tracing how eating communities are formed, it is also important to discuss how these same communities influenced people’s abilities to make diet changes. I will show how the sociality of food remains a primary influence in this regard. Finally, I will engage with the data to demonstrate differing strategies CR participants used to address their membership within their eating communities as they struggled to improve their diabetic and cardiac health.

5.3 Food Relationships

Though the act of eating is often perceived within biomedical frameworks of care simply as a biological function required for survival, it is also a relational activity that structures social interaction. Food fuels, energizes, and sustains our bodies; but it also comforts, provides enjoyment, and connects us to others, even across time. The long-lasting relationships that people develop with certain foods often focus on foods that provide pleasure and gratification, or organize social interaction. In order to understand the complexity of what it means to modify one’s diet, it is important to start thinking about how people relate to food. Participants described their food relationships within two primary contexts. The first focused on their social relationships with food. This included how participants directly related to food and how they used food to create and sustain their social relationships. The second focus was on social relationships and food. When participants asked their communities to
make changes for their new diets they often found out how committed these communities were to them. More specifically, changes in eating practices also provided insight into the state of social relationships, and how committed others were to supporting the participants’ health through cooperating with dietary changes. Prior to delving into how social relationships were affected by the participants’ new diets, it is useful to explore the different types of relationships that participants described having with food.

5.3.1 Social Relationships with Food

Within this section, I begin by exploring how people directly related to food. Participants developed relationships with food for different reasons. To begin with, people formed individual relationships with food that may have served to fill an emotional void, provide comfort, act as a companion throughout one’s day, or act as a replacement for social interaction.

The discussion of the formation of individual relationships with food begins with Carl, a busy single father struggling to support himself and his young son on a limited income. Carl started work at 4 a.m. and worked until it was time to wake up his son for school. After he helped his son get ready and eat breakfast, Carl would take him to school and then work until his son came home in the late afternoon. Alongside his busy schedule as a single father, Carl was also dealing with serious health issues. Not yet 50 years old, he was recovering from his third MI and faced the possibility of bypass surgery or death if he did not make some drastic changes to his health. At the center of these changes was the emergent need for him to restructure his eating habits in order to better control his T2D and reduce his cardiac risk.

Carl felt the urgency and need for adopting new eating habits, but remained too busy and tired to put an increased amount of effort towards improving his health. With the pressures for Carl to complete his work and care for his son, it was not a surprise that one of his constant food companions throughout the day was a 2-L bottle of Dr. Pepper, a carbonated soda high in caffeine and sugar. Carl was aware of the health repercussions of continuing his relationship with the soda, but this awareness was often overshadowed by the intimacy of the food relationship he had developed with Dr. Pepper, the length of time he had spent drinking it, and the meaning that it had to him. He likened the relationship to having a lover who was
difficult to give up: “[It’s easier to] continue to do it [drink Dr. Pepper] than it is to fight the
damn thing and say, ‘You know what, I love you, but you have to go.’ And I can’t explain it,
I really can’t.” Carl may have sustained this food relationship with Dr. Pepper for a number
of reasons. To begin with, he did not describe any other social relationships outside those he
engaged in through work and his son. He frequently described his loneliness and mused
about what it would be like to have a partner who could help him care for his son and
manage his health:

It'd be a hell of a lot easier [to have a partner]…if you're coming home and there's a
meal there, you know, whether it's a diabetic meal [or not]. So I would notice that
part. I would say, ‘My God, you know, it's so nice to have someone who loves you
enough that they're looking after you.’ I mean, and that would go a long way. That
doesn't mean I'm going to get on the Internet and look for a diabetic housewife, but
for some people, if they are married and they're diabetics and their partner truly does
love them, it would be—the success rate for them, I bet you it would be astronomical
compared to someone who's single or a single parent.

Carl often expressed how he desired to have someone who cared for his well-being.
However, when asked why he did not seek out companionship he gave an answer that
mirrored his reason for not giving up the Dr. Pepper: He was hesitant to take the time to
develop and build new relationships, and it was easier for him to continue to do small things
through the day that made him happy in the moment than to pursue longer-term
gratifications. Individual food relationships, in the case of Carl and his relationship with Dr.
Pepper, may have acted to fill social voids. Carl often attributed his failures at diet change to
his “lack of discipline” or his inability to adhere to his CR diet plan. But perhaps it was his
eating routine and relationships themselves, rather than his perceived inability to control his
eating, which were impeding his ability to change his diet. He had shown a reluctance to
change his food relationships, or to open himself to the possibility of new relationships with
other people. The formation of new relationships, whether focused on food or people,
requires time, effort, and commitment to be successful. Carl did not feel he had the capacity
to make these changes at the time.
Carl’s was not an unusual story, and other lone participants in the study identified special relationships with food that they enjoyed in the absence of others. These participants, however, often had wider social circles but chose to engage in specific food relationships by themselves. Nabhitha was a recently retired woman in her early 60s who had immigrated to Canada from India over 40 years ago. At the time, she came over by herself and later sponsored her mother and sisters. Though she had close relationships with her family, Nabhitha lived alone her entire adult life. During this time, she developed specific food relationships that served as a comfort and as a companion to her throughout the day. Nabhitha did not enjoy cooking; most of her meals were processed foods and sweets. A common meal for Nabhitha was a can of soup on rice, followed by tea with copious amounts of sugar and sweets. A self-described “vegetarian who hated vegetables,” Nabhitha found it difficult to go to her sister’s house for dinner because she did not enjoy the foods she cooked. After her MI, Nabhitha found it extremely difficult to change her food relationships.

Although she was serious about making her diet changes and put much work into re-organizing her eating practices, she had difficulty severing her intimate relationships with food. While Carl described his Dr. Pepper as a “lover that he could not let go,” Nabhitha was experiencing a different kind of loss of intimacy resulting from having to give up some of her favourite foods. She described an experience she had on the subway which involved watching a man eat her favourite food, potato chips:

Yesterday a guy was sitting on the subway eating away, yam, yam, yam and I'm sitting there going, ‘Oh my God.’ But I try to control. It's very hard…. So I'm trying, I'm trying to avoid those chips. I haven't had chips since the time I've had my heart attack.

Even participants who were successful at severing food relationships still grieved their loss. In the case of Nabhitha, she was able to position this particular relationship with potato chips as something that was detrimental to her cardiac health and to avoid it. She described her struggles to establish new relationships with food, but unfortunately, these new relationships gave her less pleasure: “You know I'm trying to eat some vegetables now and I like that I can cook, so sometimes I just put it in a pot and wait and eat it like soup. It's disgusting.” Adding
to the complexity of Nabitha’s situation was the individual nature of her food relationships. In a sense, she developed her own community of eating, in which she was the only member. Food, particularly after her cardiac event, no longer provided her companionship in the same way it did before.

Her new diet also posed limitations on how she engaged with others. A common form of engagement for Nabitha was tea with her neighbours. When interviewing Nabitha, she showed me where she kept her sugar for guests, and asked hopefully if I took sugar in my tea. I asked her to put as much sugar in my tea as she did back when she had sugar in her diet. She stopped after four teaspoons. Interestingly, she still kept a small bowl of sugar to ensure that her guests had what she felt they needed. The sugar was used as a tool for sociality in specific situations. Nabitha thought it was important to be able to offer food to her guests in a way that once afforded her pleasure.

The social practice of “having coffee” provided further insight into the formation of social relationships with food, and revealed the intimate nature of food selection within different relationships. Marion described two important social interactions that took place over her day: coffee with her husband in the morning and late afternoon, and coffee with her best friend when her husband left for work. Since her MI, Marion had been attempting to decrease the amount of fat in her diet. The cream in her coffee had been a central focus for her efforts. Though it may seem simple for Marion to have just omitted adding cream to her coffee and continue with the social interaction of sharing a coffee with another person, the relationship with her husband and her best friend shaped her food interactions in different ways.

To begin with, Marion described shared food practices with her husband. It was evident through her accounts that she and her husband commonly made joint decisions surrounding food. When they decided to indulge in certain foods they always did it together. If Marion tried a new meal that her husband did not like, he laughed and encouraged her to “lose the recipe.” Their diet changes were approved by his food choices; in a sense, he structured how and what they ate. This hierarchal structure to her food relationships with her husband posed challenges for Marion. She continued to search for meal options that her husband liked, and
that also met the standards for her new diet. At one point, Marion bought a milk frother to encourage her use of milk in her coffee rather than cream. For a brief period of time she was successful in making this change. Her husband, unwilling to give up cream in his coffee, returned home from work one evening with a carton of cream, and by the next day Marion had returned to adding cream to her coffee. On the other hand, Marion did not have any difficulty making changes to her coffee routine when she met her best friend in the morning for a cup of coffee. She switched to decaffeinated coffee and used milk instead of cream. Her friend made attempts to bring snacks that were low in fat, or aligned with Marion’s diabetic meal plan. The difference between these two social interactions brings forward the following questions regarding her relationships: What is it about Marion’s relationship with her husband that caused her to deviate from her diet plan, when in other instances she was able to do so successfully? Both relationships were structured around the act of having a coffee together, but each interaction played out differently. Different social relationships demand different interactions with food. In Marion’s case, the most intimate relationship was also the one that proved the greater challenge to her behaviour change because she had to build her new diet around her husband’s food preferences.

The act of eating ties people to food in different ways. Food relationships may emerge; for example, a person may have a cherished relationship with certain food/s, or use food as a type of companion relationship throughout the day. These food relationships may be used to replace social relationships. In some instances, people can find it difficult to make the decision to give up a relationship with food because this same relationship may also be used to structure social interactions with others. What is similar between participant accounts is the social and relational act of eating and how it serves to bind people together. The next section examines how participants’ diet changes affected their relationships with their partners, and how changes to participants’ food relationships served to uncover the state of their social relationships.

5.3.2 Social Relationships and Food

As highlighted in the previous section, food can be used to build social relationships. It can also be used to sustain them. However, these same relationships may be challenged when the food practices that at one time mediated the development of the relationship itself have to be
changed. As participants recognized the consequences to their health as a result of their previous food relationships, they also had to reflect on how they were going to disrupt these relationships. Complicating this was the fact that many of their food relationships extended into their social relationships. Consequently, when they made decisions to change their diets they also had to take into account how this would affect their connection with others through food. The ability of participants to re-negotiate their food relationships with others often provided insight into the strength and functioning of the social relationship itself.

To highlight this, I examine three partnered relationships within the data. The first relationship provides an example of a female participant who describes the unwavering support from her husband to implement her diet changes. He too had been suffering similar health changes due to their food relationships. In a sense, there was recognition that their previous food relationships, which organized their personal relationship, had put both of their health at risk. The second example focuses on a similar relationship of a male participant and his wife, who reportedly worked together to make changes, but also often chose to fail together in their efforts because they found certain changes too hard to make. As was the case with the previous couple, they were unable to alter their food relationships. The final example involves a male participant’s account of his wife’s refusal to work with his efforts at diet change. Further exploration revealed his concerns that his wife would leave him if he disrupted their relationship any further. All relationships demonstrated that there was a level of commitment involved in order to make significant diet changes. The perceived cooperation of the participant’s partners either validated the participant’s faith in the relationship, or raised questions about the stability of the relationship.

Anuhyia described having a supportive relationship with her husband. She was accepting of her long-time role as the cook within her household, and had undergone some significant changes to her diet since her entry to CR. Though she did the majority of the cooking at home and could control her diet independently, she still argued that the success of her new diet rested upon her husband’s participation. Anuhyia’s husband also had heart disease and underwent cardiac bypass grafting surgery two years prior. Anuhyia asked to have her husband join CR because he was not referred to a program after his surgery. Anuhyia not only desired to have her husband commit to maintaining her health, but to also have him
make strides to improve his own. His efforts to adhere to their new diet were signs to Anuhya that he was committed to maintaining their relationship. Anuhya explained how her husband’s participation also encouraged her efforts:

And then now, even you know, to change to skim milk, you know, 4 months back he said, “No, I can’t have skim milk, I have to have my 2%,” and now he goes and picks up the skim milk, you know? It is both husband and wife. They have to be on the same page if you want to follow. If you know, the wife wants to follow change but if the husband doesn’t want to follow this, it’s really hard. It’s very hard. You cannot. You go back and forth. Now he’s getting better. He’s better than me now.

Anuhya also recognized the complexity of food practice within social relationships when she described how it was difficult to go back and forth between two separate diets. Cooking differently for two people, or having foods in the house for one person but not the other, put the person who was making food changes at risk for deviating from their new diet. Anuhya and her husband had been married for a long time; they supported each other within their relationship and had shared roles. They were willing to challenge and help one another when needed, and took responsibility for how their previous lifestyle contributed to their current health status.

Working together could also mean struggling together to make diet changes. Frank spoke highly of his partnership with his wife. She walked with him, ate the same foods, and was supportive of his efforts to change. His wife was successful in managing her health and weight loss, and she encouraged her husband to join the same weight loss program with her. He talked about the affection that they still had for one another and described how it was a priority for them to eat together. Frequently, they met for lunch in the office building where they both worked. Lunch typically involved having a salad or a soup, or sharing a dish to decrease their individual portion sizes. Frank described how sometimes they made the joint decision to deviate from their diet and that “when we [were] bad [when cheating on the diet] we [were] really bad,” where “being bad” usually involved eating foods such as pizza, burgers, or chicken wings. Frank talked about how it was important for them to fail at their diet every once in a while because it helped them to get back on track with their meal plan.
and gave them a sense of partnership in their efforts. One of the central sentiments from participants who worked well with their partners to maintain their diets was a strong sense of love or affection for one another. They were also able to recognize that maintaining their diet was a joint effort and that at times they would both make decisions to temporarily deviate from their new diet plans. Frank spoke of how every relationship had its ups and downs, and of how he and his wife had been separated for a period of time and then reconciled. He described a similar pattern to their eating. He felt confident that they could get back on track if they made a mistake with their eating if they remained supportive of one another.

In other cases, participants described their partners actively working against their attempts at diet modification. Anthony had two grown children and a wife who was significantly younger than he. His wife took tremendous pride in cooking foods that aligned with their Italian heritage. Her meals were often large and were heavy in carbohydrates, such as in pasta and bread. Anthony had always enjoyed his wife’s cooking and understood how her identity as a wife and mother was tied into the meals that she provided for her family. Anthony’s recent MI and initiation of insulin therapy due to his uncontrollable hyperglycemia began to complicate his relationship with his wife. Anthony was painfully aware of the changes he needed make with his diet in order to improve his health and decrease his cardiac risk. At first, Anthony’s wife attempted to make the changes needed for his diet when cooking his meals. Over time, she began to struggle with this and became more distant to the point where she began to discount his diet completely. This caused anxiety and stress for Anthony, not because he was worried about deviating from his diet but instead because he was concerned about the state of his relationship with his wife. He expressed concern about re-approaching her to change her cooking practices for him. This concern stemmed in part from other fractures in his marriage that were precipitated from his struggle with erectile dysfunction caused by his diabetes. He had serious concerns that his wife would leave him if he pushed her any further to change his diet. He conceptualized his illness as taking away his strength and role as a partner: “If you’re not strong, your partner’s not strong that’s when you might lose your partner.” For Anthony to deviate from his wife’s cooking and cook for himself would put the relationship at risk. Rather than losing his relationship with his wife, he continued eating her meals at the expense of his health. At
times he would attempt to substitute other foods or control his meal portions in an effort to counter his wife’s cooking. Instead of having a large plate of pasta like he used to, he attempted to cut down his portion sizes:

I mean as she, she wants to enjoy her food that she likes and I will enjoy it less than what I'm supposed to and say, if you plate a salad, I would have a big, huge plate of salad. If there's pasta, I'll have to have a half a plate of pasta instead.

These small substitutions were an effort to adhere to his new diet and to ensure his wife could remain cooking the way she preferred. Despite his efforts to maintain a balance between his new diet and his relationships with his wife, his need to change his food relationships showed the underlying fragility of the relationship itself.

Food relationships are a central component to the formation of various eating communities. Participants may have formed individual relationships with food in the absence of others to fill social voids or to fulfill preferred ways of eating. They also used food to form social relationships with others. Food relationships, in these cases, operated specifically within the relationship itself. Finally, changing food relationships may have had consequences for the continuance of social relationships. Participants described different ways that their relationships were affected by their diet changes. Emerging within this discussion of food relationships are two other important components of community development: food identity and food practice. The next section focuses the discussion on food identity and practice by exploring how these two themes contributed further to the sociality of food and the development of eating communities.

5.4 The Sociality of Food

The sociality of eating can be studied in terms of the relationships that food cultivates, as well as how food identities and practices serve to bind individuals together. This section focuses on the sociality of food and how these social relationships may form wider communities of eating. In the previous section I explored how participants developed personal relationships with food, and how they also used food to form relationships with others. However, the formation of an eating community, according to Falk (1994), is also
contingent upon *food identities*, which encourage individual community memberships, and the actual *food practices*, which bind the community together. Previously, I discussed participants’ individual and partnered relationships with food, and in this section I advance this discussion to include insights surrounding the role of food identity and practice in formation of eating communities themselves.

### 5.4.1 Food Identities and Food Practice

Food identities may be formed from preferred relationships with food, social constructions of what eating “should” entail, or cultural associations with food identity. For example, a person may become a vegetarian for a number of reasons. Vegetarianism may emerge as a preferred relationship with food in that a person chooses not to eat meat—a decision that may be based strictly on something as simple as food preference, or on more complex ethical and political reasons. In some cases, a vegetarian diet is adopted and/or influenced by cultural or religious practices. However, identifying oneself as a vegetarian is often not enough, and some people must then ascribe to a sub-classification of vegetarianism, be it a lacto-ovo vegetarian, vegan, flexitarian, or pescatarian. Despite individual reasons for adopting (or in some cases being born into) this food identity, individual identities often become communal identities, and the term “vegetarian” is used to describe wider community memberships. Various examples from the data are used to highlight the formation of food identities amongst the participants.

A second conversation surrounding food identity pertained to how participants also ascribed their food identities to their community roles. How people came to understand their place in a community also served to inform their identities associated with food and food preparation. For example, a person who was responsible for cooking for their family may come to see their food identity as a caregiver or provider. Tensions may emerge when that person is asked to perform their role in a different way in order to cook a cardiac or diabetic diet. What they cook and how they cook can, in some instances, also be traced back to the previous discussion of food identity based on social or cultural associations with food. Therefore, food identity was not only an issue for participants attempting to change their diets but for other community members as well. Participants described the difficulty of getting their communities (be it partners or families) “on board” with their diet changes.
It is difficult to have a discussion of the development of food identity without directly speaking to food practices. Eating communities are created through identity but bound through practice. I use the term *practice* to cover decisions surrounding how food was chosen, prepared and eaten—and the associated embodied food activities. For example, Luisita described how it was a common practice within her Filipino community to deep fry food. Many participants described the difficulty of attempting to change eating practices, particularly when there were other people involved in making these decisions. Therefore, practices also referred to how community members engaged with one another. This was evident in the roles adopted by community members surrounding food preparation.

Participants described emerging tensions between identity and practice when they reflected on their reasons for the development of their CHD and T2D. Sometimes, participants who previously believed—based on their food identity—that they were healthy, were often shocked when they deconstructed their specific food practices. This exploration of food practice has differing implications for participants and their abilities to make dietary changes. To begin with several participants were able to recognize that there were specific food practices that were contributing to their ill health. After a period of reflection they sought ways to disrupt these practices and make changes for their health. Some participants were able to do this within their eating communities while others faced the possibility of discontinuing their community membership. In other instances, people found that their food identities were contingent upon their food practices and were unwilling to make any changes. Identity superseded practice even if it meant that they would continue to put their health at risk. I draw out each of these examples through a discussion of participants’ accounts. Issues related to food identity and practice emerged through each of these discussions. I conclude this section by recognizing that communities of eating are contingent upon food relationships, identities, and practice, and that all of these characteristics contribute to not only community membership but to participants’ decisions regarding diet change.

Sindu was a practicing Hindu who had been a vegetarian since birth. She never strayed from her diet and considered herself healthy up until she was diagnosed with cardiac disease and T2D. Her diagnoses led her to question her cultural associations with food, and her subsequent identity as a vegetarian. Sindu had always assumed that her vegetarianism would
support her good health and that she would not have to make very many other health changes. Though she did not question her decision to not eat meat (she remained a lacto-ovo vegetarian) because she thought it would protect her from the development of cardiac disease, she began to question her cultural food identity in different ways. In order for Sindu to gain an understanding of what went wrong with her health, she started by questioning what it was about her cultural identity that contributed to her current state of health:

I had to accept what has happened and I had to make a lot more changes in my life. I was ready for it, I just didn’t know what to do because I was already eating properly…. I was on a good diet program, but I’ve improved it since.

At first she was unable to find a direct reason for her health changes due to her identity as a vegetarian; however, she began to take apart her food practices and then trace these practices back to her cultural identity. It was not only her diet that was contributing to her issues with cardiac health; she also had a strong family history of cardiac disease, and she did not exercise. She talked about her increased consumption of carbohydrates such as rice, potatoes, and bread, which she attributed to an Indian diet. Sindu began to think of other ways to support her diet changes. Though she had to give up or modify some of her favourite foods and learn to cook differently, she was able to maintain her membership as both a Hindu and as a vegetarian. Her success in maintaining her identity and community membership also lent success towards her overall ability to adhere to her new diet changes.

Teri provides a different example of a participant who also identified as a vegetarian. Teri described herself as a “child of the 60s,” and shared several narratives describing her experiences of that time period and how it influenced her food identity and food choices. She explained that it was important for her not to eat meat for both ethical and political reasons. In essence, her vegetarianism was an outlet for her resistance to mainstream social practices. Teri described feeling distanced from health care professionals and her CR program because “they just [couldn’t] wrap their heads around the way [she ate].” For Teri, her diet fed into her larger identity as someone who was counter-cultural. Although the CR dietician provided Teri with information for vegetarians related to her cardiac and diabetic diet, Teri still felt that the dietician would never understand her diet needs. Teri’s accounts
of her specific food practices often came into conflict with what would be expected with a cardiac diet. She often ate foods high in sodium (despite her advanced heart failure), frequently choosing vegetarian meat substitutes such as processed tofu veggie slices, and indulged in other foods that contained high amounts of carbohydrates. Though Teri faced challenges such as a living on a limited income and the decline in her health, she remained resistant to changing her eating practices despite the information provided to her and her ability to retain and understand that information.

In a sense, Teri’s eating practices were isolated. She did not describe eating out with others or finding support from people in a situation similar to her. It appeared that she felt alone and frequently seemed nostalgic for the 60s, stating that, “all her heroes were dead.” For Teri, her diet was primarily used to support wider aspects of her social identity rather than her health. At times she became more fixated on how health professionals did not understand her rather than focusing on how her specific food choices were contributing to her weight gain and T2D. Her subsequent focus on her food identity overshadowed the potentially detrimental food choices she continued to make within her vegetarian diet.

