

DIET AFTER PROSTATE CANCER: GENDER INFLUENCES ON MEN'S FOOD  
PERCEPTIONS AND PRACTICES

by

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## **ABSTRACT**

Although nutrition might play a role in prostate cancer survival, most men make few diet changes following this diagnosis. Evidence that men tend to have poorer diets than women suggests that gender helps shape men's food practices, and might influence nutrition intervention uptake. Gender theory provides insight into these observations, proposing that masculine ideals prevent men from adopting healthy eating practices. Additionally, because many men rely on women for food provision, gender relations are also significant in men's diets.

This dissertation explores how masculinities and gender relations are implicated in shaping dietary understandings and food practices of men with prostate cancer. The first phase of the study produced an overview and synthesis of research on nutrition, prostate cancer, masculinities and food, and provides an analysis of diet and diet change behaviours for men with prostate cancer. Masculinity and gender relations theory are discussed in the context of men's food practices, with suggestions for applications to nutrition and prostate cancer research.

The second phase was an empirical qualitative study, involving in-depth, individual interviews conducted privately and separately with 14 men with prostate cancer and their cohabiting female partners. Findings are presented in two parts. First, men's accounts of their diets following prostate cancer and the rationales underpinning diet changes (or lack thereof) are described. The men framed their food perceptions and practices as important, action-oriented and autonomous suggesting that masculine ideals influenced if and how they engaged in diet change. Second, using a gender relations framework to interpret how gender performances shaped men's diets, couples' dietary accounts revealed how they tended to limit men's dietary engagement and maintain hetero-normative food roles. Complex couple power dynamics were

apparent, reflecting and reproducing patriarchy through women's deference to men's preferences and careful negotiation of support for men's diet changes.

Together, these findings demonstrate that although masculine ideals shape men's food perceptions and practices, complex couple interactions are also implicated. Nutrition intervention planning for men is complex and findings show that to ensure success, understanding gender relations is essential to illuminate women's roles in the food practices and nutritional health of men with prostate cancer.

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This research program was identified and designed by Lawrence W. Mróz with the assistance of his supervisory committee, Gwen Chapman, Joan Bottorff and John Oliffe.

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# **CHAPTER 1.**

## **DIET AFTER PROSTATE CANCER**

### **Introduction**

One in seven Canadian men is expected to develop prostate cancer in his lifetime. The most commonly diagnosed cancer for men, it is estimated that in Canada in 2009, 25,500 men were diagnosed with and 4,400 men died of prostate cancer (Canadian Cancer Society, 2009). Improved treatments have lowered mortality rates in Canada and the Western world; however, because most men are over the age of 60 when diagnosed, there are also age-related co-morbid conditions associated with long-term survivorship, and a risk of recurrence for many men (Jemal, Siegel, Ward, Hao, Xu, & Thun, 2009). Because of this and the growing number of men surviving longer with prostate cancer, there is increased interest in dietary interventions for prostate cancer prevention, treatment and recovery. A growing body of evidence suggests that in addition to providing general health benefits, diet might play an important role in prostate cancer recurrence and survival (Berkow, Barnard, Saxe, & Ankerberg-Nobis, 2007; Ornish, Weidner, Fair, Marlin, Pettengill, Raisin et al., 2005; Van Patten, de Boer, & Tomlinson Guns, 2008). Consequently, nutrition guidelines and diet modifications are of great interest to men with prostate cancer, their families, caregivers and nutrition educators.

Despite available guidelines, Western men with prostate cancer typically have poor diets compared to women and are unlikely to make diet changes when warranted, even if motivated to do so (Blanchard, Courneya, & Stein, 2008; Patterson, Neuhouser, Hedderson, Schwartz, Standish, & Bowen, 2003). Health behaviour theory suggests that there are multiple

determinants of food choice (Furst, Connors, Bisogni, Sobal, & Falk, 1996; Raine, 2005; Sobal & Bisogni, 2009), but there is currently no published research on the factors that might be implicated in shaping the food practices of men who experience prostate cancer. Nutrition education programs for these men thus lack the foundation of an understanding of men's food choice and diet change processes. This problem forms the crux of this dissertation, which examines men's and women's perceptions of food and diet change in the context of prostate cancer experiences, using gender theory as a theoretical framework.

Conceptually, this study is situated at the nexus of several disparate research areas, all with a Western perspective. They include: evidence for the role of nutrition and diet in prostate cancer incidence and recovery; the nutrition education needs and food practices of men with prostate cancer; behaviour change and food choice theory; knowledge developments in the nature of men's food practices; and how gender and masculinity theory can help us better understand the nutritional health and food practices of men with prostate cancer. Each of these research areas is introduced below, followed by articulation of the objectives of this research project. The research base necessary for conceptualising the study is further detailed in Chapter 2, which provides a review and synthesis of relevant research on how gender is implicated in shaping men's food practices in the context of prostate cancer.

## **Nutrition and Prostate Cancer**

Research examining the role of nutrition in prostate cancer incidence and survival has a long history, beginning with exploratory observations of systematic variations in diet and prostate cancer risk among continents, countries and cultures. These observations led to biomedical and mechanistic laboratory research on the role of nutritional factors in prostate cancer aetiology and to the evaluation of diet interventions for men with prostate cancer. This

section provides a brief overview of this evidence and how it was used to make diet recommendations for men with prostate cancer.

The evidence for nutritional influences on prostate cancer began with exploratory observations and epidemiological research. These studies demonstrated that increased risk for prostate cancer is strongly associated with Western dietary patterns that are typically high in meat, fat and processed food, and low in vegetables when compared to traditional Asian dietary patterns, which are lower in meat and fat and higher in vegetables and legumes including soy products (Fair, Fleshner, & Heston, 1997; Hsing, Tsao, & Devesa, 2000; Messina, 2003; Meyer & Gillatt, 2002; Vlajinac, Marinkovic, Ilic, & Kocev, 1997). Observational epidemiology findings were supported by research that linked diet to prostate cancer progression from micro-focal, indolent or asymptomatic forms, to clinically relevant disease (Jankevicius, Miller, & Ackermann, 2002; Meyer, Bairati, Shadmani, Fradet, & Moore, 1999; Shirai, Asamoto, Takahashi, & Imaida, 2002; Yip, Heber, & Aronson, 1999). These observations led to a large body of experimental biomedical research on the potential protective nature of low-fat diets, rich in fruit and vegetables, and the preventive roles of certain dietary factors in prostate cancer development and recurrence (Brawley, Barnes, & Parnes, 2001; Brawley & Barnes, 2001; Clinton, 1999; Clinton & Giovannucci, 1998; Gronberg, 2003). Consequently, mechanistic relationships for protective and therapeutic dietary factors have been proposed and are the subject of ongoing investigation (Clinton, 2005; Freedland & Aronson, 2009; Ho, Boileau, & Bray, 2004; Ornish, Magbanua, Weidner, Weinberg, Kemp, Green et al., 2008; Strom, Yamamura, Forman, Pettaway, Barrera, & DiGiovanni, 2008). Preliminary laboratory research on nutrients including selenium and vitamin E and non-nutrient plant-based factors such as lycopene and soy isolates prompted preventive and treatment intervention research (Duffield-

Lillico, Dalkin, Reid, Turnbull, Slate, Jacobs et al., 2003; Hwang, Kim, Jee, Kim, & Nam, 2009; Miller, Giovannucci, Erdman, Bahnson, Schwartz, & Clinton, 2002; Peters, Littman, Kristal, Patterson, Potter, & White, 2008; Song-Yi Park, Wilkens, Henderson, & Kolonel, 2008; Stacewicz-Sapuntzakis, Borthakur, Burns, & Bowen, 2008; Stratton, Reid, Schwartzberg, Minter, Monroe, Alberts et al., 2003). In summary, findings from exploratory and biomedical research suggest a link between diet and prostate cancer and that diet might therefore be an important adjunct for usual prostate cancer care and recovery.

Based on the available evidence, clinical trials with diet interventions for men diagnosed with prostate cancer have been conducted and are described in more detail in Chapter 2. Some of these intervention studies are encouraging; for example one demonstrated that adopting a low-fat, vegetarian diet for one year reduced prostate specific antigen (PSA) blood levels among men with low-grade, early-stage prostate cancer undergoing active surveillance, a deferred treatment protocol whereby treatment is delayed until markers of disease progression indicate that treatment is warranted (Ornish et al., 2005). In another study, men with recurrent prostate cancer and rising PSA after treatment showed a significant decline in their rate of PSA rise after six months on a plant-based diet (Saxe, Major, Nguyen, Freeman, Downs, & Salem, 2006). Although a crude marker of prostate cancer activity, lowered PSA can indicate slower tumour progression and a potentially reduced risk of recurrence. Despite these promising findings, reviews of nutrition intervention studies suggest that although diet might enhance survival, there remains much uncertainty as to how effective diet change is in preventing prostate cancer incidence, progression, recurrence or mortality (Berkow et al., 2007; Van Patten et al., 2008).

## **Nutrition Recommendations for Men with Prostate Cancer**

Although research is ongoing and not yet definitive, preliminary findings suggest that diet recommendations that are potentially prostate-protective are similar to general healthy eating guidelines and therefore are useful in improving overall quality of life. As a result, nutrition recommendations for Western men with prostate cancer also address co-morbidities with clear evidence for the role of diet in prevention or management, including other cancers, cardiovascular disease and type-2 diabetes (Blanchard, Stein, Baker, Dent, Denniston, Courneya et al., 2004; Brown, Byers, Doyle, Coumeya, Demark-Wahnefried, Kushi et al., 2003; Ravasco, Monteiro-Grillo, & Camilo, 2003). In particular, diet recommendations for prostate cancer have also been linked to heart-healthy guidelines and therefore might represent an important health benefit for men with prostate cancer who are also typically at high risk for heart disease (Moyad, 2006a, 2006b; Newschaffer, Otani, McDonald, & Penberthy, 2000).

Prostate specific nutrition recommendations include: lowering meat consumption and overall fat intake (especially saturated fat from meat and dairy products); maintaining a healthy body weight; increasing consumption of vegetables (especially cruciferous vegetables and tomato products); consuming legumes and soy products (e.g., beans, tofu, soymilk); consuming foods rich in vitamin E, omega 3 fatty acids and selenium (e.g., fish, walnuts, and brazil nuts). Some guidelines also recommend taking supplements such as calcium, vitamin D, vitamin E, selenium, lycopene, soy isoflavones and herbal preparations, although a number of researchers contest the effectiveness and safety of consuming them (Klein, 2009; Lippman, Klein, Goodman, Lucia, Thompson, Ford et al., 2009; Shariat, Lamb, Lyengar, Roehrborn, & Slawin, 2008). Brochures and recipe books with variants of this information are available in Canada from prostate cancer support organisations and cancer agencies. For example [Eating Right For Life](#), a 22-page booklet is available through the Canadian Prostate Cancer Network (Trachtenberg,

Fleshner, Lancaster, & Casselman, 2000). This group also publishes the Our Voice Magazine, which often has articles on nutrition and prostate cancer; see Appendix 1 for Food for Thought, an example of an article published in 2003 and commonly available as a print resource while this research was being conducted (Fleshner, 2003).

## **Nutrition Education and Food Practices of Men with Prostate Cancer**

Research findings linking diet and cancer are regularly communicated to the general public through the media and hence in an international study Western men were able to identify diet as a prostate cancer risk factor (Schulman, Kirby, & Fitzpatrick, 2003). Accordingly, men sometimes express interest in dietary information after a prostate cancer diagnosis, and some diet change researchers have positioned this time as a ‘teachable moment’ for nutrition education (Demark-Wahnefried, Peterson, McBride, Lipkus, & Clipp, 2000). Surveys of men with prostate cancer in the US, UK and Canada indicated that up to 40% of informants considered diet to be a significant component of complementary treatment (Cheetham, Le Monnier, & Brewster, 2001; Kao & Devine, 2000; Nam, Fleshner, Rakovitch, Klotz, Trachtenberg, Choo et al., 1999). Consequently, information about the potential role of protective lifestyle factors such as diet and exercise in prostate cancer recovery is of special interest to healthcare providers (Zlotta & Schulman, 2001) and represents an unmet education need for many men with prostate cancer (Boberg, Gustafson, Hawkins, Offord, Koch, Wen et al., 2003). Other findings suggest that some men with prostate cancer seek information on complementary or alternative treatments from non-traditional sources and sometimes take nutritional health and dietary supplements as part of their self-care (Kao & Devine, 2000; Ponholzer, Struhal, & Madersbacher, 2003).

Overall, however, the interest men with prostate cancer show in nutrition does not generally result in dietary improvements. Despite the potential benefits of healthy eating during

and after prostate cancer diagnosis and treatment, the majority of men with prostate cancer tend not to change their diets, even when motivated to do so (Blanchard et al., 2008; Patterson et al., 2003). Educational nutrition interventions have consequently had mixed success in effecting behaviour change towards healthy eating in prostate cancer patients (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005; Demark-Wahnefried et al., 2000) indicating that despite the ‘teachable moment’, there are barriers to diet change for cancer patients (Harnack, Block, Subar, Lane, & Brand, 1997).

One reason for this lack of diet change success might be because the evidence for potential prostate cancer specific benefits from diet change, although promising, is not yet definitive. The uncertainty of diet intervention research findings is reflected in media reports of cancer and diet research and authoritative dietary guidelines specific to men with prostate cancer are not available. Men diagnosed with prostate cancer must therefore decide for themselves if currently available prostate cancer specific diet change recommendations are warranted as part of their self-care or recovery. Existing nutrition recommendations are similar to widely accepted diet recommendations for co-morbid conditions for which men in this age group are at risk (e.g., cardiovascular disease). This suggests that men’s uncertainty of the efficacy of diet change cannot solely explain why men with prostate cancer remain unengaged in diet change and that other factors contribute to shaping men’s food practices. Further, it points to a need for effective nutrition intervention programs for these men that consider the multiple determinants of food choice as introduced in the following section (Payette & Shatenstein, 2005).