Participants struggled with their individual food identities and the role of these identities in their present state of health. Some, such as Sindu, were able to make the changes needed while maintaining their food identities, while others, such as Teri, were unable to relinquish their identities in order to improve their health. Other members within the eating communities also influenced participants’ abilities to make health changes. To highlight this, I bring forward two cases of participants who were willing to make health changes but were continually challenged by their partners’ inability to relinquish their own food identities and practices. To begin this discussion, I return to the case of Anthony introduced in section 5.3.2 titled ‘Social Relationships and Food’. As stated earlier, Anthony was facing challenges with his wife’s unwillingness to sustain the diet changes he required. Though there were important relational factors coming into play for Anthony, such as his concern that he would lose his wife due to the stress he was inflicting upon her with his diet changes and his erectile dysfunction, the discussion of food identity and practice also relates to this case. The first concern focuses on Anthony’s inner conflict of relinquishing his food identity as an “Italian man.” Anthony was clear about the diet changes he needed to make. He had
goals to cut out particular foods, control his portions, experiment with eating new foods, and find healthier ways of preparing food. However, he struggled with a sense of loss to his identity. Rather than retain his food identity as an Italian man through new practices with food, he sought to displace it instead.

According to Anthony’s account, his wife also shared a similar idea that changing her family’s meal preparation would also dissociate her from her identity as an “Italian woman.” Anthony described how his wife was a caregiver for their family. As he explained it, her main way of showing affection and fulfilling her identity as a wife and mother was through cooking the family meal. She had her favourite recipes that the family enjoyed and she took pride in her family’s response to them. Though she initially tried to change aspects of her cooking to fit her husband’s dietary needs, she quickly reverted back to her previous practices. Although she initially tried to support her husband’s efforts, she also had to face the implications of new knowledge that implied her commitment to an Italian diet had contributed to her husband’s health issues. Changing her cooking practices also meant challenging her Italian heritage and cultural associations with food. In this instance, her identity was tied to her practices, and so to change how she cooked her meals was an affront to her food identity. Complicating this matter even more was Anthony’s concern that his adult son’s health was also at risk from his wife’s food practices. He attempted to warn his son various times about his eating. Anthony felt that his wife’s continued allegiance to her food identity undermined his son’s future health:

My wife cooks Italian stuff and you know it started with pasta and then it’s done, finished there. And he’ll [Anthony’s son] have meat and then he’ll have bread and then he’ll have a side, I says, ‘this is our custom.’ The way—and she [Anthony’s wife] still does that. She likes that dish. She takes pride in that too. And that’s why my son never leaves an empty plate. It’s always—I mean, [he] never leaves anything [on] the plate, always empty.

However, Anthony was not willing to confront his wife with his concerns about the family’s health for fear of losing his relationship with her.
Other participants struggled with the same issues with their partners. Luisita was a Filipino woman who also revealed that she was at odds with her cultural identity with food because of her current state of health. Luisita explained that she had made considerable changes to her diet but remained concerned for her husband’s health because he was unwilling to make the changes needed. Both Luisita and her husband had T2D and cardiac disease. Her husband was in a more advanced state of heart disease, and had undergone cardiac bypass surgery a few years earlier. Luisita directly linked both of their health conditions to their Filipino diet. She described an embodied eating cycle central to Filipino culture:

From birth, we were introduced to that type of diet [fried food, meat, and rice]. You know, in the Philippines day, you have breakfast, you have a snack, you have lunch, you have snack, you have dinner. So, all your life that’s the type of—what you call—a cycle you have—your eating cycle, so it’s quite difficult to just cut it off.

For Luisita, her cultural food identity was not just contingent upon what she ate but when she ate and how she prepared her food. While she described her appreciation for her community and enjoyed the foods that marked her community membership, she regarded her food identity as something that needed to be modified in order to regain her health. To do this, Luisita directly confronted her food identity and changed her food practices to suit her new diet. Luisita’s husband, however, was reluctant to change. He would go off during the day while she was at work and meet his friends for lunch, which typically included fried food or other types of foods that were supposed to be excluded from his diabetic meal plan. Luisita described pressure to watch over her husband’s eating habits because he seemed unwilling to change, and looked forward to her upcoming retirement so she could “man to man guard” him in order make sure he was adhering to his eating plan.

Food identities may also be disruptive in other ways. Valerie was 49-year-old woman living with a chronic eating disorder. Due to her complex history with food, she continued to have difficulty in her food relationships. Her previous struggles led to her becoming increasingly isolated from her other eating communities. The central community that changed as a result of her chronic conditions was her family. She described how she used to binge eat by herself while her family was in bed:
The practice would be that I would try and starve myself till dinner time and then if I didn’t have anything during the day there was a reward for not eating [like] eating a bag of chips…after dinner when everybody went to bed…that’s the way I lived my life for a long time.

Initially, she described avoiding eating meals with her family by making up excuses that she was not hungry. Eventually, she made the decision no longer to sit with them while they ate dinner. When she entered a treatment clinic for her eating disorder, she stopped cooking for her family completely. Valerie talked about her struggle to make diet changes, saying, “I hate talking about food, I hate dealing with food, I try the best to do what I can to get what I need inside my body.” Her husband took on the role of cook, not only to ensure that the family’s needs were provided for, but also because his wife would often eat if he prepared the meal. Valerie’s son also participated with cooking the meals as well. In a sense, even though Valerie continued to sever her harmful relationship and activities with food, she still remained engaged in a particular eating community supported by her family. They accepted her nonparticipation in meal preparation and made space to ensure that she was cared for.

Part of community membership is feeling bound to the community. Valerie often did not feel that her husband’s efforts were centered on the betterment of her health. She described him as someone who was healthy, who ate well, and trained for triathlons. When asked if her husband took the time to learn about her new diabetic diet, Valerie replied, “He likes knowledge, so if he has learned it’s not specifically because I have diabetes.” Furthermore, she described how she felt distanced from her husband because he did not understand the difficulty in maintaining BGLs and subsequent diabetic health because he had “never taken a pill in his life,” and he did not fully understand her struggles to adhere to her medication regime and diet plan. So even though Valerie’s family was taking the right steps to create a healthy lifestyle, Valerie did not feel this was for the sake of her health, and therefore did not view herself as part of her family’s eating community. Valerie describes an interesting evolution of two communities of eating over time. These communities were heavily influenced by her eating disorder. This started when Valerie began to isolate her eating from her husband and children. Over time, the rest of her family became dependent on other means of food preparation and found other ways in which to relate to Valerie that were not
food-centered. The difficulty arose when Valerie tried to re-establish this community based on their now similar goals towards health. At this point, her family was too rooted in their own practices. Although they were all now working towards the goal of achieving health, Valerie continued to feel isolated from her family’s eating community.

The ways people identify with food can affect their abilities to change their food practices. Sometimes food identities and practices do not match up, as in the case of the vegetarian participants. Even though participants may think their food identities position them for good health, how they practice with food will guide their health outcomes. Even participants who ascribed to the same food identities or social labels may have very different food practices. Identity may also inhibit the acquisition of new food practices, as in the case of Anthony and his wife. At times, the need to identify with various food communities in a particular way can disrupt any attempts at change, especially if only one person within the relationship is willing to make these necessary changes. Finally, food practices may be cultivated in such a way that they disrupt the development of eating communities themselves. In the example of Valerie, separate food identities and practices resulted in the formation of two very different eating communities. Though these two communities existed within her own family, she found it difficult to join them together again. The next section further explores this notion of community membership and highlights some of the final decisions that participants made within their eating communities when changing their dietary practices.

5.5 Decisions about Community Membership

Eating communities may be formed through particular food relationships, cultivation of food identities, and the enactment of food practices, but they are sustained through membership. Diet change posed multiple problems for participants’ community memberships. Within the study, participants were faced with the decision either to change their eating habits or resume their previous eating practices. To accomplish this, participants had to find new ways to participate within their eating communities, make the decision to disconnect temporarily or permanently, or maintain membership at the risk of their own health. To begin with, participants faced the decision of telling their eating community about their diabetes and cardiac health. This disclosure often caused the community to become temporarily disrupted
and question how to accommodate the member’s new needs. Many participants felt that they now stood out from the crowd or that their membership was at risk. Some participants were able to confront directly their communities of eating and explain to them what their specific needs were, while others struggled to fit in, trying to find a balance between their membership and their health. Secondly, some participants temporarily disconnected from their communities in order to practice and gain confidence with their new eating routines. This endeavour may have involved practicing new ways of cooking, identifying new strategies to maintain membership, or finding ways to encourage different types of relationships with others through food. Unfortunately, other participants were suddenly disconnected from their communities and were faced with having to establish other forms of community. This disruption may have resulted from a conscious decision to move away from the community for the betterment of their health, or the disruption occurred spontaneously from the loss of other community members (i.e., death of a spouse). Finally, some participants found the pressures of changing their eating practices too great within the community, and worried that they would lose their membership if they forced any changes. Therefore, they decided to maintain their previous community memberships at the risk of their own health. These decisions were often more complex than might be suggested by the commonly held notion that individuals who struggle with diet change are merely lacking education or willpower. Instead, participants were faced with making a choice to risk the dissolution of their health rather than of their relationships and community membership.

5.5.1 Informing the Community

Many participants who disclosed their health problems were able to garner initial support from their communities of eating. This support was often paired with curiosity about the participant’s illness and an initial period of discomfort around what the community should do in order to meet the member’s needs. Eating communities established within the workplace provided interesting case studies for the disruption of community practice when participants disclosed that they had heart disease or diabetes and could no longer participate in common food activities typically associated with celebrations. There are particular activities at work that center on sociality of food. This often includes cakes at birthday parties, doughnuts at meetings, and going for lunch with coworkers. It is a community that is inescapable for the
most part, if one wants to keep their membership within a group that would benefit them professionally. For instance, Gary described the first time he refused cake after his diagnosis of diabetes during an impromptu birthday party for a co-worker: “I say I am diabetic [so I can’t have cake] and everyone shuts up right away.” Initially, the practices of his work-based eating community were disrupted, and other co-members were unsure as to how to relate to Gary during these common food-centered events. Gary was able to directly address this situation by explaining to them what his diet restrictions were. He also expressed his desire to continue participating in these events. Thus, he found a way to maintain membership while adhering to his diet changes, and his strategy of directly addressing the community worked in his favour. Gary’s decision not to take cake and disclosing his diabetes put pressure on the group to either make adjustments for his dietary restrictions in the future, or to continue with their previous practices at the risk of excluding him.

Sometimes the work community was directly confronted by the person’s illness, and of the urgent need for health changes. Heather was diagnosed with T2D in her early 40s, and soon thereafter had her first MI. She worked full time in an administrative position and felt that she was still climbing the corporate ladder. Heather dealt with many important deadlines, such as payroll entry, and was under pressure to maintain her performance and complete her tasks at work. Heather dealt with similar challenges to those faced by Gary in regards to working and managing her diet. However, rather than having to navigate the occasional birthday celebration with cake, Heather’s workplace was known for the gourmet cafeteria where everyone met during their coffee and lunch breaks. It was commonplace to have morning coffee over rich fresh-baked pastries. Lunch also offered similar delights, from hot entrees to an array of different deserts. A joke was often made to new employees that they would gain 25 pounds during their first year of employment. Heather was aware of her diabetic diet and the need to adhere to it, but she often succumbed to the temptation of eating foods that were restricted from her diet plan.

While Gary’s situation with the birthday cake resulted in his disclosure of his diabetes to his work community, Heather’s health problems were revealed in a more spectacular manner. Her health concerns started when she developed T2D that was not well controlled through her diet. She was prescribed medications but frequently tried to stop taking them when she
thought she was getting better. She experienced her first bout of chest pain one night when she was at home. Her husband urged her to call Telehealth. After a conversation with the Telehealth nurse she was told to go directly to the emergency room. Heather was worried because the payroll deadline was the next day. Concerned that she still had to enter in the monthly payroll, she decided to stop off at work first before going to the hospital. On the way up the stairs to her office she collapsed and had to call the ambulance. Everyone at work found out about her ordeal. To make matters worse Heather developed chest pain at work a few months later and again had to call the ambulance:

Yeah, it was quite a production the second time [second heart attack] getting me out because there’s no elevator and they had to take me down the stairs and along the main corridor and the kids were all in the assembly hall and they had to keep them in there until they got me out into the ambulance.

After news spread around her workplace about this second incident, she was labeled as the woman with “two heart attacks.” Heather worried that this perception would affect her advancement at work and that her workmates would now be watching her more closely. Heather felt that she was now under surveillance from her coworkers each time she visited the cafeteria:

When you go [to the cafeteria] you have three choices of hot plate; we have a salad bar, we have desserts and soup every day, so you have to learn to stay away from the good stuff and stick just to the salad bar and it’s not easy, but they [co-workers] don’t let me near anything now, they watch.

While her workmates have accepted her need for diet change and encouraged her to stay on her diet, Heather has been positioned in a different way in her work community than Gary. She described a perceived sense of loss of control regarding her autonomy to make decisions to participate in the group’s food practices.

She regained this control on the weekends when she spent time with her family. For Heather her family was a different type of eating community than her workplace, because in this case she was the one who organized and advocated for her dietary needs. Heather was careful not
to disrupt her family’s eating practices; she ate her meals early in the evening (she described these meals as low-fat microwavable dinners), and then she cooked a separate meal when her husband returned from work. Though she did not eat with her husband during the evening meal, she always sat with him, ensuring he had what he needed, and listened to his stories about his day. For Heather, the family meal was an important time of the day where members were able to re-connect. She was careful not to disrupt the enjoyment of this time by cooking foods that the family, in particular her husband, did not enjoy, or by forcing them into her diet.

Heather described how, in the past, her eating habits centered on her family’s activities. When her children were young they participated in different sport teams. Often Heather had to eat dinner (usually hotdogs) at ballparks because she picked up her children directly after work to take them to their events. In a sense, her responsibilities to balance her full-time career role of mother and wife superseded the choices that she made to eat healthy. As a result, she felt that these eating habits contributed to her development of T2D and heart disease. Despite the previous lengths she went to in order to ensure her family’s happiness, she sacrificed herself in a new way in order to ensure that her new diet did not interrupt their previous practices. She insisted that she was comfortable cooking separate meals in order to maintain the regularity of the family’s meal practices and the experience of the family meal. Again, she made accommodations to keep the status quo at home. She took control of what she ate when she was at home, while at the same time continued to maintain her family’s food practices.

Surprisingly, Heather interacted with her friends in a different way. She learned that she had to advocate for her eating requirements when she was out in public. She recounted an instance where she was out with her husband and another couple. They had met later than expected and it was time for Heather to eat lunch and take her diabetic medication. The other members of the party were not hungry at the time and asked to wait. She talked about how she was becoming more comfortable advocating for herself in such situations: “I’m being more assertive in saying, ‘Look, I’m sorry, I have to eat now,’ because if I don’t, I’m the one who pays for it.” Heather had created specific strategies to maintain community membership in three very different eating communities. At work, she put up with the surveillance from
others regarding her eating practices and, while she continued to participate by having coffee and lunch with her coworkers, she was careful about what she ate and how she appeared to the group. At home, she was careful not to disrupt her family’s routine, but at the same time she created a new way of eating outside of her family’s regular eating practices; though it would seem that she is eating in isolation, she is actually fighting to keep community membership and connectivity to the other community members. With her friends, she was learning to navigate her new diet outside of her home. She made the decision to disrupt the routines of this community in order to make them aware of her health needs. In all cases, she addressed ways of dealing with the social nature of food while preserving her diabetic and cardiac health.

Participants often had to evolve different strategies in order to maintain community membership once they decided to make diet changes. Often, they had to disclose to the community that they had chronic conditions that required significant changes in their eating practices. At times, this disclosure required small adjustments to daily functioning within the group; while at others, it created distance between the participant and the group and/or gave the group license to monitor the participant’s eating habits. As in the case of Heather, some participants could go to great lengths to ensure that they did not disrupt the functioning of particular groups. These were usually groups where there were close personal connections, or perceived negative consequences for group disruption. In other cases, participants found they were more comfortable advocating for themselves in order to keep on track with their health, and at the same time maintain community membership.

5.5.2 Disconnecting from the Community

Participants described that there were times they needed to temporarily or permanently disconnect from particular eating communities. Asha had wide social circles consisting of family and friends. She was very hospitable and enjoyed cultivating her relationships with others through the use of food. One of her favourite events with her family and friends came during the winter holidays. She would prepare a traditional Christmas feast and ensure that she had a bounty of rich, delicious foods for her family. She described how much she loved to drink eggnog and eat mince tarts during the holiday season. She was recently retired and decided to make the commitment to improve her health. She soon noted that her new diet
would come directly into conflict with the previous eating practices she had established with her family and friends. In order to make the changes that she felt she needed for her health, Asha made the decision to disconnect from her eating community for a period of time in order to develop concrete strategies for diet maintenance. She started to explore how to cook in ways that were enjoyable and acceptable to her own tastes. She became increasingly confident in her new cooking skills and attempted to try new recipes that fit alongside her food budget. Through this process, Asha began to rethink how she would position her new diet within different social contexts.

It was apparent that Asha missed her eating community and the connections and relationships that were forged through the activity of eating together. While she was isolated from the group in order to plan her diet changes, she mimicked the sociality of eating by continuing to set the table formally, to pour herself a glass of wine, and take the time to enjoy her food. She often described this as “learning to be by myself” or to “enjoy my own company.” She made the decision to eat at the table with a glass of wine rather than leaning against the counter or eating in front of the television, as some people often do when eating alone. In a sense, she remained linked to the sociality of the meal by creating an environment that reflected a social eating event. In time, Asha was able to reconnect with her eating community and organize a holiday dinner for her friends and family. She found a way to balance cooking foods that she knew she could eat, and traditional foods that she knew her family and friends would enjoy. Prior to the meal, she asked everyone to promise to take the leftovers home with them so she would not be tempted to eat them after they left. Asha’s experience provides a case wherein an eating community is temporarily disrupted and then reformed.

In other cases, this disruption of community was sudden and unplanned. Demetrio, an elderly Italian man, was a recent widower. His wife had always been in charge of meal preparation. After she died, Demetrio was faced with having to find other ways to prepare his meals. Further complicating his situation was his new diagnosis of T2D and heart disease. Unlike Asha, Demetrio did not make a conscious decision to disconnect from his eating community. He recognized, however, that he and his wife shared previous eating practices that may have led to his changes in his health. Demetrio struggled to come to terms with how he should
recreate his eating community now that his wife was gone. He knew that there were particular food relationships that he needed to sever but he felt the pull to remain connected to his Italian heritage and wider Italian food community. He decided to forge a new relationship with a small Italian eatery close to his home that premade ready-to-go meals. Not wanting to lose sight of the reasons why his previous eating community might have affected his health, he instead re-engaged with this new community according to particular new rules and restrictions. He remained committed to his efforts by ensuring that he adhered to portion control, by reducing his pasta intake and eating foods low in fat and sugar.

Demetrio also started to learn to cook by himself. He bought meat for the first time and attempted to make veal patties that he could put in the freezer and grill at another time. He wanted to learn how to make his food flavourful like this wife used to, but he required a simpler way to prepare, cook, and save some food for a later date:

I bought some minced veal and I squeeze some garlic, a lot of it, and then I go like this, after I wash my hand, you know, and made four patties about like that and then because I can’t use the salt, I never was a guy that had the salt, you know, but in this case I put them like that and I put some Mrs. Dash, like both sides, I put them in the freezer.

He also reached out to his sister for advice about cooking. She taught him a trick of freezing peaches and then letting them thaw in order to increase their flavour. All of these small changes merged into major diet modifications for Demetrio as he struggled to become more independent with his meal preparation. In a sense, he was rebuilding his eating community around the need to maintain his diabetic and cardiac health.

Many participants found it problematic to disconnect from their eating communities permanently, particularly if these communities existed within close familial relationships. As described above, there was often a temporary disruption followed by modifications to community membership and, at times, the re-building of community. None of the participants in the study spoke about disconnecting completely from their eating communities; instead, they found ways to modify how they ate or they learned to avoid situations that would put them at risk. Some participants found even these tasks difficult to
accomplish. The following section explores the experience of participants who had great difficulty in modifying their eating practices within their previously established communities of eating. Instead of finding ways to modify or disconnect from aspects of the community that put their diet plans at risk, they made the decision to continue participating just as they always had.

5.5.3 Maintaining Community Practice

Sometimes an eating community’s resistance to change, in combination with the participant’s reluctance to disconnect from the group, resulted in the participant deciding to risk his or her health by maintaining the community practices. The case of Anthony discussed throughout this chapter provides an example of this situation. As outlined earlier, Anthony faced major challenges in getting his wife on board with his new diet. She was reluctant to change her cooking practices and remained tied to her food identity as an Italian woman and as a provider. To disrupt her food practices also meant that her role within the community was disrupted. Anthony feared that his wife would leave him because their relationship was not only complicated by diet changes, but also by the erectile dysfunction caused by his diabetes. Though it was not clear from his account that this was an actual concern of Anthony’s wife, he still feared for the state of their relationship. Anthony was able to articulate the exact diet changes he needed to make, and his CR classes had served him well, but despite his knowledge and subsequent concern that his son would also suffer the ill effects of the family diet, he stated that he continued to go along with his family’s food practices in order to maintain his relationship with his wife. In this case, community membership superseded the importance of his health practices, and he was willing to live with the increased risk for disease recurrence rather than further disrupt his community relationships.

Some of the lone participants, in particular, seemed to have difficulties in disrupting their eating communities, and expressed a preference for staying engaged in their regular food practices. Carl, who was previously described as having a food relationship with Dr. Pepper, had difficulty giving up intimate food relationships, which often replaced companion relationships. As suggested earlier, he had developed these relationships during his hectic workday. His community of eating was limited to him and his son, and his priority was to cook foods that his son preferred to eat. Often this was food that did not fit with his diabetic
meal planning. Instead of disrupting his son’s practices, he went along with them. Carl felt that he was unable to cook two separate meals, like Heather did every evening, because he was too tired from his long days at work and just wanted to relax. He felt that his first priority was to provide for the needs of his son, which he did by working long hours, and showing his care by cooking foods the boy enjoyed and ensuring that his son’s needs were met. Like Anthony, Carl felt that his relationship and ability to care for his son superseded his own needs to make diet changes. Both of these participants put their relationships before their health, knowing that this could ultimately cost them their health.

Finally, some participants were simply unwilling to give up their eating practices. Jean was an elderly woman who had lived by herself for most of her life. She was dealing with advanced diabetes and heart disease. She talked about still wanting to enjoy food, and she felt that despite her diabetes, she did not need to limit the kinds of foods she ate, only to decrease her portion sizes. As time progressed, she returned to her previous eating habits with particular foods, such as ice cream, choosing instead to eat as much as she liked and to ignore her blood sugar levels. She often gave reasons that she was “too old to worry” about her health, or that it was “too late.” Jean also had a surrogate family that she formed years ago with a single mother and her daughter. She spent her holidays with them, preparing meals and celebrating. She chose not to follow her diet during these times because she wanted to enjoy the celebration to its fullest. Though there was no direct pressure placed on Jean to deviate from a diabetic diet during these times, she chose to do so because she loved to eat alongside her family.

Participants made different decisions about maintaining community membership when making diet changes to improve their cardiac and diabetic health. Some chose to find strategies to maintain membership while finding ways to modify or change their food practices within the group. Others found that they needed to temporarily disconnect from their communities of eating in order to establish new eating practices so they could return to the group with new strategies. Finally, some participants found it too difficult to leave, or had complex reasons for staying within their communities of eating. They chose not to change their eating practices, and instead remained in their previous roles and practices fully aware that they were putting their health at risk.
5.6 Conclusion

Eating is a complicated activity. In biomedical frameworks of care, changing a diet in order to manage a person’s health is presented as a straightforward process that involves learning what healthy eating entails, acquiring new eating habits, and staying committed to a new eating regime. However, food practice is more complicated than this. We develop personal and communal relationships with food, relationships that serve to structure and build relationships with others. We use our need to eat as a reason to meet and engage with others. It not only structures our social interactions, it also binds us together. Disrupting how we eat also disrupts our social interactions, it restructures how our social activities unfold, it may disrupt previous food identities or roles that have been cultivated, and in some cases it may break relationships apart. People in CR who are changing their diets for their cardiac and diabetic health encounter many of these relational challenges and, while they may demonstrate the knowledge (acquired through CR programming) needed for diet change, they remain vulnerable in their efforts because the social world plays such a large role in their ability to adhere to their diets. Diet change involves more than just the right information and a desire for change; it also involves an examination of the social world and an understanding of how to navigate it.
Chapter 6
Diet Projects

6.1 Introduction

Chapter 5, the first findings chapter, highlighted the sociality of food and described the social and relational factors at work for CR participants attempting to change their diets for health reasons. This second findings chapter focuses on how CR participants accessed diet change as a way to repair their bodies, combat disease, and rehabilitate their cardiac health. Sociologist Chris Shilling’s (2003) description of the body project will be utilized to frame the notion of individual diet projects in CR. In this chapter, I will parallel my understanding of specific diet projects with Shilling’s overall conceptualization of the body project in order to examine theoretically how CR participants came to understand, interpret and enact their diet changes. A key constituent to this theoretical examination is the relationship between behaviour change (in this case dietary change) and the re-emergence of health. Throughout this chapter I will examine how individual diet projects were formed, implemented, and measured by CR participants. The re-achievement of health is complicated by both the physical limitations of the human body as well as how people think healthy bodies should look and act. Therefore it is common for individuals engaged in CR settings to speak not only to a physical, but also, a moral reclamation of their cardiac health. Throughout this chapter these various notions of health are examined using participants’ accounts of changing their diets in order to improve their T2D and CAD.

I begin this discussion by returning to Shilling’s (2003) theorization of the body project. Shilling argues that people work on their bodies by pursuing projects that may variously focus on health, fitness, cosmetic surgery, or body modification with the goal of self-representation, or expression of an identity through physical appearance. The physical body, then, is always open to reconstruction and improvement. Central to this theoretical position is that the person engaged in a bodily reconstruction foresees (or projects) a particular type of result for their efforts. Often these desired results are based on prevalent social constructions surrounding the body and its appearance. In this chapter, I focus on body projects specifically related to health. The restoration or achievement of health is imbued with a sense of morality, positioning healthy bodies as “worthy bodies” and unhealthy bodies as
“deviant bodies” (Macionis & Plummer, 2005). To be healthy connotes a sense of self-worth to the individual and to surrounding people. Biomedical frameworks of health espouse particular expectations surrounding risk factor reduction, placing the focus on individuals to take care of their bodies by avoiding lifestyle choices thought to put them at risk for disease. As a result, body projects focusing on health can be critiqued for positioning the human body as a site of both individual and social anxieties related to health and illness, rather than recognizing the complexity of human biology and its relationship to sociality (Macionis & Plummer, 2005). However, despite social pressures to present our bodies in particular ways, our bodies do not always do what we want them to do; disease processes are complicated and often go undetected until there is a significant disruption in bodily functioning. Shilling, within his postulation of the body project, also admits that all projects are inevitably prone to failure because, as human beings, we all remain constrained by our mortality.

Diet change is positioned by both medical and social discourses as a way to limit and at times potentially eradicate the effects of T2D and CAD. Within this chapter, I reduce the wider notion of the body project to reflect specific cases wherein CR participants attempted to re-achieve their previous state of health through their diets. I refer to these efforts as diet projects. The term diet project carries two major connotations within its description; the first is aimed at changing diet to improve health and management of diabetes, and the second focuses on changing diet to incur weight loss. Though each participant engaged in attempts at diet change utilizing different approaches (or at times similar approaches with differing rationale), there were commonalities in how each project was reflected upon, interpreted, and evaluated. While CR education was readily incorporated into their diet planning, participants were also attentive to other social and experiential forms of knowledge outside of their CR programming.

In order to display the commonalities as well as the complexity of these diet projects, I draw from three major thematic areas within the data. The first thematic area (looking back, looking forward) focuses on the role of temporal reflection in the overall construction of the diet project. This includes participants’ reflections on their past health behaviours, their present state of health, and their future health-related goals. The second thematic area examines how participants interpreted the present state of their health and how they
positioned the overall mission of their diet project. Missions within diet projects were positioned in two primary ways: 1) as an undoing of past behaviour, or 2) as a means of fighting against existing disease. Finally, participants evaluated the results of their efforts from a variety of perspectives. Participants demonstrated an interest in re-gaining their physical health, as well as erasing perceived social stigmas associated with T2D and CAD. The final thematic area parallels the restoration of cardiac health with the notion of edification, a term used to describe the moral re-building of self. Participants’ accounts outlined various measures of success within their diet projects. Inevitably, all diet projects were constrained by the mortal limitations of the human body, which was directly influenced by the chronicity of T2D and CAD.

Throughout this chapter I aim to highlight the stratified nature of our biology, and to demonstrate the emergent characteristics of our bodies and society. Attempts at rectifying disease through diet display the layered nature of our biology, from the pathophysiological processes silently occurring within the body, to the recognition that we may lack control in managing our bodies, as well as to the measurements we use to determine the re-emergence of health. Embedded within all biological accounts of illness were social perceptions related to disease. Therefore, rehabilitation of the body in CR settings was more than just a focus on physically repairing the human body; it also included re-aligning social perceptions of health.

### 6.2 Looking Back, Looking Forward

The progression of cardiac disease and T2D is an insidious process. At times, people diagnosed with T2D continue to “feel fine” in spite of prolonged periods of hyperglycemia, which in turn may contribute to the development of atherosclerosis, coronary artery disease, and microvascular complications (i.e., diabetic neuropathy). Many are not aware that the disease is continuing along a dangerous trajectory until it significantly disrupts their health. A spectacular event, like a MI, shifts personal confidence in health and the claim to identity oneself as a “healthy person.” As described previously within the notion of the body project, self-identity is closely linked to perceptions of health; therefore disruptions in health can also result in disruptions in personal identity. The temporal nature of disease, more specifically how disease is often conceptualized as a significant disruption in time, often causes people to
stop and reflect on their personal identities before they became ill. Health, then, can be understood as a state prior to illness or a future state where illness is alleviated; seldom is it seen as existing in the presence of disease. Within this section, I use the term *temporal reflection* to describe how participants contemplated their health by reflecting on their pasts, presents and futures. This reflection helps to uncover the trajectory of biological processes and organizes participants’ efforts to regain health by merging their past reflections, present illness state, and future health-related goals. These reflections guided the development of individual diet projects. Interestingly, rather than focus on the present management of their disease conditions through their diet projects, participants often sought to uncover their previous risk behaviours and/or mistakes in managing their health in order to rid themselves of their T2D and CAD completely. Within this first thematic section I relate different participant accounts of *looking back* into their pasts to determine when their health was disrupted, as well as how they also *looked forward* to their futures in order to set goals for their overall diet projects. Though these reflections are presented in two separate discussions, they are often intertwined and contingent upon one another; more simply put, it is difficult to reflect on future health without coming to terms with what went awry in the past. All participants were dealing with significant health issues, including T2D and heart disease; therefore there was a sense of immediacy to their efforts. They were also early into their CR programs, and were just beginning to envision how they were going to approach their health behaviour changes.

### 6.2.1 Looking Back

Looking back into the past helped participants to uncover specific health behaviours that may have led to the development of cardiac disease. This reflection often went back to the initial development of their T2D rather than their heart disease. They sifted through their histories in an attempt to uncover everything that may have put them at risk for their current disease condition(s). Though the focus was often on food and eating, other health behaviours or bodily states (such as weight gain, physical inactivity) were identified as significant risk factors for CAD. Regardless of what participants chose to isolate and work on within their diet projects, how they engaged in this reflection inevitably organized their approach to the overall project itself. It is important to note that participants continually engaged in this type
of reflection as they became more familiar with their diet planning, and they were also able to address more complex aspects of behavioural change as their CR program progressed. Within this section I will highlight 3 participants who used their past reflections to organize their diet projects in different ways. In each instance I will show how this reflection influenced the present uptake of their diet projects.

Ted was repeating CR for the second time. His first admission to the program was after his first MI 8 years ago. At the time, he considered himself previously healthy, despite his complex 10-year history of T2D and recent onset of CAD. He did not consider his first MI to be a serious event, but rather a mild warning sign that he needed to take his health more seriously. He explained how he gauged the severity of this initial event by using a 10-point scale (10 being close to death):

On a scale of 1-10, my cardiologist said, well, about a 3. I said, okay, that’s fine, but 10 is a pine box and they didn’t do any surgery or anything like that or any bypass or anything like that at the time because he felt that it could be probably controlled by diet and exercise and medication and one thing and another, and at that time I went through the course here and I guess I completed the course here at that time.

Ted’s most recent admission to CR came after his second MI, which had resulted in immediate coronary artery bypass graft (CABG) surgery. Though he did not place his experience this time within the same 10-point scale he used in the past, his accounts revealed that this experience was not only a spectacular disruption to his health, but also a threat to his mortality. Ted described the conversation with his cardiologist after his second MI:

He [cardiologist] said, “The likelihood of a fatality if you have another heart attack is very high.” Apparently one of these two arteries is known as the widow maker. At any rate I said, “Well, okay, you think I should have a bypass. When do you think this should happen?” He said, “Well, we’re submitting your information to the surgeons and finding out when we can get a date,” and he came in the next morning and he said, “We’re going to transfer you to [the hospital] and you’ll have the surgery on Monday.”
Ted had dealt with T2D for almost a decade but had never felt aware of how it was affecting his body. Interventional strategies, such as cardiac surgery, have a way of piecing apart the hidden layers of participants’ biology, in a sense making diseases process visible and real. For Ted the effects of T2D on his coronary arteries were undeniable after his cardiac bypass surgery. After the surgery, Ted reflected in more detail on his past behaviours in order to make the insidious nature of his illness more visible within his daily practice. Therefore, it was important for him to make specific links between his T2D and the development of his CAD. He began by sifting through his past diet patterns in an attempt to pinpoint an exact point in time when he first put himself at risk for T2D. During the interview, he stopped and described a period, prior to the development of his T2D, where he drank pop on a daily basis:

One thing that I used to do, I used to drink a lot of pop—not sugar-free pop, but regular, sugary, dirty pop. I used to go and buy a carton of large bottles of pop from the convenience store that used to be on [local] road years ago, go up there and buy a couple of cartons of pop and consume this stuff—not really having a hell of a lot of idea of what I was doing to myself at the time. I’m of the opinion that if I had left that stuff alone, it might not have progressed to diabetic conditions.

He isolated this particular habit as a major contributor to his diabetes. In retrospect, he determined the pop to be an avoidable and toxic factor influencing the onset of his T2D. Regardless of the other complex factors that may have also led to the development of T2D (i.e., inactivity, weight gain, family history), he remained focused on this particular habit. This was significant to how Ted decided to formulate his diet changes. His efforts became focused on limiting his sugar intake and frequently monitoring his BGL in order to decrease his cardiac risk. Other goals, such as weight loss and exercise, did not come into the construction of his project at this time. For Ted, it made the most sense to begin his diet project by monitoring his sugar intake and the rise of his BGL, thereby uncovering the insidious nature of his diabetes and making his bodily fluctuations more apparent to him. These efforts remained central in his interpretation of his diet project and how he came to measure the effectiveness of his health changes.
Other participants recognized the need to make the workings of their bodies more apparent, but did not approach their diet projects with the same strategies as Ted. Jean, 70 years old, was diagnosed with T2D while participating in a research study. Much to her surprise, she began to develop chest pain after her diagnosis and underwent an angioplasty and the insertion of four stents. Like many other participants, Jean insisted that she never felt sick prior to her diagnosis of T2D. She recounted the insidious nature of hyperglycemia and discussed how she continued to struggle with identifying highs and lows in her blood glucose:

Even though my blood sugars were excessively high—we're talking 31s and 32s—I never had any symptoms, and I never had a low blood sugar in my life. I wouldn't know one if I fell...well, I might now. I had a 4.7 the other day but um, so you know, it was just like well, you know, I feel fine so I want to eat whatever the thing was, and I ate it.

The silent nature of prolonged hyperglycemia posed difficulty for participants who were trying to come to terms with the management of their T2D and CAD. Even though Jean developed familiarity with the health consequences of fluctuating blood sugars, she described continuing frustration with her lack of previous symptoms, and her need to relearn her body’s signals related to periods of hyperglycemia and hypoglycemia. Therefore, Jean focused her efforts on better regulating her BGL through her diet. Rather than remove specific types of food from her diet like Ted, she attempted to find ways to continue to eat the foods she loved while keeping her BGL in a normal range. Her diet project was portrayed less in terms of what she ate and how she organized her food practices, and more about what her blood glucose levels were. At times, she tried to see how much she could “get away with” before her sugars began to rise. Although this type of experimentation is necessary in coming to understand the management of T2D, Jean began to avoid taking her BGL when she knew it would be high. In a sense, she remained in the same predicament as before, this time knowingly discounting her hyperglycemia, thereby purposefully rendering it invisible rather than just being unaware of it.
Along a similar theme, other participants admitted to straying knowingly from their disease management in the past with the hope that they would not become ill in the future. Lily, 68 years old, had an exceptionally strong family history of cardiac disease (seven of her family members died from CAD), self-described as being overweight, and smoked regularly. Although her formal diagnosis of T2D came after she had chest pain and subsequent angioplasty (leading her to her current CR program), she was told years ago that she had noted hyperglycemia on a fasting blood glucose level taken at a doctor’s office. At the time she stated that she refused to entertain the notion that she was diabetic and never followed up with the doctor. Lily described being aware of the relationships between diabetes, smoking, and weight gain in relation to her cardiac health because she had previously taught biology and anatomy. Her accounts revealed anxieties related to changing her health behaviours, which she positioned as “changing her whole life,” as well as social anxieties related to being “pigeon-holed” or “judged by others” for her current state of health. Knowing that she had to engage in many difficult types of behaviour change, Lily described her need to deal with one issue at a time. Interestingly, Lily’s initial focus for her diet project, weight loss, had the ability to relieve both her physical and social anxieties related to her health.

Lily’s weight-loss strategies began through a reflection on the complexity of her biology, rather than on her past health behaviours. She talked about a common diet, “The DNA Diet,” which placed individuals into various typologies (or approaches) for weight loss based on their biological characteristics:

They show the DNA thing; they call it the DNA Diet. And yeah, my characteristics fit with low carb. If I followed the diet in that book, I wouldn’t lose an ounce; I’d put on weight. If I had that many servings of carbohydrates a day… I mean, as it is, I’m having trouble losing weight, and I believe that’s because of the diabetes and because of the Metformin. So, but by going on as low a carbohydrate content as I can, I mean, I’ve now lost 20 pounds. I’m wearing something that I haven’t worn for ages.

Lily was selective about what would work for her weight loss. She combined multiple sources of knowledge in order to come to understand her body and what would work the best for her. In the case of the DNA Diet, she countered being placed in the ‘low carbohydrate
category’ (which recommended she increase her carbohydrate intake within her diet), and used her previous experience with weight loss to guide her decision making within her diet project. She decreased her sugar and carbohydrate consumption, which resulted in a fairly rapid weight loss, as well as stabilization of her glycemic levels. She was able to successfully incorporate her own understanding of what worked for her body by combining various sources of knowledge (science, popular culture, and personal experience) to develop a plan for her weight loss. However, there were limits to the behaviours she was willing to address at this time. When asked about quitting smoking she replied:

I know that what I’m doing is not good for my health, but I’m gonna do what I wanna do, and if it shortens my life, it shortens it, or you know. Would I want to live longer, miserable? No.

Participants who were faced with changing a multitude of health behaviours often decided to start with changing one aspect of their health at a time. This is understandable due to the overwhelming nature of health behaviour change in the context of chronic disease management.

Reflecting on past behaviours aided participants in understanding their present disease conditions and helped them to formulate their initial diet project goals. Sometimes these reflections revealed previous inconsistencies in disease management, or highlighted the slow but dangerous onset of their disease conditions. Temporal reflection may involve looking back, but it also looks forward to set health goals. The following section discusses how participants projected into their futures to determine the ideal and end results of their diet projects.

6.2.2 Looking Forward

Participants were in the early phases of participation in CR, so they were still involved in envisioning the ideal and end result of their diet projects. Participants described hopes for what they might achieve at the end of their CR programs. Often, these hopes aligned with what their bodies once looked and felt like prior to illness. Therefore, past reflection was a significant step in formulating future health goals. Diet modification was conceptualized as a
primary strategy for participants to improve their health, as well as to potentially alter their bodily appearance. Participants identified goals that spoke to themes, such as weight loss, as the means to reclaim their previous health (by decreasing a significant risk factor for T2D), and to alter their physical body in ways that visually demonstrated a gain in health. The topic of weight loss as an indicator of health provides an interesting discussion surrounding goal setting within various diet projects because it uncovers participants’ perceptions of what a healthy body should look like, especially since looking healthy was often equated with being healthy. Participants sought to shift social perceptions thought to be placed on them as a result of their conditions, improve their physical appearance for the people around them, regain previous functioning, as well as to improve their health to order to maintain their social roles.

Highlighted here are three participants’ accounts of looking forward to their ideal state of health and bodily appearance. The first account focuses on the goal of having a future body that is healthy and able to care for others; the second account focuses on achieving a body that visibly meets social standards for health; and the final account highlights a participant’s attempt to reclaim a previous or past body free of disease.

Kathleen contacted the CR program independently after a complex CABG surgery resulting from multi-vessel CAD. She had been living with T2D for 10 years prior to her diagnosis of severe heart disease. Kathleen worked full time and was the sole bread-winner for her family after her husband’s job was made redundant. She lived on a piece of subdivided land with the rest of her family, taking turns with her siblings to care for their elderly father. Prior to the interview, Kathleen became a grandmother for the first time and expressed her desire to see her grandson grow up: “I have a grandson. That’s the apple of my eye. He’s 15 months old. That’s my goal in life, to be alive and healthy to see him.”

Kathleen’s efforts to improve her health were guided by her desire to be alive and healthy so she could care for her family. For Kathleen, diet change was the key to success because she saw the management of her BGL, weight, and hypertension as being contingent upon her ability to regulate what she ate. Kathleen felt that she had a head start on her diet project because she lost weight after her cardiac surgery. She set a goal of 140 pounds for the end of
CR, and aspired to lose 1 pound per week. Kathleen expected the success of her efforts with her diet to be reflected in both her weight loss and the stabilization of her co-morbid conditions. When asked if she linked her previous weight gain with her heart disease and diabetes, she replied, “Yes. And I still do.” Her future healthy self was one that was thin, active, and able to care for those around her. Weight loss reflected the success of her diet project, and also acted as a stimulus for her to continue to engage in the betterment of her health.

Other participants gave more specific details of how they thought weight gain put their body at risk for heart disease, and why it was imperative for their diet project to focus on weight loss as an end goal. Nabitha had been living with T2D for the past 10 years. Only recently she had experienced chest pain for the first time, and was admitted to the hospital for a mild MI and angioplasty. This was the first time she had ever been hospitalized, and she became anxious about improving her health. Nabitha conceptualized weight loss as the only way to correct the health issues stemming from her T2D, hypertension, and CAD. She described herself as having an “apple type” build, wherein the majority of her weight was carried around her abdomen:

If you look like an apple, then you are bound to get [a] heart attack, but if you look like a pear, then you are okay. So I look like an apple. I know that it’s all here [pointing to abdomen] and that’s what should come off.

In the above account, Nabitha reproduced prominent medical and social discourses around the appearance of a body at risk for T2D and CAD. She described how she was 104 pounds when she immigrated to Canada over 40 years ago. She indicated that her 36-pound weight gain over the years was dangerous for her short stature because the weight was primarily situated on her abdomen. Though she recognized, just like Kathleen, that her weight loss would take time, she attributed the success of her diet project on her ability to lose weight and change her current weight distribution, thereby removing a visible risk factor associated with the development of T2D and CAD.

Many women within the study spoke to how they were going to alter their health as well as physical appearance of their bodies through their diet projects. Often, the men in the study
described their goals in slightly different terms, speaking to their physical health rather than appearance. This did not mean that they did not experience the same social anxieties about their physical appearance as the women, but instead they constructed different goals for their overall diet projects. Douglas, 76 years old, was recently retired from his second career. He spent his life engaged in either playing or coaching hockey. He was finding it difficult to resume his physical activity after his MI, which had resulted in emergent CABG surgery and mild heart failure. In a sense, Douglas’s future goals were rooted in re-claiming his past levels of physical activity; his diet was conceptualized as one of the ways to improve his physical functioning and health. He described his goals for CR:

I want to get back to as close as I can to what I did. I can handle the pressures but I’m going to be through with business, but I want to go to the kids’ house and cut their grass, I want to cut my grass, I want to dig in the garden, I want to lift whatever I want to lift and I’m cheating now. I’m lifting pretty good at the office when people aren’t looking. They run, they run if I go to grab something, but I’ve lifted beds and everything again. No, I feel good with it and I’m not overdoing it. I know what I can take and what I can’t take.

Like, Kathleen, Douglas’s future goals were focused on his ability to take care of himself and his family. He also sought to maintain his identity as a hockey player and an athlete despite the recent decline in his cardiac function. He put “playing hockey again” as one of his goals on his CR information sheet. For Douglas, his future body was one that could carry on his role functions, and engage in activities that would reclaim his previous self-identity.