## **Behaviour Change and Food Choice Theory**

Health behaviour research has demonstrated that knowledge of healthy eating is not the best indicator of eating behaviour; improved dietary knowledge alone is insufficient to ensure

dietary behavioural change in the general public. Dietary practices are also influenced by complex individual, social, and environmental factors which act as determinants of food choice behaviour. These include biological (e.g., hunger, appetite, taste); economic (cost, income); physical (access to food, education, skills, time); social (culture, family, peers); and psychological (mood, stress) determinants (Glanz, Rimer, & Lewis, 2002). Health behaviour and food choice theory indicate that among these various determinants, psychosocial factors including beliefs and attitudes about food are equally or more important in determining dietary behaviour than knowledge (Bisogni, Connors, Devine, & Sobal, 2002; Furst et al., 1996; Harnack et al., 1997; Satia, Kristal, Patterson, Neuhouser, & Trudeau, 2002; Worsley, 2002).

Several health behaviour models have attempted to understand, explain and predict food choice behaviours with limited success. The Health Belief Model, Theory of Planned Behaviour and the Stages of Change Model have all been applied to diet change interventions; however, none of these models alone has successfully explained or predicted the wide range of food choice behaviours possible (Nestle, Wing, Birch, DiSogra, Drewnowski, Middleton et al., 1998). This may relate, in part, to ways that food behaviours differ from other health behaviours explained by the above models. The Cornell food choice research group has thus developed a food choice process model that attempts to integrate multiple determinants of food choice into one comprehensive framework (see Figure 1.1) (Furst et al., 1996; Sobal & Bisogni, 2009).

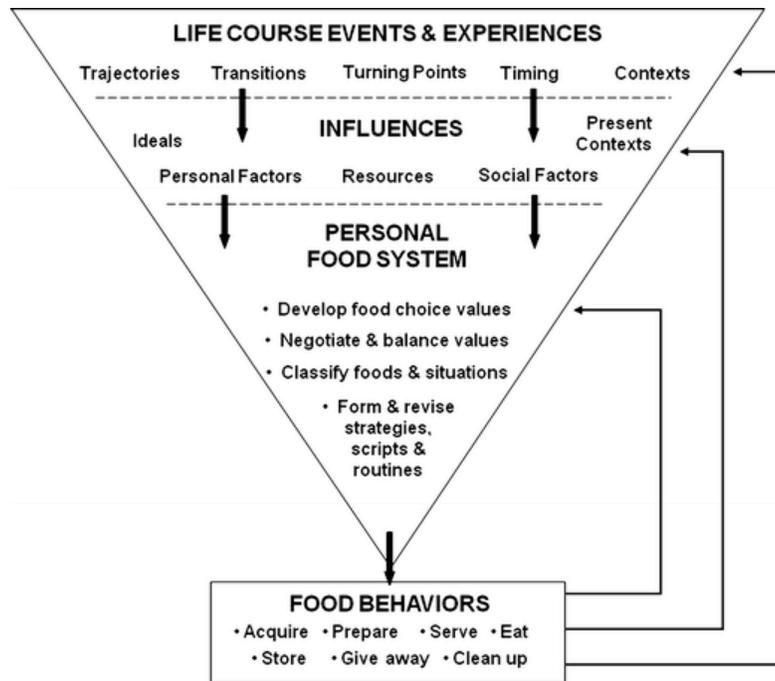


Figure 1.1 A Food Choice Process Model ©Springer, 2009. (Used by permission from the Annals of Behavioral Medicine)

‘A Food Choice Process Model’ describes how life course events shape multiple influences on food choice behaviour. These influences include food ideals as well as personal and social factors, which shape personal food systems, and in turn, individual food choice events. Personal factors including personal identities as shaped over life course experiences are identified in the model as integral to food choice decision-making and might include gendered food roles (Bisogni et al., 2002). This model thus provides a framework for understanding how multiple determinants of food choice behaviour shape people’s food practices, however, it is unclear how gender is implicated. Further exploration of the role of gender in shaping food practices of subgroups such as men with prostate cancer, would help further develop this model.

In summary, health behaviour and food choice theories offer frameworks for conceptualising food choice behaviour. However, there has been little exploration of men’s specific dietary understandings and needs and these frameworks fail to illuminate why men with

prostate cancer do not change their diets. In particular, the role of gender as a determinant of food choice warrants further investigation and is discussed in the next section.

## **Men's Food Practices and Gender Theory**

Gender is an important determinant of food choice. Research suggests that Western men generally have poorer diets than women, revealing that men consume more meat and alcohol, while women often eat more fruit, vegetables and fish, and/or have overall healthier diets (Jensen & Holm, 1999; Liebman, Propst, Moore, Pelican, Holmes, Wardlaw et al., 2003; Prattala, Paalanen, Grinberga, Helasoja, Kasmel, & Petkeviciene, 2007; Roos, Lahelma, Virtanen, Prattala, & Pietinen, 1998).

In relation to cancer populations, studies have shown that men with cancer tend to be less interested in engaging in nutritional self-care than women cancer survivors (Hopfgarten, Adolfsson, Henningsohn, Onelov, & Steineck, 2006; Kiss & Meryn, 2001; Nicholas, 2000). In addition, older men who have a higher risk for prostate cancer are reported to have a lower intake of fruit and vegetables than women, and are less aware of links between diet and disease (Baker & Wardle, 2003). These observations of behavioural differences between men and women have led to research exploring how gender and gender relations are implicated in shaping health, and especially how masculinity shapes men's food practices. Masculinity theory provides a framework for better understanding men's nutrition knowledge, perceptions, attitudes and food practices, and is introduced in the following section and described in more detail in Chapter 2.

### **Masculinities, Men and Food**

Theory regarding hegemonic masculinity has been developed to help explain gender differences between Western men and women's health practices and men's subsequent poorer health outcomes (Courtenay, 2000b). Within this framework gender is conceptualised as socially

constructed and performed through people's daily activities and social interactions. Men and women demonstrate their masculinity or femininity respectively by embodying and enacting perceived normative or hegemonic 'manly' or 'womanly' attributes and behaviours (Connell, 1995; Connell & Messerschmidt, 2005; Howson, 2006). Hegemonic enactments are problematic for men's health because many health promotion practices, including nutritional self-care, are perceived as feminine endeavours and as a result men might signify alignment to hegemonic masculinity by avoiding these and engaging in unhealthier 'manly' practices (Courtenay, 2000b; Moynihan, 1998). Recent developments in men's food choice research provide avenues to explore how masculinities might be implicated in the food practices of men, and in this context, men with prostate cancer.