Temporal reflections were central to the formulation of diet projects. Participants completed linear reflections on their past, present, and future in order to come to terms with the development of their disease, and to set future goals. How they came to understand their bodies and their health occurred in a variety of ways. Some attempted to reclaim a past mode of functioning which symbolized a time when they were free of disease, while others looked towards a healthy future. All participants struggled with finding a way to recognize and, in some sense, absolve themselves of their past behaviours in order to work towards their future health-related goals. The next section addresses how participants came to describe the overall
missions that they would embark upon through their diet projects for the improvement of their cardiac health.

### 6.3 Missions

Participants began formulating approaches for regaining health through their diets. These varied approaches can be described as *missions* composed of assignments or tasks geared towards diet change and the final goal of decreasing their cardiac risk. Often these missions were inter-dependent on each other meaning that participants had to successful on previous attempts in order to continue re-building their health. Kathleen’s accounts in particular highlighted this thematic conceptualization. She intensely described the goals she felt she needed to work towards to improve both her diabetic and cardiac health: “I do have to work on some missions like my waist measurements, I have to lose weight and my blood [glucose]”. She was able to identify not only detailed and specific missions but also described how they built on each other. For example in order to regulate her blood glucose levels and her blood pressure, which she described as significant risk factors, she needed to lose weight, in order to lose weight she needed to re-structure her diet. She was able to piece apart these broad goals into specific task with established outcomes. She described a specific mission focusing on decreasing her systolic blood pressure: “And my blood pressure for diabetic people should be 130, mine reaches sometimes as far as 138, 139.” Her broader dietary efforts were aimed in part at achieving this goal.

While there were similarities in the types of strategies used amongst participants (i.e., blood glucose regulation, removing particular foods from their diets, portion control, etc.), how participants positioned their specific missions was significant to the uptake of their overall diet projects. It was common for participants to describe an overwhelming sense of immediacy to improve their health, as well as pressure not to fail at their attempts because their lives were at stake. Therefore, participants prioritized their missions based on the larger frameworks of how they positioned their disease in relation to their bodies. The first theme in this section focuses on how some participants understood their overall mission within their diet project as an *undoing* of their previous mistakes and health behaviours. They recognized the complex embodiment of their T2D and CAD; therefore they sought to undo any damage
to their bodies by changing previous health habits, focusing on their diets, and improving both their diabetic and cardiac health. The second theme explores participants who positioned the relationship to their T2D and CAD differently. Rather than seeking to undo previous damage to their bodies, they positioned their disease condition, in particular their diabetes, as an adversary or enemy that they needed to fight against. Rather than thinking about their bodies as cultivating their T2D and CAD, participants perceived these conditions as something foreign or external attacking their bodies. Central to both thematic accounts was the notion that participants wished to rid themselves entirely of their T2D and CAD.

6.3.1 Undoing

CR participants described attempting to undo previous unhealthy behaviours by engaging in diet change. The final goal was often focused on removing the disease itself, as well as undoing the most pressing health or bodily concerns. To begin this discussion, I return to Kathleen, identified in the previous section. Kathleen referred to her diet project as one of several missions that she needed to embark upon for her health. She perceived these missions as events at which one either succeeded or failed: there was no middle ground. CR provided her with insight into which health behaviours she needed to tackle, and she thought that if she could stay on track with the program that she would be on the “road to recovery.” The following account highlights Kathleen’s integration of her current CR education with her previous health behaviours. When asked how she was dealing with the complexity of her medication regime in light of her CR education she gave the following answer:

I can see now that I was making some mistakes on that. Because I was taking my pills whenever I remembered. And at all different times, which was the wrong thing again to do but after the education here I'm taking them in the mornings, like the two diabetic pills and blood, I'm sorry, and the blood pressure pills. And the aspirin, I take them in the morning, which I used to take at 2:00, 3:00 o'clock in the afternoon when I remember it, and now I'm getting better readings. Between six and seven even though I'm fasting sugar, and I do have to work on some missions like my waist measurements, I have to lose weight and my blood, I'm sorry, my blood sugar is between seven.... The highest I have got now is about eight.
This quotation reveals that Kathleen was slowly unraveling the tasks required to stabilize her medication therapy in order to achieve optimal results for her efforts. She was convinced that her overall health goal was an undoing of her past behaviours. She identified several mistakes that she made during her 10 years of living with T2D, including not taking her diabetic medications on time, not monitoring her blood glucose levels, gaining weight, and eating the wrong foods. Kathleen used the idea of embarking on separate missions to help deal with the complex nature of her overall health goals. By piecing apart her overall goal of achieving health into measurable tasks, she was better able to come to understand and work towards her overall diet project. However, she continued to place pressure on herself to succeed and accepted the blame for what she perceived as her failures within her past efforts. This primarily stemmed from her perception that she had put herself at risk for disease because she had not been able to understand and engage the urgency of her T2D when she was first diagnosed 10 years prior. At times, she did not recognize the complexity of her current health state, and what contributed to it outside of her own perceived “failings”.

Other participants also identified their diet projects as a type of “undoing” of past behaviours. Barbara was diagnosed with T2D after her first MI. Like other participants in the study, Barbara reflected on her diabetes late in the disease process. Unlike Kathleen who was able to relate her health issues to years of not managing her diabetes, Barbara was dealing with a joint diagnosis of diabetes and heart disease. She described CAD and T2D as “twins,” and stated that she had to learn to work with both of them together:

I just look at both of them together you know, and they both intertwine. I mean, okay, you can have heart problems without having diabetes, you know, and vice versa, so in this case it’s both of them affect each other, so you have to work with both of them together…. They’re like twins! You got to work with both of them together.

Therefore her first mission was focused on coming to understand diabetes as a risk for heart disease. Significant factors for making changes included: recognizing what her diagnosis meant for her health, taking responsibility for her current state, and rehabilitating her body:
What I’m doing to myself. You know, what I’m doing to my body, and I’m thinking I had an uncle who died, who had diabetes—not from the diabetes but from complications, and then I had three other people who are on medication, but not insulin, but they are still alive and I’m thinking, ‘no, you’ve got to do something about it,’ and I know within myself that I’m overweight, I’m overweight so you know, you kind of keep putting it in the back of your mind, but with all of these things come forward now I’ve got to do something about it, so like I said, I woke up and I thought, ‘no, I better do something about it,’ so…

She directed her efforts towards diet and weight loss and outlined a specific goal of staying off insulin therapy. Her diet was central to preventing future complications. In order to be successful with her interventions, she described having to re-train herself in terms of her taste for food, learn to omit particular foods from her diet, and discipline herself to remain in a routine. She did this by keeping a schedule of when she ate, and she also learned to anticipate situations where food may be a problem (i.e., the strawberry shortcake offered at church every weekend). Barbara was not just undoing past behaviours, (such as selecting the wrong foods); she was also undoing past habits, tastes, and routines.

Participants who related themes of undoing to their diet projects often accepted their disease conditions as embodied states. By this I mean that they perceived their T2D and CAD as something that was a part of their bodies (not external to them), cultivated through their previous behaviours. Central to this recognition was the notion that they were somewhat responsible or at fault for their current situation. Therefore, a significant part of beginning a mission to undo previous illness was to accept blame or recognize particular “failings.” At times, participants placed pressure on themselves to reverse their conditions without reflecting on the complexity of the chronic nature of T2D and CAD. To this extent, individuals such as Kathleen followed prescriptive health regimes outlined by CR, and stated that she would be a “loser” (in the sense of losing her health, and potentially losing her ability to care for others) if she could not implement the program successfully and re-gain her health. This type of perception placed a significant amount of pressure on these participants to be successful within their CR program. Other participants conceptualized their overall mission to re-gain their health differently than those who sought to undo their past
behaviours. Rather than recognize their disease conditions as part of their bodies, they positioned them as something foreign or external.

6.3.2 Diabetes as an Adversary

Other participants positioned their disease conditions in a different way, focusing on their T2D and CAD as adversaries, rather than as culminations of previous risk factors and behaviours. This was significant for how their diet projects were implemented. Diabetes in particular was conceptualized as an opponent or enemy that continued to rear its head. There was a common perception that the participant was “just fine” until diagnosed with diabetes. They expressed frustration at having to manage the condition, and often felt that they were undeserving of the complications, such as CAD, associated with the disease. Diabetes, then, was perceived as the cause of all of their problems. As a result, their efforts were directed at eradicating this condition through better diabetic management, changing their eating habits, monitoring their bodies, and preventing future disease. In a sense, they were engaging in the same types of activities as the participants within the previous section; however, they provided differing rationale for doing so.

Kasun had a long-standing history with T2D. At first he tried to modify it through his diet, then moved to taking anti-hyperglycemic medications, and then ended up on insulin for more optimal glycemic control. Diabetes management was a full time job for Kasun. He spent most of his time reading about diabetes, keeping up to date with current journal articles, and integrating this new information into his diabetes management. He described the insidious nature of T2D by likening it to a robber that snuck into his house during the night:

This diabetic, I have read a lot of books about this. This is apparently the same, it’s like opening a door and sleeping, [and then] any robber can come in. No restriction, same day—when you are diabetic all other things come in as time goes on, and if you neglect, that’s it.

According to Kasun, by ignoring your body you leave it open to attack because it brings other potential complications, such as heart disease. Kasun identified how he felt he had made his body vulnerable to illness through his busy work life, poor eating habits, and high
amounts of stress. Kasun spent his days poring over diabetes websites, journals, resources from his pharmacist, and his CR information in an attempt to understand his “enemy” so he could defeat it. He was open to new approaches or therapies that would help him stabilize and expedite the removal of his diabetes. His days were extremely organized and structured; he took insulin because he knew it would provide him with better glycemic control, and he continually worked to optimize his dietary choices. He took an aggressive approach to his disease management by staying committed to his diet and exercise regime. Everything in his life focused on his desire to defeat his diabetes, and he was willing to give up basic comforts, free time, and his previous routine to do so.

Sometimes the fight against diabetes or heart disease was more episodic in nature. Some participants only embarked on specific missions to change their routines and habits when they felt at risk or vulnerable to their disease conditions. Unlike Kasun, Jason did not follow the information provided to him by CR to the letter (in fact he left mid-program). He was able to determine what worked for the management of his health and what did not. However, he positioned his diabetes in a similar way, engaging in episodic battles rather than the continuing sustained war like Kasun. Jason’s missions were not as exacting as Kasun’s, and he preferred instead to take a more generalized approach to his disease management by controlling his food portions, switching his anti-hyperglycemic oral medications, and monitoring his BGL to determine particular patterns during his day. He decided to give up drinking alcohol, and found other ways to socialize with his friends. He was adamant that he still needed to enjoy his life: “I got diabetes, I read a lot. I’m going to tell everyone in the world I’m going to cheat once and awhile. I have to live, too.”

Central to Jason’s perceptions of his disease was the experience of having other family members diagnosed with T2D prior to his own diagnosis. With this knowledge in hand, he decided to have himself screened for heart disease in order to guard himself from attack. He went to the doctor to get “checked out,” and ended up being scheduled for an elective CABG due to multiple blockages in his coronary arteries. Jason’s common complaint was that CR was simply “common sense,” and he felt that he was often too restricted in his efforts if he followed it too closely. After the MI that led him to the CR program, Jason felt that he should be doing more strenuous exercise because he was already working a job that required
physical activity. His interventions towards his health, although more episodic in nature, were often more intense and aggressive when implemented than some of the other participants.

Participants engaged in similar activities to restore their health. Diet management, weight loss, and blood glucose regulation were all common goals. However, the ways in which participants conceptualized the larger reasons or impetus for their overall diet projects were also important. Participants who focused the blame for their current state of health on themselves saw their overall diet projects as a type of undoing of past behaviours. Other participants, who felt surprised or attacked by their disease, positioned it as an adversary. All participants, however, struggled with the complexity of changing their health behaviours despite their actual reasons for change. One of the main indicators influencing CR program adherence was in how the participants came to recognize the re-emergence of their health. The final section of this chapter examines how the participants came to understand the success or, at times, the failure, of their overall diet projects.

6.4 Edification of Health

At times it appeared that participants sought not only to improve their physical health, but to also achieve a specific type of moral reclamation through the erasure of disease. The achievement of health, then, was a complex process of edification related to the physical healing of the body and the subsequent moral restoration of self. In this final thematic section I use the term *edification* to describe the subsequent re-building of self through the physical healing of the body, as well as the social body through the removal of social labels and stigmas associated with disease. I explore the concept of edification within various diet projects within three thematic areas. The first area, *metric measures of success*, explores how participants used clinical markers and physical changes to their bodies in order to determine if their diet interventions were successful. The second area, the *moralization of health*, continues the discussion of participants’ desires to remove their disease conditions through diet modification in order deflect particular social discourses associated with health. The third area, *mortal limits*, explores how participants remained constrained by their bodies, the aging process, and the chronicity of their conditions throughout their diet projects.
Ultimately, these three thematic areas bring a closing discussion to the notion of “diet projects” by highlighting the complex and stratified nature of the body-society relationship. More specifically, dietary changes in the midst of disease management show how destabilization of the body through disease continues to have both physical and social consequences for people living with these conditions.

### 6.4.1 Metric Measures of Success

Participants integrated the education they received in CR in a variety of ways in order to determine the success of their diet changes; however, how they interpreted this knowledge differed between participants. Success of the overall diet project was determined within three primary measures: 1) blood glucose regulation; 2) the discontinuation of medications and 3) weight loss. Often laboratory results that focused on blood glucose regulation were used to determine if participants’ new efforts were working. For example, HgA1C, a blood test used to track the binding of glucose to red blood cells, is often used to determine fluctuations in blood glucose levels over a period of 3 months in order to determine trends in blood glucose regulation. Often referred to as a “tattle tale” test, it provides an accurate representation of glucose levels, and paints a clinical picture in relation to diet adherence. A high HgA1C is related to prolonged periods of uncontrolled hyperglycemia (often associated with a poor diet as well as disrupted medical management), which may put the person at risk for the development of cardiac disease or other chronic complications associated with T2D.

Jacynthia, a single woman in her late 50s, relied on HgA1C to measure the success of her diet changes after her cardiac surgery. Jacynthia had a complicated history with managing her diabetes and cardiac disease. She faced several challenges, such as not being able to afford her cardiac and diabetes medications after her first angioplasty, which eventually resulted in her need for CABG surgery. Her efforts to improve her health, now that she was back on her medications, were solely focused on diabetes self-management with her main efforts focused on diet and blood glucose regulation. She took her blood glucose levels every two hours, and relied on improvements in these levels as indicators that her general health was improving. The complexity of this activity demanded her full attention, therefore it was difficult for her to also engage in goal setting related to her other conditions:
But I’ll tell you one thing, I’m not going to work on losing the weight and getting my heart so I don’t have my problems, I’m going to work on my diabetes right now. So I am really trying with that. I have my test at the end of April. I want my A1C to be down to under 7. They say once it is down under 6 you have no risk.

For Jacynthia an improvement in her HgA1C was a measurable sign of the success of her diet changes because it made the inner workings of her body apparent, and potentially alleviated her future risk of disease. Decreasing her HgA1C level provided reassurance about the improvement of her health; although it may have been a false reassurance since her other co-morbid conditions seemed quite advanced at the time of her interview.

Controlling hyperglycemia was a major goal within participants’ diet projects; however there were differences in how participants defined what a healthy blood glucose level was. Many participants developed specific goals surrounding blood glucose management. Demetrio, for example, used the parameters of a normal fasting blood glucose level taught by CR providers to determine his success with his diet: “My goal would be, to become on a 6 range—maybe it's exaggerated, maybe it's going to go to the 7, to the 7 you know. But I try to do that.”

Other participants thought any drop in their blood glucose levels was a sign of improvement. Hassin, a 62-year-old man recovering from CABG surgery, and with a history of uncontrolled and advanced type 2 diabetes, decided that maintaining his BGL at 16 or 17 mmol/L demonstrated a significant improvement in his diabetic management because such levels were significantly lower than his BGL at the start of CR. In a few cases, an inability to lower blood glucose levels despite significant diet changes also served to frustrate some participants to the point that they questioned the utility of their new diet plans. Anthony, who was eventually prescribed insulin, expressed this frustration when describing his experience with recurrent hyperglycemia: “It was happening a lot of times even if I was watching my food, my sugar level, and it was going high. It was really frustrating.” While differing biomedical measures provided insight into the success of dietary interventions, they also served to discourage participants from their diet projects if they were unable to achieve “acceptable ranges.” As described above, the success of their efforts were determined by differing criteria.
Another measure of success was the complete removal of cardiac or diabetic medications. In some cases, participants stopped taking their medications once they started to feel healthy again. Heather described stopping her cardiac medications after her first MI when she started to feel that her health had returned: “I had lost some weight, I felt I was eating better—I felt I was doing everything that people told me to do.” However, despite her weight loss and diet changes, the cessation of her cardiac and diabetic medications resulted in her having a second MI shortly after. Heather still resisted accepting medications as a permanent part of her life:

I’m putting six different medications into me every day. I’m not sure I want to do that every day for the rest of my life either, so, but I’m committed at least for a while, at least until I can see another way of doing it.

Success for Heather within her diet project would not be achieved until she had eradicated her medications.

Although each participant had T2D, they all differed in regards to body size, the severity of their cardiac disease, and co-morbid risk factors. Despite this clinical complexity, a common end goal and measure of success within their diet projects was weight loss. Participants linked increased body size to the development of T2D and interpreted it as a visible social marker for ill health. Losing weight was thought to be a welcome and positive result of adhering to their new diets. Fluctuations in body size for participants occurred in different ways. Some participants actually lost weight prior to CR due to illness (i.e., uncontrolled diabetes, long-term hospitalization) while others slowly worked towards reasonable weight-loss goals over time.

For example, Teri experienced rapid weight loss over a period of months. She knew that something was wrong and suspected that it was diabetes because she had been voiding excessively during the day, was constantly thirsty, and was rapidly “dropping clothing sizes.” However, she was pleased with her shrinking frame and the attention she was receiving from others regarding her weight loss. After a significant period of time, she was no longer able to sustain her health, and sought medical intervention. At the time it was revealed that she was experiencing a serious side effect of T2D, and was admitted to the hospital for severe dehydration and hyperglycemia. In the following months as her BGL stabilized, she became
increasingly frustrated with the weight gain she was experiencing. She described how she often felt tempted to go off her new diet because she enjoyed being able to indulge in the foods she enjoyed while still losing weight. She identified that her “big problem was that [she] had a period of almost two years where literally [she] was eating everything in sight and continuing to lose weight.” Though Teri had advanced heart disease and serious complications arising from her T2D, she still yearned to have the same success with weight loss as she did when her diabetes was uncontrolled. For Teri, even though she knew her previous weight loss was a sign of her declining health, she still perceived it as a marker of success.

Anuhya, a woman of Sri Lankan descent in her early 60s, also had a similar experience with rapid weight loss prior to her entrance in CR. Anuhya was diagnosed with T2D and attempted to control it through her diet for a period of 5 years, but after limited success with this approach her physician started her on antihyperglycemic medications. As time went on, her busy work and home life continued to complicate her ability to adhere to her medication regime. Anuhya developed advanced CAD a result of her uncontrolled hyperglycemia and progressing hyperlipidemia. After an elective angioplasty, she was started on a relatively high dose of Lipitor (a statin drug prescribed to help lower LDL cholesterol levels in the blood). Anuhya was on this drug therapy for a few months and developed a rare side effect of hepatic failure, which resulted in a long period of hospitalization; she lost 25-35 pounds as a result. Anuhya described her weight loss as a positive part of her hospitalization and a head start on her efforts to re-claim her health. This experience heavily influenced how she came to understand her diet project within CR. Still feeling trepidation about having to go back on the drug that caused her initial problems, Anuhya focused in on her diet with the hope that eventually her diet control would enable her to stop taking the medication completely. She realized that her high blood pressure, high blood glucose levels, and high cholesterol could all be better controlled through her diet. Her focus then became fixated on diet adherence and weight loss in order to erase her co-morbid risk factors, and to eliminate her need to take medications. However, she became increasingly frustrated with how difficult it was to work towards her weight-loss goals. Though she had lost a significant amount of weight due to her initial illness, she still did not perceive her weight as healthy. She described frustration over
not being able to shed the “last 10 pounds,” despite her success in controlling her hypertension, BGL, and cholesterol with her diet and medications.

Losing weight was a visible marker of success for participants. The focus on this specific outcome revealed that for participants, health was represented both as an internal and external state. It was also significant that participants sought to have a body that “looked” healthy even if it was, ironically, at the detriment of their health. Social perception, then, was a significant driver for re-obtaining health. The next section explores how participants came to understand these perceptions, and further explores how the moralization of health influenced differing diet projects.

6.4.2 Moralization of Health

The social restoration of health involved participants’ attempts to remove not only their disease processes, but also social labels primarily reproduced through generalizations or social stigmas associated with diabetes and heart disease. Participants described how they addressed the scrutiny, judgment, and cause for concern that others had placed upon them since they were diagnosed with T2D and CAD. Accounts of moralization also revealed participants’ own perceptions of their conditions. For example, Steve, a retired man with a 25-year-history of T2D, described diabetes as “the disease of lazy and idle people.” He used this perception to drive his diet project, which was focused on diet changes and increased physical activity. Steve prided himself on not requiring medication to manage his diabetes for a prolonged period of time, even though this lack of medication therapy may have contributed to his advanced cardiac disease, recent cardiac surgery, and current initiation of insulin therapy. At the time of the interview, he was seeing a traditional Chinese medicine practitioner in an effort to replace his cardiac medications with other therapeutic modalities. For Steve, the treatments he had to take were symbolic of the disease and his inability to control his health; therefore a complete reclamation of health was to reclaim his sense of self-worth (not being seen as lazy or idle by others), and to focus on the end goal of removing his T2D and CAD completely from his body.

Other participants had family members who had lived with T2D, or in some cases, died from CHD. Often, participants created their perceptions regarding these conditions by watching
their loved ones manage their conditions. Barry found out that he had diabetes over 12 years ago after a minor heart attack. He revealed his thoughts at the time: “Yeah, immediately [I thought] of piss on a stick and taking those giant horse pills. Oh, not me, please.” Having watched his father manage his own diabetes, Barry described how he was apprehensive about going through a similar experience. Along with the therapies associated with T2D, Barry also described a concern about periodically losing control of his body due to serious side effects such as hypoglycemia. He worried that many people were not equipped to recognize hypoglycemic episodes, and that they would confuse hypoglycemia with alcohol intoxication. He described his bodily management, then, as both the day-to-day management of the diabetes paired with the risk of losing bodily control, and being dependent on others. His fear was not that others would not care for him if he was experiencing side effects, but that they would judge his condition to be something else considered to be even more socially problematic. Outside of concerns regarding the management of his diabetes, Barry was also experiencing significant changes in his social roles. Recently retired due to his health concerns, he felt that he had been “put out to pasture” after his cardiac surgery. His continued focus on managing his health isolated him from his previous roles and family. Adding to this situation was his perception that his family no longer needed him as a provider. Therefore, he was also experiencing another shift within his life as his social roles changed due to his illness. His body, which was once seen as being able to provide and care for his family, had failed him, displacing not only his health but also his social position.

Some participants initially attempted to avoid being labeled as “diabetic” at all, or accepted other labels, such as a “borderline diabetic” in order to relieve some of the social pressures associated with disease. In some of these cases, they described themselves as having borderline diabetes even though their clinical history revealed that their disease had significantly progressed. Demetrio described how it was important not to fall prey to this interpretation:

When you had the diabetic, you think it's a joke; it's human nature because you don't have any feeling—you don't have a headache you know or something that hurts that you try to…so the pre-stage is important. It's a shame that there's no more emphasis on it because I'm sure that all my problem that I had now, begin with that.
Gary echoed this point and prided himself for not falling into a false reassurance that he was pre-diabetic: “I mean to me, it’s like being a little bit pregnant, if you’re pre-diabetic, you know? Because either you’re diabetic or not diabetic. But pre-diabetic really is the beginning of diabetes.” Participants could only reflect on how they may have previously understood the label of a borderline diabetic because all of them were now dealing with advanced disease and/or complications related to their T2D. Others, however, still clung to the notion of having a mild case of diabetes that could be erased through diet and exercise. As identified previously, Jean was called by her doctor’s office to come in to have a high fasting blood glucose level checked, but she refused because she “was not diabetic.” She did not follow up on her potential diagnosis of diabetes until after she had her first bout of chest pain, and underwent subsequent angioplasty. Her efforts were aimed at eradicating herself of this label. Interestingly, many participants within the study still identified as having borderline diabetes even though they were on medication therapy for their conditions, had advanced heart disease, or other co-morbid conditions frequently associated with T2D.

Social restoration was not only contingent upon the removal of disease labels, but also upon the visibility of illness or of health decline. Mary-Christina, a retired 63-year-old woman, was living with advanced heart disease. She was diagnosed with T2D after a prolonged period of hyperglycemia, which was initially associated with the initiation of prednisone for her rheumatoid arthritis. At the time of her diagnosis, she was already experiencing peripheral neuropathy (tingling in her feet). Shortly afterward she began experiencing shortness of breath and chest pain, and it was determined that she had severe CAD. Mary-Christina was resistant to her diagnosis and did not change her health habits until approximately 3 years later, when she had severe chest pain that led her to call 911. The emergency team found her unconscious she described being “coded” at the hospital. After her MI, she was diagnosed with heart failure and was placed on a diuretic (Lasix) to help her manage the increased amount of fluid now in her lungs. She had a third MI, which was accompanied with a dysrhythmia, resulting in the insertion of an internal defibrillator. Mary-Christina, slightly in shock over how much her health had declined, recognized how vulnerable she was. She focused her efforts on both the current management of her co-morbid conditions, and the prevention of future cardiac events. However, throughout all of her efforts she remained extremely aware of her body and what others thought of her. For
example, Mary-Christina often became short of breath when walking. She felt conspicuous in public when she had to take a short break, concerned that others would notice her inability to walk long distances and ask her if she needed help. During these moments of rest she pretended that she was looking for someone in order to avoid cause for concern:

Most of the time when I'm walking and I'm out of breath and I can't go nowhere, I used to stand up, watch my time, do that, and gladly for waiting on somebody. ‘Hi!’ Somebody was watching they would realize, oh she's looking for someone.... Not letting other people know of my distress.

Despite her advanced health issues, Mary-Christina continued to perceive that others were watching her and making assumptions about her health. She remained committed to her diet project to help avoid any future complications arising from her T2D and end-stage heart disease, as well as to attempt to decrease the visibility of the effects of her disease.

Improving health through diet was conceptualized as a socially acceptable way in which to regain health. Participants utilized diet modification as a potential way to erase the health effects of their diabetes and heart disease, along with the social labels that come along with them. Sometimes, they were unwilling to immediately identify with these labels, which they perceived to have been placed on them. Participants worried about how these labels would affect their ability to contribute to their families, seek employment, and about what accepting these labels meant for their future health. At times, their health issues were too advanced. Even though they realized that they were now in dire circumstances, they still attempted to minimize the visibility of their disease to others. Central to all accounts was the hope that their CR education would provide them with an opportunity to erase their diseases permanently.

6.4.3 Mortal Limits

Despite participants’ attempts to monitor the progression of their health or re-claim social positions lost through illness, their efforts to change remained influenced by the overall capacitates of their bodies. For many, one of the most difficult tasks seemed to be confronting and coming to terms with the limits to their recovery. CR programming, often
conceptualized as a turning point towards recovery, was brought into question once the participants realized that they might not reach their end project goals. Often absent from participants’ accounts was the recognition that they were living with two significant chronic disease conditions (T2D and CAD). Interventional strategies such as coronary angioplasty and CABG surgery were seen as “resetting” the illness trajectory, rather than just managing it. Participant histories revealed the complex and chronic nature of CAD, while their goals continued to focus on re-achieving their bodily state prior to becoming ill. Participants’ current health and their perceived “achievable” health often came into conflict with one another as they attempted to make health changes. Each participant had different limits to their recovery that they were willing to accept. These limits influenced their commitment to their overall diet projects.

For example, Barry (identified previously) continued to have complex and advanced health issues. He relayed an account in which his cardiologist referred to CR as the “last-chance motel...[that it was his] last chance to smarten up or [he] might not be around much longer.” He described an overwhelming need to make significant changes to his health because he felt that he was running out of time. Having attended CR previously, not following the program, and then having to undergo cardiac surgery, Barry realized that he had no choice but to make significant changes this time around. Other participants, by contrast, did not report an immediate or emergent need to engage in health behaviour change because they thought they had more time. For example, even though Carl had three myocardial infarctions requiring coronary intervention, he continued to interpret these events as warnings:

> It’s warning me that if I don’t get some discipline in my life, I’m going to go blind and when I get up in the morning, it takes me about 15 minutes before the blood gets to my feet. So it’s warning me that way. And you know, maybe when I’m walking around like this, I might finally go, ‘Hey this isn’t fun.’ I’ve got to get serious about changing my diet. Hopefully it won’t get that far.

When read with a clinical lens, the above quotation suggests that Carl may be suffering from advanced complications arising from his T2D. However, Carl continued to place death as his only limitation. With each cardiac event he spoke to how he felt better. In a sense, he
perceived the interventions (i.e., angioplasty) that he received as resetting the clock, giving him more time. However, the majority of participants identified their cardiac event (be it an MI or cardiac surgery) as a threat to their mortality that required immediate health changes.

In this study, participants described their diet projects in terms that never strayed far from mortality—past brushes with death during MI, providers’ references to arteries as widow makers, the deaths of family and friends from heart disease... Shilling (2003) describes that all [diet] projects focused on health are subject to failure at some point because all humans remain limited by their mortality. Many CR participants started their health behaviour changes late in their illness trajectory. This did not mean that their efforts were in vain, but that instead they needed to conceptualize their health in a different way than they previously envisioned. This involved thinking beyond just the prevention of acute periodic episodes, but instead on redefining what health meant to them, and how they would continue to achieve it within the context of their chronic conditions.

6.5 Conclusion

It is important to recognize that while the achievement and maintenance of health is a primary focus for CR participants, they can come to understand the re-emergence of health in different ways. Success within various diet projects rested on the improvement of clinical indices, the removal of social labels associated with disease, and alteration of the physical body. All participants remained constrained within these projects by the chronicity of their conditions and the tertiary nature of T2D and CAD. These constraints are important because, once uncovered, they may influence CR programming uptake and adherence. The diet projects discussed in this chapter highlight the social pressures placed on individuals who are living with T2D and CAD, and provide insight into how CR participants come to understand, work towards, and interpret their end project goals. Ultimately, diet projects reveal the complex and stratified nature of the body-society relationship, and show that health is contingent upon both the physical and social restoration of the body.
Chapter 7
Discussion and Conclusions

7.1 Introduction

In this thesis, I investigated how people with CAD and T2D approached their dietary practices in order to improve their cardiac health. To do so, I explored research questions focused on the relationship between food and cardiac health, the restructuring of eating habits for diet change, personal, partnered and community relationships with food and the navigation of diet changes within varying social contexts. The central argument throughout this thesis focused on the influence of the body-society relationship in the adoption of new health behaviours in CR settings. In order to advance this argument within my work, I drew from material-corporeal sociology in order to provide a relevant theoretical framework by which to approach the analysis of the study data and to aid me in drawing out practical examples of the body-society relationship in CR settings. Sociologist Chris Shilling’s theoretical conceptualization of corporeal realism was utilized as a lens to further uncover the multi-dimensional nature of the human body within both its biological and social contexts. This theoretical lens provided a unique approach to the problem of weight neutrality in CR settings, by extending the analysis past weight gain to the intricacies of diet change and the complex role of the body-society relationship in the adoption of new health behaviours. This study also addresses a significant gap in the study of adherence in CR settings, by proposing that future studies focused on adherence include both the biological and sociological implications related to health behaviour change.

In this final chapter I will summarize the findings from this study. I will begin this discussion by addressing each of the research questions posed within the study and situating my findings within the current literature. Secondly, the strengths and limitations of this study will be discussed. Thirdly, I will examine the implications of this work for research, policy, practice and education in cardiac care settings. Finally, I will address the theoretical implications of this study in the context of material-corporeal sociological perspectives and suggest future areas for theory development for the examination of the body-society relationship within health studies.
7.2 Research Questions

This study reveals the complexity of engaging in new health behaviours for people living with T2D and CAD and provides further insight into the adoption of new health behaviours and self-care practices for people living with chronic disease conditions. I completed a comprehensive study of the phenomena of weight gain and dietary changes in CR settings, taking into account both the biological and social mechanisms at work for people who were attempting to change their health behaviours. More specifically, this study uncovered the complex nature of diet change by focusing on how individuals came to understand the role of food for their health and the way that food bound them to varying types of social relationships. The act of eating was more than just a means to sustain the vital functioning of the body. Food was a source of pleasure, a way to identify and bond with others, and at times became a companion in the absence of human relationships. Within this section I will address each of the four research questions posed in this study in order to address the embodied and social influences at work for people with T2D and CAD who are attempting to change their diet practices.

7.2.1 Research Question 1: How do CR participants describe the significance of food to their health?

The diagnosis of T2D and CAD immediately shifted participants’ relationships with food because food played a significant role in how participants came to understand their health. Often, the relationship between food and cardiac health was understood through biomedical interpretations of the role of diet in the development of T2D and CAD, as well as social preoccupations with the importance of being healthy and responsible for one’s own health. Health, then, was interpreted as both an absence of disease and the presentation of a socially acceptable “healthy” body. While diet change was positioned in CR as an important and central intervention to promote long-term diabetic and cardiac health, the majority of participants interpreted diet change as a way to escape their chronic disease conditions. This perception, which frequently identified T2D and CAD as temporary states of disruption rather than long-term and manageable conditions, posed challenges for participants as they attempted to regain their health through their diets. However, this belief in the ability to cure advanced T2D and CAD through diet change influenced how participants came to understand
the role of food to their future health. Participants described how food negatively impacted their health according to three major themes. The first positioned food as a mechanism which caused disease and harm to their bodies, while the second revealed social anxieties pertaining to weight gain and the visibility of their bodies to others. More specifically, weight gain was thought to be a visible marker of health risk. The third and final theme spoke to the lack of pleasure and deprivation associated with restrained eating.

Initially, food was often situated as causing disease and harm to the body. For example, it was common for participants to search through their food histories in order to reveal foods or previous food practices that may have been dangerous to their health. Particular foods like baked goods, chocolate, French fries, potato chips, doughnuts and soda were identified as toxic and were linked to the development of T2D and CAD. As participants began to identify foods that might have been problematic or disruptive to them in the past, they also made decisions to cut these particular foods out of their present diets. The CR program provided information (or sometimes a framework) that helped participants to start the process of changing their diets. Participants applied this information, selectively favoring their individual food preferences, previous habits and current lifestyle. They also enlisted knowledge that they gained in interpreting what types of foods were thought to be healthy. Their strategies relied on particular foods that they thought would help them to lose weight, better manage their diabetes or decrease their risk for future heart disease. Ironically, participants learned to identify foods, which were commonly represented as healthy (muffins, granola bars and vitamin water, for instance), that actually had high amounts of sugar, fat, and calories. In addition to information provided by CR, which sometimes complicated this process, participants also had to wade through large amounts of diet information coming from popular culture.

One of the most influential cardiac researchers on the topic of food and cardiac risk is cardiologist Dr. Dean Ornish, who has completed extensive work with people living with cardiac disease. His program uses diet as a primary means to decrease cardiac risk and reverse CAD (Ornish, 1998a; Ornish et al., 1990; Ornish et al., 1998b). This research has crossed over into popular culture and informs not only cardiac care interventions but also
provides evidence that lifestyle modification can delay the progression of CAD.\(^1\) Though participants within the study did not directly refer to Ornish’s work, they combined medical and popular knowledge (commonly found on the internet) to make their diet plans. This meant that they were faced with a plethora of differing sources, ranging from popular diet programs like the Atkins diet and Weight Watchers, to the Zone diet. Not only did they need to reconcile their past lifestyle behaviours in their attempt to change them, but also had to decide which particular diet plan to follow. Dansinger, Gleason, Griffith, Seker & Schaefer (2005) completed a study comparing popular diets for heart disease risk reduction. These diets included the Atkins diet, Ornish’s diet, Weight Watchers and the Zone diets. They found that weight loss was not linked to diet type, but instead to overall adherence to the diet plan itself. These findings are significant for this study because even though participants were able to integrate their knowledge from the CR program into their diet plans, they too struggled with adherence for a variety of reasons.

Paradoxically, several participants conceptualized food as a potential toxicity to the body as well as a way to reverse disease if food practices were changed. Participants not only stated their desire to improve their health through diet change, they also expressed anxiety related to the appearance of their bodies because they too held various social scripts related to health. As Shilling (2005) describes, our bodies may also become location for social structure and social perceptions related to health. In many respects, T2D and CAD were invisible processes, commonly “hidden” from the gaze of others. However, participants worried that the appearance of their bodies would give away not only their food practices but also their current disease states. For example, weight gain was considered to be a visible sign to the outside world that participants embodied a potential risk to their health, and as a reminder in situations where others knew the person had T2D or CAD. The same concern existed for those who engaged in other risk behaviours (i.e., eating junk food, smoking). This perspective of tying risk with self-management in the context of chronic illness management has been well explored within the sociological literature. Not only have social theorists such as Lupton (1995) and Elliot (2007) conceptualized varying risk narratives in relation to health and embodiment, there is also a growing amount of literature critiquing neo-liberal

\(^1\) I will speak in more detail to the role of Dr. Ornish’s work and its influence on these findings when I address my second research question.
perspectives that focus on risk management within the self-management/self-care literature for chronic illness (Morden, Jinks & Ong, 2012). For example, Morden et al. (2012) recommend that self-management frameworks deviate from focusing purely on “lifestyle” risk management and instead examine the risk and uncertainty associated with chronic illness related to social roles and obligations, the emotional work of living with disease, and the challenges posed by social environments in relation to lifestyle change (p. 78).

Chronic diet restriction, or what is referred to in the literature as “restrained eating” (Hofmann et al., 2010), is often related to hedonic associations with eating. This is often attributed to psychological consequences related to dieting, which include feelings of deprivation as well as preoccupations with food (Timmerman & Gregg, 2003). Deprivation as well as ahedonia or the loss of pleasure with food emerged as a theme within the data. More specifically, participants described that they did not enjoy their new diets because they felt they were lacking in appealing taste and appearance. Hedonic eating is often associated with high calorie foods that are rich in taste and attractive in appearance. It has been previously suggested in the literature that restrained eaters experience stronger hedonic responses to tempting foods than normal eaters (Hoefling & Strack, 2008; Veenstra & de Jong, 2010), however other studies have shown that despite this increase in desiring pleasurable food that restrained eaters may be more practiced at regulating these responses than normal eaters (Papies, Stroebe & Aarts, 2009; Roefs & Jansen, 2002). Hofmann et al. (2010) expanded their quantitative study to compare how restrained eaters and normal eaters reacted to immediate and delayed responses related to tempting food, finding that restrained eaters were more practiced at being able to regulate their food cravings. However, they also found that pre-exposure to tempting food made it more difficult for them to do so. Ouwehand and Papies (2010) found a similar theme to Hofmann et al. (2010) in that women in general were successful in self-regulating when faced with tempting food. However, within the study overweight restrained eaters (which encompassed a separate category in the study) commonly forgot about their diet goals when confronted with attractive food. However, what is lacking within this specific literature surrounding restrained eating and deprivation is how people attempted to regain pleasure with food. Shilling (2005) attributes the loss of pleasure with food in restrained eaters to the social pressures placed on people to improve their self and health. People’s bodies become a location for social preoccupations with bodily
appearance. Self-identity is tied to one’s ability to be able to control their body and demonstrate a socially acceptable outer appearance. He notes that women in particular may have relationships with food that may not only impact their self-image but also inhibit them from having satisfying social relationships with others. The loss of pleasure with eating and perceived deprivation with restrained eating, according to Shilling, condemns people engaged in dietary change to ambivalent relationships with food (p.162). This loss of pleasure with eating influences dietary uptake and adherence within CR settings.

Food, then, was not only identified as a cause of participants’ T2D and CAD, but also as a way to escape these conditions. Diet change emerged as a central way to regain health through the reversal of T2D, to change bodily appearances linked to health risk and subsequently to decrease future risks of CAD. Participants followed their diets with the goal of erasing disease, regaining previous functioning and preventing future illness. The second research question explores the complexity of these endeavours by examining how participants attempted to restructure their eating habits in order to make their diet changes.

7.2.2 Research Question 2: How do CR participants attempt to restructure their eating habits to enact dietary changes?

Initially, I had thought that this particular research question would draw on the minutia of diet planning. However, it became evident that even though participants spoke to specific diet-related tasks (in most instances these tasks were similar between participants), the restructuring of diet remained contingent upon how they perceived their disease in relation to their bodies and their relationship to their own embodiment. In other words, the way that participants thought about and perceived their bodies influenced how they took up diet change. I address this research question from two perspectives related to disease and the body. The first perspective examines how participants positioned their disease process in relation to their bodies (this was examined in the second findings chapter as either undoing or fighting their disease processes), while the second perspective focuses on how participants came to re-understand their body and its signals after their diagnosis of CAD.

To begin with, diet planning was centered on either undoing or combating the disease process incurred through T2D or CAD. Even though the disease process was either
conceptualized by participants as being an internal embodied process accelerated through previous lifestyle behaviours (such as a poor diet) or an external mechanism attacking the body, all participants were faced with the chronic nature of their illness conditions. Many participants re-organized and adhered to their diets with the intent of working towards permanently eradicating disease. The discourse of reversing or staying CAD through lifestyle behaviour is a common narrative in health-related literature and within popular media.

Much of this shift is attributed to Ornish’s (1990) seminal study, “The Lifestyle Heart Trail.” This study examined whether comprehensive lifestyle changes could affect the progression of CAD after one year. Twenty-eight patients with CAD assigned to the experimental group followed a low-fat vegetarian diet, stopped smoking, underwent stress management, and followed a moderate exercise program. Ornish found that comprehensive lifestyle changes could bring about regression of severe CAD after only one year without the use of lipid-lowering drugs. Further studies by Ornish (1998) and Ornish et al. (1998) also found that comprehensive lifestyle changes delayed revascularization in patients with CAD at both three and five year marks when the program was continued. Ornish has been a strong advocate for lifestyle change as a primary form of both preventing and delaying CAD and has completed several studies focused specifically on the role of diet in reversing cardiac disease (2008; 2009; 2012). Participants in the present study expressed a common belief that if they just changed their eating habits that they would be able to overcome their current disease states. However, they were not acting early in their disease trajectory as many of Dr. Ornish’s study participants were. While lifestyle changes could improve quality of life and slow the progression of CAD to some extent for participants within this study, they were too advanced in their CAD to expect that diet would eradicate it completely.

This narrative of curing one’s body through diet had implications for participants related to their adherence to their new diet plans. First, the speed at which diet changes occurred impacted adherence to dietary changes. The more quickly participants observed change the more likely they were to adhere to their new diets. It is also important to note that the participants within this study were in early stages of CR (3-6 months) and had recently experienced a severe cardiac event. In most cases, they were committed to making
substantial lifestyle changes. This is significant because most struggles with intra and post-program adherence typically occur at the 6-12 month marks in CR programming (Millen & Bray, 2008; Bock, Carmona-Barros, Esler & Tilkemeier, 2003; Moore et al. 2006; Oldridge & Streiner, 1990). To the point, they were still early in their CR program and eager to make lifestyle changes. Secondly, participants had an expectation that they would be able to diet themselves out of their diabetic and cardiac medications and eventually out of their T2D. This is significant because all participants attempted to find a balance between their new diets and previous diet practices. In some cases, positive changes in clinical indices gave participants permission to “cheat” or adapt their diets slightly. All participants attempted to walk the line between incorporating their new diets and finding some pleasure in eating. Lastly, participants felt a sense of responsibility to re-structure their diets and adapt to new lifestyle behaviours in order to demonstrate that they wanted to become well. However, even though participants felt the social pressure to regain health, it was not enough to drive their health efforts. How they came to know their body and the changes incurred through disease played a central role in the uptake of new diet practices.

Therefore, a second significant factor in re-structuring diet for the achievement of cardiac health was the need for participants to establish a new relationship with their bodies and to learn to read their bodies in new ways. For example, participants needed to be aware of when to eat, when they were experiencing hypo- or hyperglycemia, or when their bodies were in danger or distress. Signals that might have been previously ignored now gained new meanings. In some cases, some participants even went so far as to describe tingling in their fingers and toes when eating foods that were high in sugar. These findings reinforce aspects of the embodiment literature within both health-related fields and within the sociology of health and illness.

Perhaps the most popular recent work on this topic is by Mol and Law (2004), who studied the embodied action of hypoglycemia in people living with diabetes. Putting aside the subject-object dichotomy favoured within studies of the body, they explore how people with diabetes “do” their body. More specifically, rather than focus on clinical measures determining hypoglycemia (i.e. having people recognize that they met the clinical parameters of having hypoglycemia) they investigated how people came to understand their bodies as
their blood glucose levels decreased. Hypoglycemia, then, was expressed as a type of bodily knowing or recognition by the individual that they were in danger. Self-care, then, was not just about learning to “measure” one’s blood glucose levels, but to also learn to detect falls in blood glucose in the body using past experience as a guide and to develop strategies within each individual’s daily routine in order to avoid future hypoglycemic episodes. Pickard & Rodgers (2012) also studied embodied self-awareness in the everyday practice of chronic illness work (p. 101). They found that self-care employed an embodied, practical knowledge very different from the medical model of care (p. 116). These findings align with Mol et al.’s (2004) suggestions that knowledge is not something you acquire but something that you do in the form of social, biographical and clinical contexts (p. 116).