Research exploring factors influencing food practices has traditionally involved women and issues such as body image or weight control (Barr & Chapman, 2002; Chapman, 1997, 1999; Chapman & Maclean, 1993; Farrales & Chapman, 1999) and breast cancer (Adams & Glanville, 2005; Beagan & Chapman, 2004a, 2004b; Chapman & Beagan, 2003; Thomson, Rock, Caan, Flatt, Al-Delaimy, Newman et al., 2007). Femininity and food research demonstrates that women typically perceive food work as nurturing and a part of their feminine identities as wives and mothers (DeVault, 1991; Furst, 1997; Lupton, 2000; Lyons & Willott, 1999). Research focussing specifically on men's food choice processes is scarce, but recently there has been increased interest in the role of masculinity in health care and diet (Bird & Rieker, 1999; Cameron & Bernardes, 1998; Courtenay, 2000a; Lee & Owens, 2002; O'Brien, Hunt, & Hart, 2005; Roos, Prattala, & Koski, 2001; Smart & Bisogni, 2001; Sobal, 2005). Differences between men's and women's diet habits are well documented and suggest that masculinity is a key determinant of men's poorer food practices and contributes to men's poorer nutritional health

outcomes (Berrigan, Dodd, Troiano, Krebs-Smith, & Barbash, 2003; Bourdieu, 1984; Jensen & Holm, 1999; Millen, Quatromoni, Pencina, Kimokoti, Nam, Cobain et al., 2005; Oakes & Slotterback, 2001; Patterson et al., 2003; Roos et al., 1998). These findings suggest that masculine food ideals might inhibit the uptake of nutrition intervention programs for men with prostate cancer and indicates that gender theory should be considered in the design and delivery of such programs; however, because of the lack of empirical research in this area, it remains unclear how to do so. There is a small but growing body of literature that examines how masculinities are implicated in shaping Western men's food practices; however, much of the research has focused on men younger than those typically diagnosed with prostate cancer (Gough & Conner, 2006; Roos et al., 2001; Roos & Wandel, 2005; Sellaeg & Chapman, 2008; Sloan, Gough, & Conner, 2009; Smart & Bisogni, 2001). Some research indicates that older men are less likely than younger men to perceive healthy eating positively (Drummond & Smith, 2006; Moss, Moss, Kilbride, & Rubinstein, 2007), but no published studies have focused on the food and diet perceptions and practices of men with prostate cancer who are typically diagnosed between 60-69 years of age in Canada (Canadian Cancer Society, 2009). The role of gender in shaping men's and women's health and food practices is detailed in chapter 2.

### **Gender Relations and Food**

Although masculinity theory affords a framework for understanding men's perceptions of diet and food practices, it must also be considered in relation to women and femininity. This is because masculinity is defined in relation to femininity but also because interactions or gender relations between men and women are also important in shaping men's health behaviours (Lyons, 2009; Schofield, Connell, Walker, Wood, & Butland, 2000). Gender relations theory is particularly useful for better understanding many men's food practices because women tend to

be leaders in food and nutrition. Men's general dietary practices are greatly influenced by their family relationships, especially co-habiting partners (Bove, Sobal, & Rauschenbach, 2003; Harnack, Story, Martinson, Neumark-Sztainer, & Stang, 1998; Schafer, Schafer, Dunbar, & Keith, 1999). Furthermore, families and female partners of heterosexual men with prostate cancer are important contributors to their health (Arar, Thompson, Sarosdy, Harris, Shepherd, Troyer et al., 2000; Gray, Fitch, Phillips, Labrecque, & Fergus, 2000; Harvei & Kravdal, 1997). At the time of diagnosis, men with prostate cancer tend to make final treatment decisions independently (Boehmer & Clark, 2001a, 2001b; Davison, Goldenberg, Gleave, & Degner, 2003). However, men's co-habiting partners do take active roles in helping them manage their illness through provision of health care and general support (Gregory, 2005; Harden, Schafenacker, Northouse, Mood, Smith, Pienta et al., 2002; Helgeson, Novak, Lepore, & Eton, 2004; Navon & Morag, 2003). Given the influence of men's co-habiting partners on their diets, constructions of masculinity and overall health care, it is important that female partners' perceptions and roles are included in addressing the dietary practices and beliefs of men with prostate cancer (Schofield et al., 2000).

The complexity of hetero-normative interactions calls for a better understanding of how gender relations are implicated in family food practices and men's health. In addition, a more nuanced incorporation of femininity into masculinity theory as suggested by Schippers (2007) would provide a better understanding of how gender relations are implicated in maintaining traditional gender power structures that in turn sustain gender hegemony or patriarchy. Masculinity and food research has focused on men's perceptions of food but has not considered how gendered interactions between men and women are implicated in men's food and health practices. Furthermore, although masculinity theory assumes the existence of a gender hierarchy

in which masculinity is dominant, gendered interactions around food have not been examined in ways that illuminate how power dynamics are implicated, nor how these are shaped through men's illness experiences. Although there are separate literatures on masculinity and food, and femininity and food there is a lack of research that links men and women's 'food worlds'. Lyons (2009) has called for research that exposes how links between men's performances of masculinity and women's performances of femininity through food and health behaviours are implicated in shaping men's nutritional health and food practices. Exploring how experiencing prostate cancer can impact gender relations and power structures that shape men's food practices is a focus of this research.

## **Summary**

In this background review, I sought to integrate several areas of inquiry in men's health in order to better understand men's disinclination to change their diets when diagnosed with prostate cancer. Central to this issue is the growing evidence for the protective nature of healthy eating for men with prostate cancer, and that many men express an interest and desire for nutrition knowledge and education after a prostate cancer diagnosis. Despite potential health benefits, there is little evidence that men with prostate cancer make significant diet changes when warranted, even if apparently motivated to do so. Understanding why this is so is important to help develop and deliver effective nutrition programming for men with prostate cancer. The reasons for men's disinclination for diet change are unknown, but health behaviour and food choice theory suggest that gender is an important determinant of food choice and provide important avenues to investigate food choice processes. Emerging research in masculinity and food provides insight into this by demonstrating how gender and gender relations can be implicated in shaping men's food practices. However, there has been no

examination of men's dietary practices following a prostate cancer diagnosis from a masculinity perspective and no published research that integrates masculinity, femininity and men's food practices and health, using a gender relations approach. This dissertation research therefore addresses these knowledge gaps.

## **Thesis Objective and Overview**

In this chapter, the need for research into the dietary perceptions and food practices of men with prostate cancer and their female partners has been described. It is apparent that multiple psychosocial issues must be considered when creating nutrition programs (Visser & van Andel, 2003) and that the role of gender and gender relations is poorly understood in this area, warranting in-depth exploration. The purpose of this dissertation research was thus *to explore how masculinity and gender relations are implicated in shaping dietary understandings and food practices of men with prostate cancer.*

I have approached this research from a social constructionist perspective that recognises that gender and health behaviours are configurations of practice that develop through social interactions (Berger & Luckmann, 1980; Brickell, 2006; Courtenay, 2000b). In this sense food practices are social phenomena that are created through a dynamic process reproduced when people act on their knowledge and understandings about food and eating, and can furthermore be conceptualised as performances of gender. Because the extant literature on nutrition and prostate cancer is separate from masculinity and food research, there has been little conceptualization of the role of masculinity in shaping men's dietary perceptions and food practices in the context of prostate cancer. The first phase of the dissertation research thus entailed reviewing and integrating empirical research on nutrition and prostate cancer, and masculinity and food, using gender and gender relations theory as a conceptual framework. This review is presented in

Chapter 2 of the dissertation, expanding on several of the areas of inquiry introduced in this Introduction chapter, providing a synthesis of knowledge developments in men's gendered food choice processes, and discussing the significance of this in the context of prostate cancer survivorship.

The second component of the dissertation research was an empirical qualitative study, involving individual, semi-structured interviews with 14 men who had been diagnosed with prostate cancer and their co-habiting female partners. Interviews were conducted in private, with men from each couple interviewed first and separately from his partner. Data collection and analysis were guided by constructivist grounded theory methods as described by Charmaz (2006). The research methods and findings are presented in Chapters 3 and 4. The first of these, Chapter 3, focuses on the men's perceptions of diet and food practices in the context of prostate cancer and the rationales they provide for perceived diet changes (or lack thereof) in their recovery and self-care. Masculinity theory is used as a framework to interpret these findings. Chapter 4 responds to calls for research that explores how performances of masculinity and femininity interact to help shape men's food and health practices, and expose how gender relations sustain patriarchal power structures. This chapter integrates accounts from the men and women's interviews to expose how gender relations are implicated in both complex couple power dynamics and men's food practices. The dissertation concludes with a discussion of the significance, implications, strengths and weaknesses of the study, presented in Chapter 5.

## References

- Adams, C., & Glanville, N. T. (2005). The meaning of food to breast cancer survivors. *Canadian Journal of Dietetic Practice and Research*, 66(2), 62-66.
- Arar, N., Thompson, I., Sarosdy, M., Harris, M., Shepherd, D., Troyer, D., et al. (2000). Risk perceptions among patients and their relatives regarding prostate cancer and its heredity. *Prostate Cancer & Prostatic Diseases*, 3(3), 176-185.
- Baker, A. H., & Wardle, J. (2003). Sex differences in fruit and vegetable intake in older adults. *Appetite*, 40(3), 269-275.
- Barr, S. I., & Chapman, G. E. (2002). Perceptions and practices of self-defined current vegetarian, former vegetarian, and nonvegetarian women. *Journal of the American Dietetic Association*, 102(3), 354-360.
- Beagan, B. L., & Chapman, G. E. (2004a). Eating after breast cancer: Influences on women's actions. *Journal of Nutrition Education and Behavior*, 36(4), 181-188.
- Beagan, B. L., & Chapman, G. E. (2004b). Family influences on food choice: Context of surviving breast cancer. *Journal of Nutrition Education and Behavior*, 36(6), 320-326.
- Berger, P. L., & Luckmann, T. (1980). *The social construction of reality: A treatise in the sociology of knowledge* (1st Irvington ed.). New York: Irvington Publishers.
- Berkow, S. E., Barnard, N. D., Saxe, G. A., & Ankerberg-Nobis, T. (2007). Diet and survival after prostate cancer diagnosis. *Nutrition Reviews*, 65(9), 391-403.
- Berrigan, D., Dodd, K., Troiano, R. P., Krebs-Smith, S. M., & Barbash, R. B. (2003). Patterns of health behavior in U.S. adults. *Preventive Medicine*, 36(5), 615-623.
- Bird, C. E., & Rieker, P. P. (1999). Gender matters: An integrated model for understanding men's and women's health. *Social Science & Medicine*, 48(6), 745-755.
- Bisogni, C. A., Connors, M., Devine, C. M., & Sobal, J. (2002). Who we are and how we eat: A qualitative study of identities in food choice. *Journal of Nutrition Education and Behavior*, 34(3), 128-139.

- Blanchard, C. M., Courneya, K. S., & Stein, K. (2008). Cancer survivors' adherence to lifestyle behavior recommendations and associations with health-related quality of life: Results from the American Cancer Society's SCS-II. *Journal of Clinical Oncology*, 26(13), 2198-2204.
- Blanchard, C. M., Stein, K. D., Baker, F., Dent, M. F., Denniston, M. M., Courneya, K. S., et al. (2004). Association between current lifestyle behaviors and health-related quality of life in breast, colorectal, and prostate cancer survivors. *Psychology & Health*, 19(1), 1-13.
- Boberg, E. W., Gustafson, D. H., Hawkins, R. P., Offord, K. P., Koch, C., Wen, K. Y., et al. (2003). Assessing the unmet information, support and care delivery needs of men with prostate cancer. *Patient Education & Counselling*, 49(3), 233-242.
- Boehmer, U., & Clark, J. A. (2001a). Communication about prostate cancer between men and their wives. *Journal of Family Practice*, 50(3), 226-231.
- Boehmer, U., & Clark, J. A. (2001b). Married couples' perspectives on prostate cancer diagnosis and treatment decision-making. *Psycho-oncology*, 10(2), 147-155.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, Massachusetts: Harvard University Press.
- Bove, C. F., Sobal, J., & Rauschenbach, B. S. (2003). Food choices among newly married couples: Convergence, conflict, individualism, and projects. *Appetite*, 40(1), 25-41.
- Brawley, O. W., Barnes, S., & Parnes, H. (2001). The future of prostate cancer prevention. *Annals of the New York Academy of Sciences*, 952, 145-152.
- Brawley, O. W., & Barnes, S. T. (2001). Potential agents for prostate cancer chemoprevention. *Epidemiologic Reviews*, 23(1), 168-172.
- Brickell, C. (2006). The sociological construction of gender and sexuality. *Sociological Review*, 54(1), 87-113.
- Brown, J. K., Byers, T., Doyle, C., Courneya, K. S., Demark-Wahnefried, W., Kushi, L. H., et al. (2003). Nutrition and physical activity during and after cancer treatment: An American Cancer Society guide for informed choices. *CA: A Cancer Journal for Clinicians*, 53(5), 268-291.