Within the context of this study, the re-structuring of diet has similar themes to Mol and Law’s (2004) work. To begin with, people must first learn to plan their diet in order to manage their T2D and CAD. This involves pinpointing their previous dietary mishaps, becoming familiar with new healthy foods, and changing their eating routines. Secondly, they must also learn to incorporate their new diet into their daily routines. This includes finding foods that they did not access before, developing tastes for new foods or learning to omit previous preferences for the sake of their diets (i.e., learning to drink coffee without cream, or not putting salt on their meals). It takes time and practice to acquire these new routines. Thirdly, they needed to learn to pay closer attention to their bodies because of the insidious nature of the progression of T2D and CAD. In a sense, they needed to re-learn how to feel and interpret changes in their body, which may have been ignored previously or occurred on a sub-conscious level. Finally, they needed to conceptualize the importance of the role of diet for attaining their health. This involved understanding what health meant to them and how it could be demonstrated to themselves and others.

7.2.3 Research Question 3: What are CR participants’ descriptions of personal, partnered, and community relationships with food?

While the last section focused on the role of re-establishing bodily relationships during diet change, the last two research questions explore how social practice and social relationships influence the uptake of new dietary practices. I use the term sociality to describe the state or quality of being social. Social relationships can be expressed as relationships with other
individuals, families, social groups or wider cultural or practice communities. Within this study I was able to contextualize the influence of the sociality of food in diet change using the notion of an eating community as a central point for discussion. Eating communities were formed through individual, partnered and community relationships with food. This included intimate and deeply personal relationships with food, shared food practices and the cultivation of particular food identities. The continuance of these same communities was contingent upon participant membership and practice. Diet change, then, presented significant challenges for those individuals who needed to change their food relationships, identities and practices in order to better their health. The persistence of the community itself posed a significant challenge to participants attempting to implement a new diet plan.

Here I discuss the emergent characteristics of these communities of eating by reflecting on personal, partnered and wider community relationships with food. These examples provide evidence of how the body-society relationship influences people who are attempting to change their diets. To begin with, participants described cultivating deep and intimate relationships with food. These relationships were described as providing enjoyment, comfort or companionship. Eating was habitual and often tied to specific situations, but food preference itself was highly embodied. People described tastes, feelings, and attachments to particular foods and expressed a sense of loss when they made the decision to stop eating them. It was evident that specific food relationships were difficult to give up. Not only did people have to curb their cravings and develop new tastes, but they also had to learn to avoid places where they knew these foods would be served or find ways to resist eating them.

This task became even more challenging when participants shared these same food relationships and practices with another person or group of people. This is often termed commensality and commensal eating patterns have been proven to reflect wider social relationships (Sobal & Nelson, 2003). Therefore participants within this study not only had to curb their own embodied relationships with food, they also had to disrupt their food relationships with other people. Sobel et al. (2003) found that many people ate alone during the day but shared evening meals, primarily with family members rather than friends or neighbours (p. 181). This was also a common theme noted in accounts of commensality within this study. At times, participants’ partners or friends were on board with these
changes: they provided encouragement and were also willing to change their habits. In other cases, the partner or friend resisted the change, attempting to draw the participant back into old habits, while in yet others, the relationship itself could not survive the stress of the change. Participants developed different strategies to try to save these relationships, including finding ways to mimic a previous practice while adhering to the rules of their new diet plan, “cheating” on their diets in only particular situations, or temporarily leaving the relationship in order to gain a better sense of how to deal with their new diets.

Food relationships constituted wider food practices and food identities. These same identities served to further feed into wider communities of eating. At times, participants found support with their new diet changes in these wider eating communities, particularly when they perceived the community to value their health as important. Krause and Bastida (2011) studied the role of church-based emotional support in the health of older Mexican Americans and found that individuals who attended church more regularly had an increased sense of belonging as well as personal control related to their health. However, other participants found the routines within these communities to be too fixed and did not want to disrupt them. Community membership, then, in a sense sustained previous food practices, unless the participant was able to find a strategy to maintain membership and integrate their new eating habits within the community. However, a significant finding of this study was the overarching and constant influence of eating communities in the adoption of new health behaviours. Participants needed to make difficult decisions about their membership within differing eating communities. They had either to find new ways to participate in the community, to disconnect (temporarily or permanently) in order to gain success with their diet, or to maintain membership through practice at the risk of their health.

Individual, partnered and community relationships with food have deep implications for diet change. It is common for biomedical models of care to conceptualize diet change as being mechanistic in nature. The body is positioned as a machine that can be repaired or fixed through the adoption of particular health behaviours. This is particularly relevant for individuals living with T2D and CAD. Though this type of structured approach allows for learning the “bodily rules” of diet change, it is evident that participants within this study had difficulty sustaining this type of strategy. Those who found success were able to exert
control over their health changes. For example, participants who controlled the cooking often had success in terms of implementing new diet changes. However, they still paid close attention to how these changes influenced their social relationships. Success with diet change, then, was contingent upon both an ability to understand the physiological effects of food on the body paired with the ability to navigate these changes through differing social situations and groups. The final research question explores in more detail how CR participants navigated their diet changes within these differing social contexts.

**7.2.4 Research Question 4: How do CR participants attempt to navigate diet changes within different social contexts?**

Social contexts, which include modes of sociality, commensality of eating practices, and social environments, influence the uptake of diet change. It has been found that increased social connectedness is associated with an increase in positive emotion, which has been correlated to improved cardiovascular outcomes (Ong & Allaire, 2005). A significant part of addressing this research question was the need to define social contexts using the study data. For CR participants tackling diet change, these contexts included social interactions with their family, friends, and workmates, the confrontation of social norms related to health and food, expected roles and functions within their established social groups, and their cultural food practice and memberships. Participants engaged in these varying social contexts and environments through acts of sociality. However, diet change itself placed restrictions on participants’ abilities to act socially when food was a central focus of the interaction. In a sense, diet change served to reposition participants in their social worlds (Shilling, 2005). Therefore participants’ efforts to change their diets became focused on more than just what they ate, but also on who they ate with and on the overarching contexts in which food was consumed.

A first step in navigating the complexity of social interactions centered on food was for participants to gain a sense of what types of foods were harmful to their health and to limit them. Decisions were made to cut out particular foods that were high in sugar or fat and participants described particular foods they removed from their homes. In most cases, this strategy proved useful, unless a family member brought the food back into the environment. A second step was to determine where they would be at risk of encountering these foods
when they were outside of the house. Some participants described difficult encounters with the foods they loved, while others developed strategies for dealing with those same foods within social situations. These strategies may have involved avoiding the social interaction itself, finding alternative items to eat or giving into the temptation. Bodily cravings for particular types of food also complicated participants’ efforts, particularly if they were in a social situation where they were pressured to eat foods they had removed from their diets (for example during Christmas dinner). Therefore a third step in navigating social contexts was to make the decision to disclose their dietary needs to others, at the risk of being made uncomfortable, (particularly if the community was not a familial relationship) within the social interaction itself or revealing personal health information to people outside of their close relationships. This discomfort was described in circumstances where: 1) community members apologized for the food available or prepared separate food thereby making the participant’s differences even more visible within the community; 2) community members demonstrated a lack of understanding about the disease condition and asked personal questions (making participants describe the limitations of their diet and thus particular aspects about their illness history); and 3) community members were unwilling to recognize the importance of diet change thus encouraging the participant to still eat the food available.

Therefore, disclosure of T2D and CAD presented challenges for some participants. Several participants were able to address their needs within each new social context, while others detached from varying social interactions or eating communities in order to preserve their privacy and/or to ensure that they adhered to their diet plan. In some instances, individuals continued on with specific food relationships at the risk of their future health. Interestingly, each social interaction and environment posed different barriers for participants. There was no specific pattern in terms of whether participants fared better within their close relationships or within wider forms of community practice, because each relationship and interaction posed a distinct set of specific challenges.

7.3 Study Strengths and Limitations

Within this section I will address the strengths and limitations of my study, starting with the generalizability of my study findings, moving to my study design, research process, and
finishing with a realist account of my interpretation of the data. This doctoral study drew from a larger data set of 33 participants enrolled in one of three large urban CR programs. Though these programs differed slightly in terms of delivery (for example, one was an onsite program for men and women, the other was an onsite program for women only and the last was an out-patient program for men and women), each utilized the same approach and imparted similar knowledge to participants. However, the study was not focused on the CR programs themselves, but rather the everyday worlds in which people attempted health behaviour change and the strategies they used to do so. For example, even participants within the same program had significantly differing practices and spoke to the CR program in markedly different terms, so how they described their daily practices became significant in understanding the challenges they faced in changing their diets. The data yielded from these three sites was dense with participant accounts related to different aspects of behavioural change, including diet, as well as physical activity and smoking cessation. Saturation was achieved with key thematic areas related to diet change, weight loss and food practices. The findings within this study are highly generalizable to other CR populations across Canada and may also provide insight into health behaviour change within a variety of populations living with chronic disease conditions.

It is important to speak specifically to this study design in terms of its analysis of a larger qualitative data set because this approach is not common to doctoral studies utilizing qualitative methodologies. It is important to note that this was not a secondary analysis of a larger data set, but instead a concurrent analysis exploring specific themes related to diet, weight loss, and body size (which were not outlined in the larger funded study goals) within a rich data set focused on diabetes self-care in persons with heart disease. Prior to addressing some of the limitations of this approach, I will speak to the strength of the study design and the attention paid toward both theoretical and methodological coherence between the two studies. My supervisor and I approached the parameters for my doctoral study by completing a contractual research agreement regarding my area of analysis, publication credit, and data transfer agreements. It was also important that my study design complemented the realist ontology used for the funded study because it influenced methods used for data collection. Therefore, great consideration went into the theoretical lens for this study in order to ensure methodological coherence within the framework of the funded study and to further advance
my exploration of diet change, weight loss and body size. It made sense that I continue with a realist ontological framework for my study design so I turned to Shilling’s (2003, 2005) works on corporeal realism and body projects.

Critical to any form of qualitative research is the researcher’s ability to make the research process apparent. The funded study team generated detailed field notes and interview transcripts. We held weekly meetings during data collection and engaged in group discussions pertaining to the analysis. During this time I was actively engaging with the data and conducting participant interviews. As the data set grew, it was apparent that there would be many avenues for analysis due to the large sample size and variety of important topics that were emerging within the participant accounts. A potential limitation to my study is that I started my own work with the data set about halfway through the data collection for the funded study. Therefore specific questions or exploration of themes related to weight loss in particular were asked primarily in the later interviews. However, these themes had emerged in early interviews and it was determined that this would be a significant area of analysis before the decision was made to allow for me to access the data set for my doctoral study.

The problem of diet change was a consistent and central theme throughout the entire funded study. I maintained an audit trail throughout my analysis by completing reflexive logs for participants, summary tables and charts (containing progressing themes and thoughts), memos and a reflexive journal, which I turned to in order to deal with the complexity of the emerging data and to engage in further theoretical reflection.

Danermark et al. (2002) refer to the intensive nature of qualitative procedures from a realist perspective. This form of intensive research allows for the exposure of generative mechanisms through the exploration of substantial relations or connections within causal groups (p. 165). This exploration is primarily supported by ethnographic methods and, in the case of this study, through in-depth interviewing in order to generate causal explanations of particular events. The use of realist ontology in the context of this study allowed for scientific explanation, integration of human experience, and aspects of social constructivism in order to account for the complex causes of how and why changes in health or social factors need to be understood within the context of health behaviour change (Clark et al., 2008).
A challenge in qualitative research is in the representation of participant accounts. In this study it was recognized that participants were knowledgeable about the practices of their social worlds, and that within each interview transcript there was information about these worlds. However, there were limitations as to what could be told in the interview setting and participants may not have been aware of the contexts informing their understandings and everyday practices. This study has implications for research, practice, policy and education in CR settings. The next section describes the potential contributions that this study could make to the field of CR and nursing practice.

7.4 Study Implications

In section 7.2 I addressed the four research questions in this study and demonstrated how the findings from this study resonated with other published literature. In this section I discuss the implications of my work for CR programming. While the results from this study are potentially transferable to other areas of study outside of CR programming, this section will primarily focus on the implications of this work for the study of dietary change within CR settings. However, these findings can be applied to other sociocultural settings focusing on the study of health behaviour change and can potentially inform wider studies of chronic illness management. I believe that this work is not only applicable to the disciplines of medicine and nursing but also to the fields of medical anthropology and the sociology of health and illness. I will address how the study findings may influence future research, policy, practice and education within the context of cardiac health. As the concept of transferability in qualitative research is also related to the explanatory value of theories developed through qualitative inquiry I address the transferability of theoretical concepts from the study within my discussion of the theoretical implications of this work in section 7.5 of this chapter (Graneheim & Lunman, 2003).

7.4.1 Research Implications

The Canadian Association of Cardiac Rehabilitation (CACR) (2009) notes that further research is required for health behaviour change within the areas of weight reduction, smoking cessation, dietary and nutritional habits, and adherence to life enhancing/prolonging interventions (i.e., medication therapy). This study has the potential to inform future health
and education interventions in CR settings. An initial step for my research is to replicate another study focusing on diet change in other individuals living with cardiac disease and other co-morbid conditions. I would explore the body-society relationship in more detail aiming to uncover both embodied aspects of behavioural change as well as the generative mechanisms between our biology and social interaction. I would use additional methodological approaches including visual methods, such as photo elicitation, in order to be able to further explicate the complex and stratified nature of our biology and its relationship to the social within the context of health behaviour change. An extension of this relationship would be to explore other layers and perspectives related to health behaviour change for people living with cardiac conditions outside of diet change, for example; in terms of physical activity and smoking cessation. As identified in the literature review in this dissertation, there is also work needed to further uncover the complexity of the embodiment of weight gain.

I would also consider adding the accounts of participants’ family members and health providers to my research in order to obtain a greater understanding of the causal mechanisms at work for health behaviour change. It would be beneficial to not only follow participants while they were in their CR programs but to also provide follow-up one year after program completion and, if possible, five years since their entrance into CR settings. Based on the low referral and participation rates within CR settings, it would be interesting to do a comparison of the challenges faced by individuals who are discharged to home from acute care without CR referral compared to those who engage in CR programming. While outcomes between these two groups have been studied to some extent, there is limited information regarding the challenges faced by both of these groups when engaging in behaviour change and whether CR programming in its current state is equipped to meet these challenges.

Outside of cardiac care, this study also has implications for diabetes research and the adaptation of diabetes self-care. The focus on the role of the body-society relationship in the adoption of health practices would be particularly salient for the study of diabetes care and in examining the potential barriers to diabetes management.
7.4.2 Policy

A central document for discussion in relation to policy is the third edition of the CACR (2009), *Canadian Guidelines for Cardiac Rehabilitation and Cardiovascular Disease Prevention*. This document identifies an “action” gap between health maintenance practice and chronic cardiovascular disease care, in which CR practitioners demonstrate significant knowledge related to best-practice but fail to integrate it within their daily interactions with CR participants. This document contains clinical practice guidelines and attempts to enable processes of knowledge translation and knowledge transfer within CR settings (Stone, Arthur & Suskin, 2009). This study has the potential to inform the CACR guidelines in relation to the topics of health behaviour change, social support and adherence within CR settings.

Social support and isolation is identified as influencing cardiac health in regards to its influence on behavioural, psychological and functional issues. Prior, Francis, Retiav, and Stone (2009) use the literature linking social isolation or lack of social support to increased cardiac risk, however these outcomes were also influenced by other psychological indicators such as anxiety and depression. In light of these study findings, I would suggest that cardiovascular research also explore the wider influences of sociality within the context of behaviour change, rather than default to perceived measurable forms of the social (i.e. SES indicators) in order to further explore the relational aspects of behavioural change in CR settings. Many of these relational components directly relate to the concept of adherence, which will be covered in detail in this section.

The CACR (2009) guidelines suggest that patient adherence to CR programming is positively influenced by: 1) the strength of endorsement of the referring physician; 2) patient’s beliefs about their ability to control their disease; 3) their belief that they can achieve positive outcomes (self-efficacy); and 4) links of their past behaviours to their current heart condition. Prior et al. (2009) state that, “despite its clear importance the scientific literature does not provide evidence-based direction on how to improve adherence” (n.p). Quantitative systematic reviews have been unable to provide any insight into the phenomenon of non-adherence to medication regimes (Prior et al., 2009). I argue that qualitative research is best positioned to explore the complexity of adherence within CR settings because adherence is not just about forgetting or disregarding therapy, instead it is intensely mediated by social
practice, experiential knowledge, and the embodiment of disease and health. Within this study, two major themes emerged pertaining to the concept of adherence. The first concept focuses on participants’ desires to remove their illness conditions through the adoption of new health behaviours and the second is the role of sociality in CR program adherence.

To begin with, adherence to CR programming was driven by participants’ desires to rid themselves of their T2D and CAD. Participants frequently reproduced a narrative that said they would diet themselves out of their T2D. By removing their diabetes they would also in turn remove their cardiac risk. It was uncertain as to where participants received this information, if it came from CR practitioners or if it stemmed from wider social narratives. CACR CPG guidelines are clear that CVD is a chronic disease condition. Medications, then, were often conceptualized as a constant reminder of participants’ illness conditions; therefore a sign that one was cured of their illness was the discontinuation of their medication regime. Participants thought that their medications increased the visibility of their conditions to others and reminded them of vulnerability of their bodies. Diet change was positioned as a key interventional strategy for removing the need for medication and as a potential way out of T2D and CAD. This desire to discontinue medications was sometimes so strong that some participants immediately stopped taking them once they started to feel better or had an improvement in their clinical indices. This was often in contrast to other participants who recognized the chronic nature of their illness conditions and continued to take their medications in order to sustain their present health and prevent future exacerbations of their illness.

As demonstrated within the first findings chapter, adherence to CR programming (particularly within the context of diet change) is primarily mitigated by relationships. People have a variety of social relationships with food, food practice, and community groups. Social interaction and belonging may be highly contingent upon previous practices and behaviours (i.e. eating, drinking, and smoking). Perhaps, then, more study is required surrounding the role of sociality and behaviour change in order to develop concrete strategies within CR settings to help participants learn to navigate the complexity of these social environments. Qualitative research methodologies are well positioned not only to add to but
to also extend the study of adherence because it is a complex and multi-dimensional phenomenon that is difficult to put into quantifiable terms.

7.4.3 Practice

If the CACR identifies an action gap between what health care professionals know and what they enact in practice perhaps, then, wider practice concerns arise from policy itself. For example, while clinical practice guidelines (CPG) create concrete evidence-informed goals for care, the prescriptive flow of these documents often do not account for the flux of daily social life. Perhaps then, CR programming should pay wider attention to the social influences of behaviour change and seek to understand the day-to-day challenges of their participants who are attempting to adopt new health behaviours. Rather than rely purely on prescriptive interpretations or models related to changing health, practitioners should attempt to understand the relational nature of health behaviour change. This statement is not meant to negate the importance of current CR practices but rather to encourage a more holistic representation of the complexity of adopting new health behaviours. CR outcomes are still of primary importance, and this type of measurement is required in order to determine program success. For example, in the CACR guidelines, Lownstey et al. (2009) call for improved measures in the further development of short valid self-reporting dietary scales pertaining to reduced fat and salt intake and increased fruit and vegetable intake. Based on the results of this study this type of self-reporting could also extend to include social environments or social interactions, which provided challenges to dietary adherence.

The findings from this study would support the inclusion of significant others within CR programming, classes to help participants learn how to navigate complex social environments by providing concrete strategies, and the development of wider communities of practice within CR settings. I pose three basic examples aimed at increasing awareness surrounding sociality and health behaviour change. To begin with, a simple, yet effective, initial intervention for CR participants changing their diets may be to track the challenges they are facing with their diets (or any other health behaviour change for that matter) in a journal. Rather than measuring intake and adherence (as commonly conceptualized in terms of journaling one’s diet) participants could talk about and identify their social environments, relationships and how these relate to their food choices. Secondly, an integration of CR
events or social gatherings during the CR program wherein participants could practice preparing and bringing in food may provide opportunities for practicing their new diet changes and integrating their food choices into a formal social context. These gatherings could include significant others and family members and could occur throughout the CR program. Some CR programs already include significant others in aspects of program planning, particularly within the context of food preparation and diet teaching. The findings of this study would further support these types of interventional strategies. Finally, a strong desire for the continuation of the CR community was noted in some of the participant accounts. This often materialized as requests for after-program support. Though it is common for some CR programs to offer post-program peer support or for CR participants to keep in touch after the program is completed, perhaps a more structured form of community development for CR participants post-program would be beneficial for aiding participants in maintaining their health behaviour changes. In a sense, CR participants could create their own communities of practice and continue to have a forum for social interaction focused on supportive relationships aimed at maintaining cardiac health.

7.4.4 Education

As a nurse educator, I have already begun to implement aspects of these study findings into my own educational practice. Currently, I am the lead Canadian editor for the textbook, *Chronic Illness in Canada: Impact and Interventions*, which explores the concept of chronicity from differing medical and sociological perspectives. The second edition of this book will take a more direct focus on the role of sociality within chronic disease management and will further integrate interdisciplinary perspectives on the role of the body-society relationship in illness management. Also, nursing curricula should consider the wider sociological implications of health behaviour change and chronic disease management by extending traditional focuses (such as the determinants of health) to include a greater focus on the role of sociality on health. Registered nurses are positioned to be able to address both the biological and the sociological implications of disease management.

This study has relevant educational implications for CR settings. These findings may inform CR educators to take a more holistic focus to programming by recognizing the importance of including significant others within the CR program, by openly addressing how to navigate a
variety of social environments when engaging in health behaviour change and by allowing CR participants to express their frustrations as well as insights regarding diet change. Stone, Arthur, Suskin & Thomas (2009) maintain that the process of knowledge translation is central to the ongoing education of health care professionals and that we need to consistently acquire new knowledge and skills. The findings from this study can help to operationalize knowledge into action so that participants with CR programs can be directly benefited.