- Cameron, E., & Bernardes, J. (1998). Gender and disadvantage in health: Men's health for a change. *Sociology of Health & Illness*, 20(5), 673-693.
- Canadian Cancer Society (2009). Canadian Cancer Statistics 2009. Toronto: Canadian Cancer Society's Steering Committee
- Chapman, G. E. (1997). Making weight: Lightweight rowing, technologies of power, and technologies of the self. *Sociology of Sport Journal*, 14(3), 205-223.
- Chapman, G. E. (1999). From "dieting" to "watching what you eat": An exploration of shifting constructions of eating for weight control. In J. Sobal & D. Maurer (Eds.), *Interpreting Weight: The Social Management of Fatness and Thinness*. (pp. 73-87). New York: Aldine de Gruyter.
- Chapman, G. E., & Beagan, B. (2003). Women's perspectives on nutrition, health, and breast cancer. *Journal of Nutrition Education and Behavior*, 35(3), 135-141.
- Chapman, G. E., & Maclean, H. (1993). Junk food and healthy food - Meanings of food in adolescent women's culture. *Journal of Nutrition Education*, 25(3), 108-113.
- Charmaz, K. (2006). *Constructing grounded theory*. London; Thousand Oaks, California: Sage Publications.
- Cheetham, P. J., Le Monnier, K. J., & Brewster, S. F. (2001). Attitudes and use of alternative therapies in UK prostate cancer patients - Isn't it time we were in the know? *Prostate Cancer & Prostatic Diseases*, 4(4), 235-241.
- Clinton, S. K. (1999). The dietary antioxidant network and prostate carcinoma. *Cancer*, 86(9), 1629-1631.
- Clinton, S. K. (2005). Tomatoes or lycopene: A role in prostate carcinogenesis? *Journal of Nutrition*, 135(8), 2057S-2059S.
- Clinton, S. K., & Giovannucci, E. (1998). Diet, nutrition, and prostate cancer. *Annual Review of Nutrition*, 18, 413-440.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, 19(6), 829-859.

- Courtenay, W. H. (2000a). Behavioral factors associated with disease, injury, and death among men: Evidence and implications for prevention. *Journal of Men's Studies*, 9(1), 81-142.
- Courtenay, W. H. (2000b). Engendering health: A social constructionist examination of men's health beliefs and behaviours. *Psychology of Men and Masculinity*, 1(1), 4-15.
- Davison, B. J., Goldenberg, S. L., Gleave, M. E., & Degner, L. F. (2003). Provision of individualized information to men and their partners to facilitate treatment decision making in prostate cancer. *Oncology Nursing Forum*, 30(1), 107-114.
- Demark-Wahnefried, W., Aziz, N. M., Rowland, J. H., & Pinto, B. M. (2005). Riding the crest of the teachable moment: Promoting long-term health after the diagnosis of cancer. *Journal of Clinical Oncology*, 23(24), 5814-5830.
- Demark-Wahnefried, W., Peterson, B., McBride, C., Lipkus, I., & Clipp, E. (2000). Current health behaviors and readiness to pursue life-style changes among men and women diagnosed with early stage prostate and breast carcinomas. *Cancer*, 88(3), 674-684.
- DeVault, M. L. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
- Drummond, M., & Smith, J. (2006). Ageing men's understanding of nutrition: Implications for health. *The Journal of Men's Health & Gender*, 3(1), 56-60.
- Duffield-Lillico, A. J., Dalkin, B. L., Reid, M. E., Turnbull, B. W., Slate, E. H., Jacobs, E. T., et al. (2003). Selenium supplementation, baseline plasma selenium status and incidence of prostate cancer: An analysis of the complete treatment period of the Nutritional Prevention of Cancer Trial. *BJU International*, 91(7), 608-612.
- Fair, W. R., Fleshner, N. E., & Heston, W. (1997). Cancer of the prostate: A nutritional disease? *Urology*, 50(6), 840-848.
- Farrales, L. L., & Chapman, G. E. (1999). Filipino women living in Canada: Constructing meanings of body, food, and health. *Health Care for Women International*, 20(2), 179-194.
- Fleshner, N. (2003). Food for thought. *Our Voice* (Fall), 6-8.

- Freedland, S. J., & Aronson, W. J. (2009). Dietary intervention strategies to modulate prostate cancer risk and prognosis. *Current Opinion in Urology*, 19(3), 263-267.
- Furst, E. L. (1997). Cooking and femininity. *Women's Studies International Forum*, 20(3), 441-449.
- Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: A conceptual model of the process. *Appetite*, 26(3), 247-265.
- Glanz, K., Rimer, B. K., & Lewis, F. M. (2002). *Health behavior and health education: Theory, research, and practice* (3rd ed.). San Francisco: Jossey-Bass.
- Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine*, 62(2), 387-395.
- Gray, R. E., Fitch, M., Phillips, C., Labrecque, M., & Fergus, K. (2000). Managing the impact of illness: The experiences of men with prostate cancer and their spouses. *Journal of Health Psychology*, 5(4), 531-548.
- Gregory, S. (2005). Living with chronic illness in the family setting. *Sociology of Health & Illness*, 27(3), 372-392.
- Gronberg, H. (2003). Prostate cancer epidemiology. *Lancet*, 361(9360), 859-864.
- Harden, J., Schafenacker, A., Northouse, L., Mood, D., Smith, D., Pienta, K., et al. (2002). Couples' experiences with prostate cancer: Focus group research. *Oncology Nursing Forum*, 29(4), 701-709.
- Harnack, L., Block, G., Subar, A., Lane, S., & Brand, R. (1997). Association of cancer prevention-related nutrition knowledge, beliefs, and attitudes to cancer prevention dietary behavior. *Journal of the American Dietetic Association*, 97(9), 957-965.
- Harnack, L., Story, M., Martinson, B., Neumark-Sztainer, D., & Stang, J. (1998). Guess who's cooking? The role of men in meal planning, shopping, and preparation in US families. *Journal of the American Dietetic Association*, 98(9), 995-1000.
- Harvei, S., & Kravdal, O. (1997). The importance of marital and socioeconomic status in incidence and survival of prostate cancer. An analysis of complete Norwegian birth cohorts. *Preventive Medicine*, 26(5 Pt 1), 623-632.

- Helgeson, V. S., Novak, S. A., Lepore, S. J., & Eton, D. T. (2004). Spouse social control efforts: Relations to health behavior and well-being among men with prostate cancer. *Journal of Social and Personal Relationships, 21*(1), 53-68.
- Ho, E., Boileau, T. W., & Bray, T. M. (2004). Dietary influences on endocrine-inflammatory interactions in prostate cancer development. *Archives of Biochemistry and Biophysics, 428*(1), 109-117.
- Hopfgarten, T., Adolfsson, J., Henningsohn, L., Onelov, E., & Steineck, G. (2006). The choice between a therapy-induced long-term symptom and shortened survival due to prostate cancer. *European Urology, 50*(2), 280-289.
- Howson, R. (2006). *Challenging Hegemonic Masculinity*. New York: Routledge.
- Hsing, A. W., Tsao, L., & Devesa, S. S. (2000). International trends and patterns of prostate cancer incidence and mortality. *International Journal of Cancer, 85*(1), 60-67.
- Hwang, Y. W., Kim, S. Y., Jee, S. H., Kim, Y. N., & Nam, C. M. (2009). Soy food consumption and risk of prostate cancer: A meta-analysis of observational studies. *Nutrition and Cancer-an International Journal, 61*(5), 598-606.
- Jankevicius, F., Miller, S. M., & Ackermann, R. (2002). Nutrition and risk of prostate cancer. *Urologia Internationalis, 68*(2), 69-80.
- Jemal, A., Siegel, R., Ward, E., Hao, Y., Xu, J., & Thun, M. J. (2009). Cancer Statistics, 2009. *CA: A Cancer Journal for Clinicians, 59*(4), 225-249.
- Jensen, K. O. D., & Holm, L. (1999). Preferences, quantities and concerns: Socio-cultural perspectives on the gendered consumption of foods. *European Journal of Clinical Nutrition, 53*(5), 351-359.
- Kao, G. D., & Devine, P. (2000). Use of complementary health practices by prostate carcinoma patients undergoing radiation therapy. *Cancer, 88*(3), 615-619.
- Kiss, A., & Meryn, S. (2001). Effect of sex and gender on psychosocial aspects of prostate and breast cancer. *BMJ: British Medical Journal, 323*(7320), 1055.
- Klein, E. A. (2009). Selenium and vitamin E: Interesting biology and dashed hope. *Journal of the National Cancer Institute, 101*(5), 283-285.

- Lee, C., & Owens, R. G. (2002). Issues for a psychology of men's health. *Journal of Health Psychology, 7*(3), 209-217.
- Liebman, M., Propst, K., Moore, S. A., Pelican, S., Holmes, B., Wardlaw, M. K., et al. (2003). Gender differences in selected dietary intakes and eating behaviors in rural communities in Wyoming, Montana, and Idaho. *Nutrition Research, 23*(8), 991.
- Lippman, S. M., Klein, E. A., Goodman, P. J., Lucia, M. S., Thompson, I. M., Ford, L. G., et al. (2009). Effect of selenium and vitamin E on risk of prostate cancer and other cancers: The selenium and vitamin E cancer prevention trial (SELECT). *JAMA, 301*(1), 39-51.
- Lupton, D. (2000). 'Where's me dinner?': Food preparation arrangements in rural Australian families. *Journal of Sociology, 36*(2), 172-186.
- Lyons, A. C. (2009). Masculinities, femininities, behaviour and health. *Social and Personality Psychology Compass, 3*(4), 394-412.
- Lyons, A. C., & Willott, S. (1999). From suet pudding to superhero: Representations of men's health for women. *Health, 3*(3), 283-302.
- Messina, M. J. (2003). Emerging evidence on the role of soy in reducing prostate cancer risk. *Nutrition Reviews, 61*(4), 117-131.
- Meyer, F., Bairati, I., Shadmani, R., Fradet, Y., & Moore, L. (1999). Dietary fat and prostate cancer survival. *Cancer Causes & Control, 10*(4), 245-251.
- Meyer, J. P., & Gillatt, D. A. (2002). Can diet affect prostate cancer? *BJU International, 89*(3), 250-254.
- Millen, B. E., Quatromoni, P. A., Pencina, M., Kimokoti, R., Nam, B.-H. O., Cobain, S., et al. (2005). Unique dietary patterns and chronic disease risk profiles of adult men: The Framingham nutrition studies. *Journal of the American Dietetic Association, 105*(11), 1723-1734.
- Miller, E. C., Giovannucci, E., Erdman, J. W., Jr., Bahnson, R., Schwartz, S. J., & Clinton, S. K. (2002). Tomato products, lycopene, and prostate cancer risk. *Urologic Clinics of North America, 29*(1), 83-93.

- Moss, S. Z., Moss, M. S., Kilbride, J. E., & Rubinstein, R. L. (2007). Frail men's perspectives on food and eating. *Journal of Aging Studies, 21*(4), 314-324.
- Moyad, M. A. (2006a). Step-by-step lifestyle changes that can improve urologic health in men, Part I: What do I tell my patients? *Primary Care: Clinics in Office Practice, 33*(1), 139-163.
- Moyad, M. A. (2006b). Step-by-step lifestyle changes that can improve urologic health in men, Part II: What do I tell my patients? *Primary Care: Clinics in Office Practice, 33*(1), 165-185.
- Moynihan, C. (1998). Theories in health care and research - Theories of masculinity. *British Medical Journal, 317*(7165), 1072-1075.
- Nam, R. K., Fleshner, N., Rakovitch, E., Klotz, L., Trachtenberg, J., Choo, R., et al. (1999). Prevalence and patterns of the use of complementary therapies among prostate cancer patients: An epidemiological analysis. *Journal of Urology, 161*(5), 1521-1524.
- Navon, L., & Morag, A. (2003). Advanced prostate cancer patients' relationships with their spouses following hormonal therapy. *European Journal of Oncology Nursing, 7*(2), 73-80.
- Nestle, M., Wing, R., Birch, L., DiSogra, L., Drewnowski, A., Middleton, S., et al. (1998). Behavioral and social influences on food choice. *Nutrition Reviews, 56*(5), 50-64.
- Newschaffer, C. J., Otani, K., McDonald, M. K., & Penberthy, L. T. (2000). Causes of death in elderly prostate cancer patients and in a comparison nonprostate cancer cohort. *Journal of the National Cancer Institute, 92*(8), 613-621.
- Nicholas, D. R. (2000). Men, masculinity, and cancer: Risk-factor behaviors, early detection, and psychosocial adaptation. *Journal of American College Health, 49*(1), 27-33.
- O'Brien, R., Hunt, K., & Hart, G. (2005). 'It's caveman stuff, but that is to a certain extent how guys still operate': Men's accounts of masculinity and help seeking. *Social Science & Medicine, 61*(3), 503-516.

- Oakes, M. E., & Slotterback, C. S. (2001). What's in a name? A comparison of men's and women's judgements about food names and their nutrient contents. *Appetite*, 36(1), 29-40.
- Ornish, D., Magbanua, M. J. M., Weidner, G., Weinberg, V., Kemp, C., Green, C., et al. (2008). Changes in prostate gene expression in men undergoing an intensive nutrition and lifestyle intervention. *Proceedings of the National Academy of Sciences*, 105(24), 8369-8374.
- Ornish, D., Weidner, G., Fair, W. R., Marlin, R., Pettengill, E. B., Raisin, C. J., et al. (2005). Intensive lifestyle changes may affect the progression of prostate cancer. *Journal of Urology*, 174(3), 1065-1070.
- Patterson, R. E., Neuhouser, M. L., Hedderson, M. M., Schwartz, S. M., Standish, L. J., & Bowen, D. J. (2003). Changes in diet, physical activity, and supplement use among adults diagnosed with cancer. *Journal of the American Dietetic Association*, 103(3), 323-328.
- Payette, H., & Shatenstein, B. (2005). Determinants of healthy eating in community-dwelling elderly people. *Canadian Journal of Public Health*, 96(Suppl 3), S27-31.
- Peters, U., Littman, A. J., Kristal, A. R., Patterson, R. E., Potter, J. D., & White, E. (2008). Vitamin E and selenium supplementation and risk of prostate cancer in the vitamins and lifestyle (VITAL) study cohort. *Cancer Causes & Control*, 19(1), 75-87.
- Prattala, R., Paalanen, L., Grinberga, D., Helasoja, V., Kasmel, A., & Petkeviciene, J. (2007). Gender differences in the consumption of meat, fruit and vegetables are similar in Finland and the Baltic countries. *European Journal of Public Health*, 17(5), 520-525.
- Ponholzer, A., Struhal, G., & Madersbacher, S. (2003). Frequent use of complementary medicine by prostate cancer patients. *European Urology*, 43(6), 604-608.
- Raine, K. D. (2005). Determinants of healthy eating in Canada: An overview and synthesis. *Canadian Journal of Public Health*, 96(Suppl 3), S8-S14.
- Ravasco, P., Monteiro-Grillo, I., & Camilo, M. E. (2003). Does nutrition influence quality of life in cancer patients undergoing radiotherapy? *Radiotherapy and Oncology*, 67(2), 213-220.