7.5 Theoretical Implications for the Study of the Body-Society Relationship in Health Behaviour Change

I close this chapter by articulating the wider theoretical implications of this work for both the discipline of nursing and the sociology of health and illness. To do so, I return to my previous critique of the body-society relationship being understudied within the context of health behaviour change. More specifically, in the context of disease prevention and management, the body-society relationship is often conceptualized as a relationship between personal behaviours and wider social environments. For example, people who live in modern culture and regularly consume “fast food” may be at a greater risk for developing obesity, heart disease and T2D. Therefore, the body-society relationship as viewed within biomedical models of care commonly articulates this as a causational relationship between 1) the individual’s choice to engage in particular behaviours and 2) social environments which constitute risks to health. Though it is noted that there are other factors, besides health behaviours, that may predispose individuals to disease (i.e., genetic history), it is a commonly held belief that individuals should control their own behaviours within broader social environments in order to maintain their health. Material-corporeal sociology, as a central lens for this study, provided a different approach to the study of the body-society relationship in individuals who were seeking to change their diets in order to improve their cardiac health. The work of Chris Shilling (2005), in particular, focused on the human body as a multidimensional site for the constitution of society. Through his theory of corporeal realism Shilling explored how our bodies shape and are in turn shaped by our social environments. In this section, I will speak specifically to how material-corporeal sociological perspectives can advance the study of health behaviour change and provide insight into further building these theoretical perspectives for future health-related studies.
My overall goal within this final section is to initiate a theoretical conversation pertaining to the utility of material-corporeal sociology for the study of the body-society relationship in the context of health behaviour change. I will begin this endeavour by re-articulating two significant theoretical areas of study identified earlier in this dissertation, which I feel require further conversation in light of these study findings. The first area for discussion is the realist concept of *stratification*. I will begin by comparing and contrasting two realist conceptualizations of stratification put forward by Danermark et al. (2002) and Shilling (2005). Using the findings from this study I will make suggestions as to how this concept can be applied to the study of the body-society relationship in cardiac settings. The second area for discussion focuses on the *role of the body* within the body-society relationship. In order to draw out current tensions surrounding the body within material-corporeal sociological perspectives, I will return to a common area of contention in sociological thought focused on coming to know the biological body within the context of sociological study. This is an important conversation because it may serve to better interpret the role of our biology within the body-society relationship and demonstrate the complexity of the relationship between embodiment and health behaviours.

### 7.5.1 Stratification and the Body-Society Relationship

This discussion begins by placing the concept of stratification within the meta-theory of critical realism. In critical realist terms, the world is not only structured and differentiated, it is also stratified. The term stratification within this context refers to differing strata or layers of reality, which are hierarchically organized (Danermark et al., 2002, p. 59). This conceptualization of stratification is a helpful starting point for the study of the body-society relationship. Danermark et al. (2002) provide the example of working one’s way up through stratum by first finding physical mechanisms in one strata, chemical mechanisms in the next, biology in the third, towards the ‘top’ where psychological and social strata occur. As one moves upwards through the strata, it becomes clear that each new layer is formed by the powers and mechanisms of the underlying strata; it is important however, to note that mechanisms cannot be reduced to specific underlying stratum themselves (p. 60). For example, in the context of weight gain there may be complex mechanisms existing within various biological strata. Perhaps a person does not maintain physical fitness and eats
processed foods regularly exceeding what is thought to be a normal caloric intake, thereby producing weight gain in the body. This phenomenon may also be influenced by the person’s underlying chemical responses to food (for example, noted decrease in satiety hormones) as well as genetic structure. However, the phenomenon of obesity is not reducible to any of these specific factors, rather it has emergent properties stemming from the combination of varying mechanisms existing within each strata. In this case, when the properties of underlying strata have been combined (i.e., chemical, physical, biological mechanisms), “qualitatively new objects come into existence with their own specific structures, forces, powers and mechanisms” (Danermark et al., 2002, p. 60). This occurrence is termed emergence and it is possible to describe an object as having emergent powers.

Shilling (2005) utilizes the realist conceptualization of stratification within his representation of corporeal realism in slightly different terms. Rather than focus on the inherent hierarchal structure conceptualized by Danermark et al. (2002), Shilling posits that the body and society are stratified in nature, combining to produce phenomena. He considers the body and society to be irreducible to each other because they are both “real” and possess causally generative properties (2005, p. 12). He frequently interchanges his references to “the body” with “embodied social actor” in order to view the embodied subject as “an emergent and causally consequent phenomenon and object of analysis in its own right” (p. 13). Shilling is reluctant to reduce people to “their biology,” stating that while he acknowledges that the human body is made up of distinctive parts (blood, genes, bones, etc.), he also sees embodied subjects as more than just material constituents, because they also possess dispositions and embodied consciousness, which in turn enable them to make a difference in their environment and to exercise agency (p. 13). Social structure, then, may be contingent upon pre or non-conscious bodily conditions of existence; more specifically, our embodied action has the potential to produce social structure. Society, on the other hand, is afforded a broader scope, consisting of economic classes, bureaucracies, legally sanctioned roles and social norms, which may be fundamentally different from the desires and actions of embodied subjects (p. 13). People, then, are not just continually re-creating society through embodied action but also confronting it as a given structure. Therefore, at times we are also acting in a world of structural constraints and possibilities that we as individuals did not produce (p. 12). Shilling (2005) reminds us that society also “includes cultural norms and values that can potentially
shape the behaviour of generations that confront them” (p. 13). Using the body as the central area of study Shilling (2005) articulates his desire to recognize human bodies through their three fold character: as a source or vehicle through which society is constructed, as a location on which the structures of society inscribe themselves and as a circuit which connects individuals with society (p. 19). For Shilling, these three areas require a method of study, which recognizes the stratified nature of the body-society relationship.

While both of these representations of the realist concept of stratification provide insight into the study of the body-society relationship and health behaviour change, the findings from this study lead me to consider a slightly different theoretical map. While Danermark et al. (2002) provide a highly structured form of stratification compared to Shilling’s (2005) more flexible use of the term, there remains a particular theoretical gap in both of these conceptualizations if they are to be utilized for the study of the body-society relationship within health-related contexts. Common to both representations is an under-articulation of what constitutes our biology and its influence on the social. In the case of Danermark et al. (2002), this arises from the hierarchal nature of the concept of stratification with the social having primacy over aspects of the body that have been reduced to the chemical, biological, and so on. For Shilling (2005) the body remains a central concern but is articulated more in the sense of people as embodied social actors, rather than giving recognition to the constitution of our biology and its influence on social functioning. What this study has revealed, in particular within the context of chronic illness management, is that the body is more complex and intertwined in its corporeality (meaning its material characteristics) than previously theorized within the study of the body-society relationship, and that society should be thought about in terms of sociality and practice rather be addressed purely at a macro-societal level. It is made clear within the findings of this study that sociality plays a central role in people’s abilities to change their diets. Therefore, it is helpful to conceptualize the influence of “society” within the context of the body-society relationship in terms of larger (macro) social environments as well as specific social relationships and social practices.

To make my case for further study of the body within the context of the body-society relationship, I turn to the work of sociologist Nick Crossley. Crossley (2004) speaks to a similar idea as Danermark et al.’s (2002) concept of stratification when he refers to “the
social being nested in the psychological, which is nested in the biological, which is nested in the chemical and so on,” but differs in his conceptualization by focusing on the complex nature of our embodiment, particularly in our ability to be able to think reflexively about our bodies (p. 5). I will expand on Crossley’s work and the implications it has for the study of the body-society relationship in the context of disease management in the latter half of this section. For now I would like to focus my discussion on coming to gain a deeper understanding of the notion of biology, hence the material body, within the context of the body-society relationship in order to advance the study of health behaviour change.

7.5.2 Coming to “Know” the Biological

Discussions pertaining to the role of the body-society relationship in health behaviour change should return to, or at least start with, the study of the body itself. Shilling posits that the goal of corporeal realism is to “reduce the analytical elusiveness of the body and to overcome the theoretical limitations of recent approaches to the study of the body-society relationship” (2005, p.1). Corporeal realism provides a relevant starting point and framework for the study of the body-society relationship but this approach may be strengthened by further exploring practical examples of how the body-society relationship is enacted. In this section I will return to my previous argument that the “body” within the body-society relationship needs to be further articulated. Prior to addressing this, I will explain what I mean by biology within the context of this argument and highlight some common problems connected with coming to understand “the biological” within both material-corporeal approaches, as well as within broader studies of health behaviour change.

Our biology is invariably complex. When I speak about our biological complexity I am including our physiology, vulnerability to disease and pathology, our temporal connections to our bodies, recognizing our embodiment, and even, at times, our ability to imagine ourselves as something separate from our own bodies. Realist perspectives seeking to understand the body-society relationship often sidestep conversations related to the influence of our biology. For example, Simon J. Williams (2006), a sociologist who calls for the return of the biological body to the sociology of health and illness, brings forward a common critique posed by Newton (2003) which says there is not an “easy way to know the biological body” or to “know how it relates to the social” (p. 18). This is due to the fact that many embodied
sociological perspectives subsume aspects of materiality into bodily characteristics, preferring to focus on embodied agency rather than the body itself. This creates an epistemological tension between how we come to know our bodies and how we come to know society. Williams (2006) uses the example that the biological and social operate in differing timescapes, making it difficult to establish a common epistemology between the two (p. 18). Therefore, our bodies are inevitably intertwined with society, sharing emergent rather than common epistemologies (Williams, 2006). Durkheim (1965) described society as a part of nature in that the social realm is a natural realm that differs from the others (i.e., biological) only by greater complexity (p. 31). I would argue, in light of these study findings, that while aspects of our social interaction remain complex, our biology remains a central and consistent concern within studies related to health behaviour change. Though many participants within this study continued to be limited by aspects of their sociality when approaching diet change, the re-emergence of health was invariably dependent upon the biological complexity of their disease conditions and their bodily states. I do not intend by any means to engage in what Danermark et al. (2002) term as “materialistic reductionism” of our biology thereby reducing it to its basic components, or to engage in a type of “sociobiologism” in which social interaction is reduced purely to the biological (p. 62). Instead, I would like to use realist perspectives as a starting point in order to understand the emergent properties of our biology within the context of health-behaviour change. Though Shilling (2003) is quick to recognize our mortal or bodily constraints within his articulation of the body project, there remains an incomplete articulation of how our biological constraints influence significant aspects of the body-society relationship itself. It is not my intent to situate our biology as having primacy over the social, but to attempt to extend Shilling’s work on corporeal realism in order to think further about the relationship between our biology and our social interaction. After all, if society is said to constitute its own stratum and social phenomena are produced by social mechanisms, why can this not be said for the study of biology (biological stratum) within the context of health behaviour change?

In order to further explore the role of our biology in both shaping and being shaped by social interaction, I briefly leave Shilling’s work on corporeal realism and return to sociologist Nick Crossley’s (2004) theory of reflexive embodiment. While Shilling is able to articulate the centrality of the human body in both shaping social structure and at times being shaped by
social perception itself, in light of these study findings it is evident that perhaps a different lens is required alongside his theory in order to capture our biological complexity (rather than just the positioning of our body within the body-society relationship) and its relationship to our sociality. Perhaps the central characteristic of our biology that renders its study difficult (especially within the study of health behaviour change) is the inherent insidious nature of our bodily happenings, especially within the context of chronic diseases such as T2D and CAD. Theorists studying embodiment, such as Drew Leder (1990; 1998), have spoken to the “absent body” during health, in which we only are aware of our embodiment when something within our bodies is disrupted. Leder’s work provides an important framework for the study of embodiment in both disease management and for the advancement of sociological studies of the body. Participants within this study identified similar themes related to their T2D and CAD. More specifically, they identified the complexity of living with these chronic conditions. This included revelations regarding the insidious nature of T2D and CAD, the shocking recognition after their cardiac event that they were ill and their struggles to come to know their bodies in new ways in order to manage their conditions.

While Leder identifies the “absent body” in the context of our embodiment of disease other social theorists aim to further uncover the complexity of our material body and its happenings in a more socially nuanced way. Williams (2005) suggests that what is needed within the biological account is a “subtle and sophisticated form of socially ‘pliable’ biology which accords existential modes of being a central role in linking the health and illness of the embodied agent with wider structures of power and domination, civilization and control” (Williams, 2005, p. 10). Studies such as this one, situated within chronic illness management, provide a relevant starting point for this conversation by focusing on the role of our biology within the body-society relationship. Bodies change with chronic disease and self-capacities are “reciprocal to bodily experiences, feelings and actions.” therefore our biological basis of experience can thereby construct our notion of self and identity (Williams, 2005, p. 11). The relationship between self and health is explored within Shilling’s (2003) conceptualization of the body project, however Kelly and Field (1996) further note that our biology is socially significant because it impinges directly on our concept of self by providing signals for identity construction (for example, in the case of weight gain) and eventually acts as limiting factors for the sufferer (p. 251). This is evident, for example, the
fact that the clinical construction of obesity has become a socially significant phenomenon. While it is difficult to fully articulate what a comprehensive study of the biological should entail within the context of the body society relationship, our biology remains a central and important concern because of its complex and varied relationship with the social. Further study is required to advance this conversation. Nursing as a discipline is well positioned to further this work by utilizing interdisciplinary theory to better understand the complexities of bodily relationships to disease and the role of the body-society relationship for health behaviour change.

7.6 Conclusions

In this study, CR participants’ experiences of engaging in diet change to improve their health were explored in order to gain a broader understanding of the generative mechanisms at work in the body-society relationship within the context of health behaviour change. Weight neutrality in CR programs provided a framework in which to explore wider medical and social perceptions of the body and to narrow in on the role of social practice in adoption of new health behaviours. Rather than focus on the existing discourses related to obesity to explore why participants were not losing weight in CR settings, an alternative approach was taken, exploring how participants engaged their diet changes. Material-corporeal sociology was used as theoretical guide to explore the role of the body-society relationship in persons who were attempting to change their diets and lose weight for health reasons.

The body-society relationship in the context of health management was revealed in different ways. To begin with, participant accounts highlighted the complexity of eating within various relationships, identities and practices associated with food. It was also apparent that participants had complex bodily relationships with their social practices, meaning that they had highly embodied tastes and routines, which may have been influenced by social interaction. Participants’ abilities to imagine health were closely tied to social perceptions (particularly social preoccupations with the representation of health); therefore it was often difficult for participants to conceptualize health as a state occurring simultaneously within the context of chronic illness. This was problematic because all participants were living with two very real chronic disease conditions: T2D and CAD. Secondly, the embodiment of
disease and illness also presented potential challenges to re-achieving health. Not only was social practice highly embodied, participants also had to come to know their bodies in new ways. Therefore diet change was not contingent only upon participants’ abilities to follow a diet plan and adhere to it, but was also influenced by their abilities to recognize changes in their bodies and to learn to navigate a variety of social contexts.

This study has significant implications for future CR programming. To begin with, it calls for a more nuanced understanding of the role of the body-society relationship within the context of health behaviour change. It was evident within participants’ accounts that dietary changes were influenced by more than participants’ desire to adhere to CR programming. A bridging of two disciplinary perspectives (biomedicine and sociology) will continue to advance this area of study. This doctoral work provides a starting point for this endeavour because it brings forward the intricate relationship between people's bodies and the social, and highlights the complex role of sociality in health behaviour change. Secondly, this study suggests that CR programming re-conceptualize some of the current program approaches in order to empower participants to navigate complex social situations. This may occur by extending current CR program approaches to include different courses of action. This change may be advanced by re-opening the current CACR Clinical Practice Guidelines in light of these study findings. Finally, this study shows the utility of social theory in examining clinical issues within cardiac health. It builds on previous studies using complex realism and advances wider theoretical conversations pertaining to the role of social theory for the study of health.

Diet change for the re-attainment of health continues to be a complex endeavour. Aspects of this complexity were uncovered within this study and provide insight into some of the potential factors related to the issue of weight neutrality within CR settings. Further qualitative research focused on the role of the body-society relationship for health behaviour change would further strengthen interventional strategies for the management of chronic illness conditions such as CAD and T2D.
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Appendices

Appendix A: Body Mass Index Table

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<th>BMI Range</th>
<th>Risk of developing health problems</th>
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<td>Underweight</td>
<td>&lt;18.5</td>
<td>Increased</td>
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<tr>
<td>Normal Weight</td>
<td>18.5 to 24.9</td>
<td>Least</td>
</tr>
<tr>
<td>Overweight</td>
<td>25 to 29.9</td>
<td>Increased</td>
</tr>
<tr>
<td>Obese Class I</td>
<td>30.0 to 34.9</td>
<td>High</td>
</tr>
<tr>
<td>Obese Class II</td>
<td>35 to 39.9</td>
<td>Very High</td>
</tr>
<tr>
<td>Obese Class III</td>
<td>&gt; or equal to 40.0</td>
<td>Extremely High</td>
</tr>
</tbody>
</table>

Appendix B: Synopsis of the 2006 Canadian Clinical Practice Guidelines on the Management and Prevention of Obesity in Adults and Children

Appendix C: Guides for First and Second Interviews

Gender and Co-morbidity: Everyday Tactics for Balancing Diabetes Self Care and Cardiac Rehabilitation

Instructions and Schedule of Questions for 1st Interview

The intent of the first interview is to gather some background information about the participant’s biographical context and past history of diabetic self-care to provide a foundation for the more focused discussion in the second interview. The interview will begin with questions about self-care for diabetes and will move on to anticipated and actual complexities associated with the combination of diabetic self-care with CR.

The questions serve as a schedule of topics and not as a structure or guide for the interview. The wording will be flexible according to the vocabulary of the participant. The interviewer will pay attention to the terminologies and comfort level of the participant in the earlier portions of the discussion and will adjust the approach accordingly.

Diabetes and Self Care

First, I’d like to find out a little more about you and your background with diabetes. Could you tell me about how you found out that you had diabetes?

Prompts:

- How has diabetes affected your everyday activities?

- What was it like learning new patterns of self-care for diabetes?

- During the course of a normal day, how does having diabetes affect your relationships with other people who are close to you?

- What is your main occupation? How is it affected by having diabetes?

- What do you like to do in your leisure time? How might this be affected by having diabetes?
Probes: Things to probe for if participants do not mention should include medication issues, side effects, hypoglycemic issues, physician appointments, how their day is structured with activities/exercise, monitoring of sugar, diet modification, and the financial impact, including affordability of medications & glucose monitoring devices/straps.

CR Related Questions

Let’s talk a little bit more about your experiences with heart disease. Could you start by telling me about how you learned that you have heart disease?

Prompts:

- What symptoms did you experience? How have they changed over time?
- What diagnostic tests did you have? Please tell me what they were like…
- What treatments have you had for heart disease? What were their effects?
- How were you referred to your cardiovascular rehabilitation classes?
- What have the classes been like for you so far?

Probes: Things to probe for if participants do not mention should include psychological and emotional responses such as anger and depression.

Additional Health Problems

I’d like to hear about any other health problems that you might have. Please tell me what other health problems you have been diagnosed with.

Prompts:

- What symptoms do you have as a result of [other health problem(s)]?
- What treatments do you have for [other health problem(s)]? Please tell me what they are like….
• How does this affect your daily routines and activities?

Complexities and Self Care

Finally, I’m wondering how the combination of these health problems has affected you and your everyday main activities. Could you tell me a bit about what it is like to deal with more than one health problem?

Instructions and Schedule of Questions for 2nd Interview

The second interview will be a continuation and elaboration of the issues discussed in the first interview. The activity diary will be reviewed and discussed with the participant to discover what major issues are encountered in everyday self care. The interview will begin with questions designed to re-establish rapport and determine if any new health issues or problems have developed over the interval between interviews.

Introductory Questions

In our last discussion you told me about how you manage with diabetes and how you learned that you have heart disease. You also told me about your other health problems. How have you been feeling since the last time we spoke?

What additional thoughts did you have after our discussion that you would like to tell me about?

What new issues have come up for you that may affect your health or ability to take care of yourself?

Questions about the CR program

Tell me about how your cardiac rehabilitation program has been going

• What has it been like to include things you’ve learned at the cardiac rehabilitation program into your usual routines?

• What specific goals have you been working on?
• What has made it difficult to include these goals in your life?

• What has made it easier to incorporate these routines in your life?

• Are there other behaviour changes that you would like to work on?
  
  a. have you initiated a plan to start making these changes?
  
  b. is there anything that has made it difficult to start these behaviour changes?

Journal Specific Questions

Let’s spend some time looking over your activity journal. Can you please walk me through the entries and review for me the details of the events they describe?

• When reviewing your 7-day journal, what stands out for you?

• Tell me about the activities you charted in your journal?

• Were there certain days of the week or times of day where it was easier or more difficult to complete your activities?

• I notice … in your journal, can you tell more about that?

Summary Questions

In conclusion, summarize some of the themes noticed during the discussion of the journal. Pay attention to the overarching barriers, resources and strategies described by the participant.

• What would you tell health care providers of a cardiac rehabilitation program in order to help you more successfully combine diabetes self-care with the cardiac rehabilitation programme?

• What would you tell a friend who had diabetes and was going to start cardiac rehabilitation?
Appendix D: Consent Form

Research Title:

Gender and Co-morbidity: Everyday Tactics for Balancing Diabetes Self Care and Cardiac Rehabilitation

Principal Investigator:

Jan Angus, RN, PhD, Associate Professor, Faculty of Nursing, University of Toronto (416)-978-0695

Co-Investigators:

Paul Oh, MD, Jennifer Lapum, RN, PhD(c), Beth Abramson, MD, Alex Clark, RN, PhD
Jennifer Price, RN, MN, Susan Marzolini, Lori Korkola, ACNP

You are being asked to take part in a research study. Before agreeing to participate in this study, it is important that you read and understand the following explanation of the proposed study procedures.

The following information describes the purpose, procedures, benefits and risks associated with this study. It also describes your right to refuse to participate or withdraw from the study at any time. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is known as the informed consent process. Please ask the study staff to explain any words you don’t understand before signing this consent form. Make sure all your questions have been answered to your satisfaction before signing this document.

Background:

Some people who participate in cardiac rehabilitation have other health problems to contend with, including diabetes. The ways that people attempt to combine self-care for more than one health problem needs to be better understood.
**Purpose of the Research:**

The purpose of this pilot study is to understand how people combine cardiac rehabilitation regimens with existing patterns of self-care for diabetes. We want to learn more about what makes it easier or more difficult to add these new health behaviours.

**Description of the Research:**

If you agree to participate in this study, we will ask you to take part in two interviews. These will last about 1-1½ hours, and they will be recorded so we will not miss any of the information that is discussed. You will be able to decide on the place and time of the interview. The first interview will occur within the first month of your rehab program and the second interview will occur 1-2 months following your first interview. During the first interview you will be given a journal to keep note of your activities and how you are feeling for 7 days. It will take you approximately 10-15 minutes to document your activities each day. At the second interview we will discuss the events and activities you wrote about in your journal entries. You will be asked to provide a copy of this journal to the research team.

During the interviews you will be asked about:

- your health routines and behaviors
- what it is like to combine new health behaviors learned in cardiac rehabilitation with your routines for diabetes
- things that have made it easier to adhere to these health behaviors
- things that have made it harder to adhere to these health behaviors

Study personnel will also review your chart from your cardiac rehab program in order to document information related to your health history.

**Potential Benefits, Harms and Inconveniences:**

You will not benefit immediately from participating in this study, but your contributions will increase awareness of how we might better support people who must combine multiple health behaviours and routines. In reports about the study, your ideas and experiences will be grouped with those of other participants to develop conclusions that could be used to improve
delivery of cardiac rehabilitation programs that take into consideration other health conditions. Although there are no obvious harms associated with taking part in this study, participating will involve some of your time, and may inconvenience you. You may find it uncomfortable to discuss some of your experiences.

**Participation:**

Your participation in this study is entirely voluntary. It is important that you understand that if you change your mind and want to withdraw from the study at any time, you may simply inform the interviewer. There will be no negative consequences whatsoever. If you decide not to participate, it will not affect the health care you receive or access to your cardiac rehabilitation program.

**Confidentiality:**

Every effort will be made to safeguard your privacy. We will not share the information you give us with anyone involved in your care. No information that could reveal your identity will be disclosed to anyone unless disclosure is required legally. All information that is collected for the study, including audiotapes and transcripts, will be kept in a locked filing cabinet that can only be accessed by members of the research team. To further protect your anonymity, your name will be replaced by a pseudonym on the file. Your identity and any identifying characteristics will not be revealed in publications that report on the findings of this study. Any information from this study that is used for teaching purposes will not include your identity or identifying characteristics. Audiorecordings will be erased on completion of the data analysis. Transcripts, journals and fieldnotes will be retained for seven years and then destroyed.

**Compensation:**

You will be provided with a honorarium of $30 for the first interview and another honorarium of $30 for the second interview. The honoraria will be provided regardless of whether you complete the interviews.
Questions:

If you have any general questions about the study, please call the principal investigator in charge of this study, Dr. Jan Angus, at (416)-978-0695.

If you have any questions about your rights as a research participant, please call Rachel Zand, Director, Ethics Review Office of the University of Toronto, at (416)-946-3389. Also, you can contact the Research Ethics Office of the Toronto Rehab at (416)-597-3422, ext. 3817, or Dr. Ron Heslegrave, Chair of the Women’s College Hospital Research Ethics Board at (416)-351-3732 extension 2535. These people are not involved with the research project in any way and calling them will not affect your participation in the study.

Consent:

I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been informed of the alternatives to participation in this study, including the right not to participate and the right to withdraw without compromising health care services that are received now, or at any time in the future. I have been informed that I reserve the right to refuse to answer questions posed during the interview. In addition, the potential harms and discomforts have been explained to me and I also understand the benefits of participating in the research study. I know that I may ask now, or in the future, any questions I have about the study or research procedures. I have been assured that all information pertaining to me will be kept strictly confidential and no information will be released or published that would disclose my personal identity.

Signature:

I acknowledge that I have been provided with a copy of this consent form and description of the study.
Having thoroughly read, understood and had full explanation of this consent form, I voluntarily consent to participate in this research study.

__________________________  ______________________  __________
Name of Participant            Signature of Participant       Date

I confirm that I have explained the nature and purpose of the study to the subject named above. I have answered all questions.

__________________________  ______________________  __________
Name of Person                 Signature                     Date

Obtaining Consent
Appendix E: Information Flyer

We are interested in your experiences with cardiac rehabilitation and diabetes...

Do you have diabetes and take medication to control it?

If so, you are eligible to take part in this research study.

The purpose of this study is to understand how people combine cardiac rehabilitation regimens with existing patterns of self-care for diabetes.

We want to learn more about what makes it easier or more difficult to add these new health behaviours.

Participation in this study involves 2 interviews and a 7 day journal documenting your activities (which will take you approximately 10-15 minutes each day to complete). Each interview will last about 1-1½ hours. These interviews will occur at a time and place of your convenience such as your home, the cardiac rehab institution or the University of Toronto.

The first interview:

- You will be asked to share your experiences about illness and making heart health lifestyle changes

- You will be given a journal for 1 week to take note of your daily activities and how you are feeling each day
The second interview:

- You will be asked to discuss your journal to help us understand things that affect your lifestyle changes

To learn more about this study,

please call our research office at 416-946-8438.

Leave a message with your name and phone number and we will return your call.
Appendix F: Demographic Questionnaire

(to be completed by study personnel)

1. Birthdate: _______ _______
   Month       Year

2. Living situation
   (check all that apply)

   [ ] alone      [ ] spouse/partner

   [ ] child(ren) under 18    -    if yes, number of children under 18: _____

   [ ] other adult(s) that are dependent on you    -    if yes, number of other adults: _______

   [ ] common law

   [ ] divorced/separated

   [ ] married

   [ ] single

   [ ] other, specify ______

3. Education
   (highest level of education completed)

   [ ] < high school      [ ] some post secondary education      [ ] completed high school

   [ ] college diploma    [ ] undergraduate degree             [ ] graduate degree or greater

4. Current employment status:

   [ ] full-time      [ ] part-time      [ ] casual      [ ] unemployed      [ ] disabled
[ ] homemaker       [ ] retired       [ ] sick leave

[ ] other ____________________________

If currently employed, list occupation:
_________________________________________________________

If you are not currently employed, list previous occupation:
______________________________________________________

5. Income

a) Participant’s own personal before-tax income in 2006?

(hand page of income ranges to participant)

[ ] A = < $15, 000       [ ] B = $15,000-19, 999       [ ] C = $20, 000-29, 999

[ ] D = $30,000-39, 999       [ ] E = $40, 000-49, 999       [ ] F = $50, 000-59, 999

[ ] G = $60, 000-69, 999       [ ] H = $70, 000-79, 999       [ ] I = $80, 000-99, 999

[ ] J = > $100, 000

b) Participant’s total before-tax family income in 2006?

[ ] A = < $15, 000       [ ] B = $15,000-19, 999       [ ] C = $20, 000-29, 999

[ ] D = $30,000-39, 999       [ ] E = $40, 000-49, 999       [ ] F = $50, 000-59, 999

[ ] G = $60, 000-69, 999       [ ] H = $70, 000-79, 999       [ ] I = $80, 000-99, 999

[ ] J = > $100, 000
6. Language

(spesken in home)

[ ] English
[ ] French
[ ] Other(s), please specify: ________________________

7. Born in Canada?

[ ] yes  [ ] no  If no, where?
________________________________________

If no, year of arrival/immigration to Canada? __________

8. Resources:

a) Does participant have additional health insurance coverage (other than OHIP)?

[ ] yes  [ ] no  specify:
____________________________________

b) Access to a Primary Care Provider (e.g. family doctor, nurse practitioner):

[ ] yes  [ ] no

c) Currently seeing a Specialist (eg. Endocrinologist, Cardiologist):

[ ] yes  [ ] no  If yes, specify:
___________________________________

d) Currently attending or attended a diabetes education clinic:

[ ] yes  [ ] no

e) Access to:
weight management support [ ] yes [ ] no

exercise or fitness facilities [ ] yes [ ] no

f) Distance from participant’s home to rehabilitation clinic/health care centre:

__________________

g) Mode of transportation to rehabilitation clinic/health care:

[ ] private car [ ] taxi-cab [ ] subway/ttc [ ] walk/bike

[ ] other, specify ________________________________

9. Health patterns:

a) Smoking history (duration, frequency): _______________________________

b) Number of years with diabetes: ______________________________

c) Specific lifestyle changes attempted: ______________________________

______________________________

______________________________

d) Year of most recent admission to the hospital __________

reason for admission ______________________________

e) Number of times admitted to the hospital in the past 12 months __________

reason(s) for admission ______________________________

Income Ranges

A. < $14,999

B. $15,000-19,999

C. $20,000-29,999
D. $30,000-39,999  
E. $40,000-49,999  
F. $50,000-59,999  
G. $60,000-69,999  
H. $70,000-79,999  
I. $80,000-99,999  
J. $>100,000
Appendix G: Activity Journal and Instructions

Monday


Tuesday


Wednesday


Thursday


Friday


Saturday
Sunday

Journal Instructions

Directions

- Please keep track of the activities you do for a period of 7 days

- You may start on any day of the week

- You may write in point form or sentences

- It should take you approximately 10-15 minutes each day to complete

- You have been provided two additional blank pages if there is further information about your daily activities and health routines that you would like to document

What to write?

- Write down what activities you did each day with regards to your cardiac rehabilitation routines

- Write down what activities you did each day with regards to your diabetes routines

- Write down what activities you did each day with regards to other health routines

- Write down any other activities you did each day

- Write down if you did not do any activities and why you did not do any activities

- Write down a few words that describe how you felt each day

- Write down any physical and emotional issues that you experienced each day, such as feeling up or down, or joint discomforts that limited your mobility
Appendix H: Program Descriptions

Program 1

Program: St. Michael’s Hospital – Cardiac Prevention & Rehabilitation Centre
Address: 30 Bond Street, Room 7-076 Queen Wing, Toronto, Ontario M5B 1W8
Phone: (416) 864-3035 Fax: (416)-864-5334
Email: cardiacrehab@smh.toronto.on.ca
Website: http://www.stmichaelhospital.com/content/programs/cardiac/index.asp

About Our Centre

The Cardiac Prevention and Rehabilitation Centre program aims to promote and restore the health and well being of individuals and families who have established coronary heart disease. Ultimately, the program will grow and also be available for those who are at high risk of developing coronary heart disease and those who wish to learn more about heart health.

The members of the Cardiac Prevention and Rehabilitation team are here to help patients and their families cope and live healthy lives with coronary heart disease. This is done by learning about prescribed treatments, identifying risk factors that require additional treatment and working toward making heart healthy lifestyle changes including diet, exercise and emotional well being.

The Cardiac Prevention and Rehabilitation Centre is committed to health promotion. This focus encompasses several different areas: education, clinical care and research. The objectives of our centre demonstrate this commitment.

Educational Objectives:

- To be a community resource for various aspects of cardiac prevention including medical and psychosocial interventions, obesity counseling, and smoking cessation
- To be the main resource and education centre for preventative health promotion for the cardiology trainees at the University of Toronto
- To allow health care trainees from variety of disciplines including nursing, medicine and allied health exposure to health promotion in the cardiac rehabilitation setting

Clinical Objectives:

- To improve quality of life for the cardiac patient
- To provide counseling on heart healthy living that will reduce the risk of further CHD
- To reduce death from coronary heart disease
- To reduce further admissions to hospital for coronary heart disease
- To reduce health care costs
Research Objectives:

- Foster development and profile research in the cardiac prevention and risk reduction field from all groups of health care professionals
- Link various programs at St. Michael's Hospital and University of Toronto to the heart and vascular program and cardiac patients via satellite projects pertaining to health promotion
- Maintain a "gender lens" on cardiovascular research for our female and male patients

Our Services

The time you spend in the Cardiac Prevention & Rehabilitation Centre will be busy. There is so much to learn in such a short time! We provide you with all the information you need to live a heart healthy lifestyle based on an assessment of your individualized needs.

When you have been referred either by your cardiologist, family doctor, cardiac surgeon or any other physician involved in your care that feels you will benefit from heart education, we will contact you to make your initial appointment. If you know you have coronary heart disease and would like to join our program, please speak with your physicians.

We follow you for five years according to the following schedule:

1. Initial visit
2. 3 month visit
3. 1 year visit
4. 2 year visit
5. 5 year visit

The entire Cardiac Prevention & Rehabilitation Centre team will be involved in each of your encounters with our program.

Over time the course of the program you will learn about a heart healthy lifestyle. This will include identifying your personal risk factors and what you can do about them. You will learn about healthy eating, weight management, stress management, diabetes, smoking, blood pressure, cholesterol and exercise.

Because our program involves a home-based exercise plan, our services uniquely meet the needs of many different clients from many walks of life. In a world as fast paced as ours, it is often difficult to make a commitment to a program that requires your presence on a regular and routine basis. We provide you with an exercise prescription that you can carry out in your own time and space.
Cardiovascular disease (CV), once considered a ‘man’s disease’, is the number one killer of Canadian women.

The Women’s Cardiovascular Health Initiative (WCHI)

- Canada’s first comprehensive health-care facility for women with existing or potential heart problems
- A cardiovascular risk identification and modification program encompassing investigation, education and management
- A team of health professionals providing access for women to the best diagnostic and therapeutic procedures
- Access to an innovative exercise facility that has a relaxed atmosphere in a safe, comfortable and non-competitive setting at a convenient downtown location
- A program of Women’s College Hospital, a world renowned institution for integrated health-care service
- Research focused on women and heart disease

Multidisciplinary Team

Health care professionals in tune with women’s specific health care issues make up the team at WCHI. All members of the team educate, support and monitor the participant’s progress on a regular, individualized basis. In addition, they provide lectures, discussions and literature on relevant topics throughout the course of the program.

- Cardiologists
- Nurse Practitioner
- Physiotherapist
- Exercise Specialist
- Exercise Leaders
- Dietitian
- Dietitian
- Social Worker
- Respiratory Therapist
- Pharmacist

Unique Features

- Program components & delivery of care based on the Women’s Health Principles
- Small group sessions (maximum 8)
- Individualized prescription for in-class and home-based exercise
• Variety of exercises
• Personalized report provided
• ‘State-of-the-art’ monitoring equipment
• Support group for meeting others with similar health problems

Programs of WCHI

Comprehensive Primary Prevention (PP) and Education

Women at high risk for developing cardiovascular disease are assessed by our nurse practitioner and offered a program designed to reduce known risk factors. This plan may include a three-month exercise program, group education classes, individual counseling and support, and general lifestyle education.

Comprehensive Cardiac Rehabilitation (CR)

Women with known cardiac condition work with our professional staff to create a complete program tailored to each woman’s cardiovascular needs. A safe, closely monitored six-month exercise program is provided in our facility. We offer individual counseling services and group education sessions to assist in successful risk factor modification.

Exercise Consultation

Women who cannot commit to our exercise programs or those who have already established an exercise routine within their community are offered a one-time exercise consultation and assessment with a stress test. The exercise consult consists of goal setting, exercise prescription for a home program, group education and individual counseling.

Healthy Weight Program

This 10-week nutrition education program is co-facilitated by the dietitian and exercise specialist. This program enhances the nutrition knowledge of women and assists them in developing skills required to incorporate healthy eating and active living into their lifestyle. Program elements include goal setting, self-awareness, and self-monitoring.

Our Exercise Programs

Exercise Sessions - 90-Minute Exercise Session twice a week for 6 months (CR) and 3 months (PP)

Upon admission, participants perform a graded exercise treadmill test (GXT) that helps the nurse practitioner and cardiologist assess cardiovascular status. Based on the test results and identified risk factors, the physiotherapist or exercise specialist prescribes an appropriate set of exercises. The prescription specifies frequency, intensity, duration and type of exercise (ASCM guidelines)
Each exercise session is supervised by a physiotherapist and exercise specialist or leader who also leads warm-up and cool-down exercises and provides strength training instruction, posture, balance, fall prevention and flexibility exercises. Close monitoring can be provided via telemetry if needed. The important role of the exercise staff is to educate women about the role of exercise in everyday life, and to provide motivational support and feedback.

Self-monitoring techniques are learned such as heart rate monitoring, rating of perceived exertion and recognizing the signs and symptoms of heart problems. A home-based program is also prescribed that includes aerobic activity four to five times a week for 20-45 minutes.

Ongoing assessment is provided by repeating the exercise treadmill test at midterm and at completion of the program. On-going exercise prescription may be adjusted based on stress test results and feedback from the client.

Upon graduation, a home program and goals are discussed with each client for successful achievement and maintenance of a heart healthy lifestyle in the community.

**Education**

**Risk Factor Management**

A group workshop to examine risk factors for heart disease, particularly highlighting key risk factors specific to women. Participants will have the opportunity to do some goal planning and receive a risk factor booklet to take home.

**Nutrition**

A registered dietitian will guide participants in adopting and further developing healthy eating habits through group workshops and individual counseling. Participants with abnormal cholesterol or triglyceride levels will have an opportunity to participate in nutrition workshops. Topics include: up-to-date guidelines for healthy eating, reducing dietary fat intake, the effects of dietary fats on cholesterol levels, the ABC’s of label reading, dining out healthfully, and meal planning strategies.

**Women & Heart Health**

Women will have the opportunity to talk about their own experience with your heart health and have their questions answered with the most up-to-date information available by the nurse practitioner.

**Menopause & Heart Health**

Menopause is a biological and hormonal event in a woman’s life, which is influenced by her social, emotional and cultural world. Women not only experience various symptoms during this stage of life, menopause also changes a woman’s risk of heart disease. This continues to be an area of great confusion and importance for women!
Support

The social worker provides counseling to participants who are referred by the cardiologist or another member of the multidisciplinary team. The reasons for the referral can include a variety of issues such as social support and assistance, depression, marital problems, family relations, and adjustment to diagnosis.

Principles of Self Care

It is not unusual for women with risk factors for heart disease to experience stress, anxiety and depression. This workshop was designed to give a safe and comfortable environment to discuss client’s experience. With the help of a clinical nurse specialist in mental health, stressors and coping strategies will be discussed to help properly manage stress.

Mood Matters

This 9-week interactive workshop teaches the principles of cognitive behaviour therapy. Learn strategies to change negative thoughts, change behaviour patterns, and react in more positive ways. Lead by the social worker and physiotherapist.

Pharmacy - Cardiac Medications

During the program, the pharmacist provides an in-class session about the important issues of drug therapy. This workshop examines why medications are used, why they will help, why it’s important to take them exactly as they are prescribed, and what the side effects are. Individual counseling is encouraged to increase each woman’s understanding of her personal medication regimen.

Heart Health at Home and Away

Living with a chronic disease like heart disease means doing some special things in order to take care of yourself properly. The social worker will facilitate a discussion about living with heart disease and what that means to each client. Looking after your heart health includes planning ahead when traveling. The respiratory therapist will discuss tips to considering when travelling with a heart condition.

Smoking Cessation Therapy

The program is based on individual sessions with the respiratory therapist who has extensive training in smoking cessation interventions. The respiratory therapist will help you develop a strategy to quit or reduce smoking by facilitating and guiding the process. You will receive support in an understanding and non-judgmental atmosphere. The program is based on the assumption that smoking cessation is a process, which needs time, commitment and patience.
Our Commitment

We understand that women’s symptoms and issues may be very different from those of men. We are committed to providing high quality care to women and their families. The ultimate goal is to improve women’s physiological and psychosocial status, and to encourage a permanent transition to a healthy lifestyle.
Program 3

Program:  Toronto Rehab – Cardiac Rehab Program
Address:  Rumsey Centre
          347 Rumsey Road
          Toronto, Ontario M4G 1R7
Phone:    416-597-3422 ext. 5200
Website:  http://www.torontorehab.on.ca/patient/cardiac/index.htm

Cardiac Rehabilitation

The Cardiac Rehabilitation and Secondary Prevention Program is the largest outpatient cardiac rehabilitation program of its kind in North America. Each year, we treat close to 1,600 people who are recovering from various forms of heart disease and/or surgery.

The program is based on a scientifically proven and medically supervised course of exercise, education and lifestyle modification aimed at providing patients with the information, motivation and support they need to adopt and maintain heart-healthy habits. The ultimate goals of the program are to limit the physiological effects of cardiac illness and to improve overall cardiovascular fitness and health.

Through clinical research, the program investigates the risk factors associated with heart disease and seeks to improve the delivery of service to patients and the scientific understanding of cardiac rehabilitation.

The program is delivered by an interprofessional team of specialists including physicians, exercise physiologists, nurses, occupational therapists, physical educators, laboratory technologists and a consulting nutritionist and psychiatrist.

Adding years to your life

Join Toronto Rehab's Cardiac Rehabilitation Program and add years to your life. As a patient, you can expect that our program of exercise and education will help you to improve your cardiovascular strength and fitness level. And, it will help you reduce the chance of further cardiac problems. As soon as you walk in the door, you will sense that we are different from other hospitals. Our building has been designed for cardiac rehabilitation in a scenic ravine setting. What this means for you is an environment suited to your individual needs and an opportunity to focus on getting better with help from a dedicated team of professionals. Because all we do is cardiac rehab, you will be surrounded by other cardiac patients who understand what you are experiencing.

Joining the program is easy

If you have recently experienced any of following, you are a good candidate for cardiac rehab:
· a heart attack
· cardiac surgery
· angioplasty
· angina
· or if you are at high risk of heart disease.

Simply print the referral form and ask your physician to refer you to Toronto Rehab.

What to expect

The rehabilitation process begins with your arrival. Over the course of 12 months, our team of cardiac specialists will work closely with you to help you achieve your rehabilitation goals, as well as adopt and maintain heart-healthy habits for the rest of your life. Each class consists of a lecture and discussion, warm-up, and your personalized exercise program. We also provide:

· Resistance training program (weight training)
· One to one counselling and group sessions with a psychologist, social worker and dietitian
· Educational lecture series for family and friends.

You will be assigned to a cardiac rehabilitation supervisor who will guide you through the program and monitor your progress. To fully benefit from the program, we expect you to attend scheduled classes and follow your exercise prescription.

A New Service for Adults Living with Diabetes

The Diabetes, Exercise and Healthy Lifestyle Service helps adults living with diabetes to improve their quality of life. It is offered through Toronto Rehab's Cardiac Rehabilitation & Secondary Prevention Program.

How will it help me?

Our team of specialists will develop an individualized program of exercise and education to help you improve and control your diabetes and quality of life through fitness and a healthier lifestyle. This program will help you:

· Establish your own personalized exercise program
· Help you to adopt healthy eating habits
· Help you to lose weight if you need to
· Help you to understand how your medications work.

What is the service like?

Your exercise program is six months in length. Exercise specialists work closely with you to help you achieve your goals. Supervised exercise classes are held twice a week. We offer
convenient daytime and evening class times. Classes include education, question and answer sessions and a review of your personalized exercise program.

**Where is the service held?**

At Toronto Rehab's Rumsey Centre, 347 Rumsey Road, Toronto. Designed for exercise, our facility is the best in the city. Some of the features that make us unique are:

- Two 200-metre walking tracks - one indoor and one outdoor - that enable you to carry out your exercise routines year-round
- A gymnasium for warm-up exercises and weight training classes
- Two on-site exercise assessment labs
- A 120-seat lecture theatre
- State-of-the-art training equipment
- Men's and women's locker/shower facilities
- An attractive common area where you can meet and socialize with others.

**A Brief History**

The Cardiac Rehabilitation and Secondary Prevention Program was started over 30 years ago by Dr. Terry Kavanagh, an internationally recognized authority on cardiac rehabilitation and the program's founding medical director.

The success of the program changed conventional thinking about how patients recover following a cardiac incident. Since then, almost 26,000 patients have graduated from the program following a heart attack, heart disease or bypass or transplant surgery.

Throughout its history, the program has celebrated many rehabilitation firsts. In the 1970s, staff trained a group of patients recovering from heart attacks to run the Boston Marathon. This success was followed a few years later when a heart transplant patient was trained to run the same marathon in the early 1980s.

Over the years, Toronto Rehab has helped develop cardiac rehabilitation across Canada and around the world in order to help cardiac patients make the fullest possible recovery.

Each year, the program plays host to visiting physicians and other health care professionals interested in learning about cardiac rehabilitation. The current medical director is Dr. Paul Oh.