- Roos, E., Lahelma, E., Virtanen, M., Prattala, R., & Pietinen, P. (1998). Gender, socioeconomic status and family status as determinants of food behaviour. *Social Science & Medicine*, 46(12), 1519-1529.
- Roos, G., Prattala, R., & Koski, K. (2001). Men, masculinity and food: Interviews with Finnish carpenters and engineers. *Appetite*, 37(1), 47-56.
- Roos, G., & Wandel, M. (2005). "I eat because I'm hungry, because it's good, and to become full": Everyday eating voiced by male carpenters, drivers, and engineers in contemporary Oslo. *Food & Foodways*, 13(1/2), 169-180.
- Satia, J. A., Kristal, A. R., Patterson, R. E., Neuhouser, M. L., & Trudeau, E. (2002). Psychosocial factors and dietary habits associated with vegetable consumption. *Nutrition*, 18(3), 247-254.
- Saxe, G. A., Major, J. M., Nguyen, J. Y., Freeman, K. M., Downs, T. M., & Salem, C. E. (2006). Potential attenuation of disease progression in recurrent prostate cancer with plant-based diet and stress reduction. *Integrative Cancer Therapies*, 5(3), 206-213.
- Schafer, R. B., Schafer, E., Dunbar, M., & Keith, P. M. (1999). Marital food interaction and dietary behavior. *Social Science & Medicine*, 48(6), 787-796.
- Schippers, M. (2007). Recovering the feminine other: Masculinity, femininity, and gender hegemony. *Theory & Society*, 36(1), 85-102.
- Schofield, T., Connell, R. W., Walker, L., Wood, J. F., & Butland, D. L. (2000). Understanding men's health and illness: A gender-relations approach to policy, research, and practice. *Journal of American College Health*, 48(6), 247-256.
- Schulman, C. C., Kirby, R., & Fitzpatrick, J. M. (2003). Awareness of prostate cancer among the general public: Findings of an independent international survey. *European Urology*, 44(3), 294-302.
- Sellaeg, K., & Chapman, G. E. (2008). Masculinity and food ideals of men who live alone. *Appetite*, 51(1), 120-128.

- Shariat, S. F., Lamb, D., Lyengar, R. G., Roehrborn, C. G., & Slawin, K. M. (2008). Herbal/hormonal dietary supplement possibly associated with prostate cancer progression. *Clinical Cancer Research*, *14*(2), 607-611.
- Shirai, T., Asamoto, M., Takahashi, S., & Imaida, K. (2002). Diet and prostate cancer. *Toxicology*, *181-182*, 89-94.
- Sloan, C., Gough, B., & Conner, M. (2009). Healthy masculinities? How ostensibly healthy men talk about lifestyle, health and gender. *Psychology & Health*, *iFirst*(1), 1 - 21 DOI 10.1080/08870440902883204.
- Smart, L. R., & Bisogni, C. A. (2001). Personal food systems of male college hockey players. *Appetite*, *37*(1), 57-70.
- Sobal, J. (2005). Men, meat and marriage: Models of masculinity. *Food & Foodways*, *13*(1/2), 135-158.
- Sobal, J., & Bisogni, C. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, *38*(0), 37-46.
- Song-Yi Park, S. P. M., L. R. Wilkens, B. E. Henderson, L. N. Kolonel., (2008). Legume and isoflavone intake and prostate cancer risk: The Multiethnic Cohort Study. *International Journal of Cancer*, *123*(4), 927-932.
- Stacewicz-Sapuntzakis, M., Borthakur, G., Burns, J. L., & Bowen, P. E. (2008). Correlations of dietary patterns with prostate health. *Molecular Nutrition & Food Research*, *52*(1), 114-130.
- Stratton, M. S., Reid, M. E., Schwartzberg, G., Minter, F. E., Monroe, B. K., Alberts, D. S., et al. (2003). Selenium and prevention of prostate cancer in high-risk men: The Negative Biopsy Study. *Anticancer Drugs*, *14*(8), 589-594.
- Strom, S. S., Yamamura, Y., Forman, M. R., Pettaway, C. A., Barrera, S. L., & DiGiovanni, J. (2008). Saturated fat intake predicts biochemical failure after prostatectomy. *International Journal of Cancer*, *122*(11), 2581-2585.

- Thomson, C. A., Rock, C. L., Caan, B. J., Flatt, S. W., Al-Delaimy, W. A., Newman, V. A., et al. (2007). Increase in cruciferous vegetable intake in women previously treated for breast cancer participating in a dietary intervention trial. *Nutrition and Cancer-an International Journal*, 57(1), 11-19.
- Trachtenberg, J., Fleshner, N., Lancaster, C., & Casselman, B. (2000). *Eating right for life: Prostate cancer, nutrition and you*. Montreal, Quebec: Parkhurst.
- Van Patten, C. L., de Boer, J. G., & Tomlinson Guns, E. S. (2008). Diet and dietary supplement intervention trials for the prevention of prostate cancer recurrence: A review of the randomized controlled trial evidence. *The Journal of Urology*, 180(6), 2314-2322.
- Visser, A., & van Andel, G. (2003). Psychosocial and educational aspects in prostate cancer patients. *Patient Education & Counseling*, 49(3), 203-206.
- Vlajinac, H. D., Marinkovic, J. M., Ilic, M. D., & Kocev, N. I. (1997). Diet and prostate cancer: A case-control study. *European Journal of Cancer*, 33(1), 101-107.
- Worsley, A. (2002). Nutrition knowledge and food consumption: Can nutrition knowledge change food behaviour? *Asia Pacific Journal of Clinical Nutrition*, 11(Suppl 3), S579-585.
- Yip, I., Heber, D., & Aronson, W. (1999). Nutrition and prostate cancer. *Urologic Clinics of North America*, 26(2), 403-411.
- Zlotta, A. R., & Schulman, C. C. (2001). Can survival be prolonged for patients with hormone-resistant prostate cancer? *Lancet*, 357(9253), 326-327.

## **CHAPTER 2.**

# **MEN, FOOD AND PROSTATE CANCER: GENDER INFLUENCES ON MEN'S DIETS<sup>1</sup>**

### **Introduction**

The role of diet in prostate cancer has received considerable attention following observations that compared to typical Western diets, which are high in energy, meat and fat, traditional Asian diets rich in vegetables and legumes are associated with lower prostate cancer incidence (Grant, 2004). Subsequent research on diet and prostate cancer progression and recurrence is of interest given the large and growing number of long-term survivors in Western countries (Jemal, Siegel, Ward, Hao, Xu, & Thun, 2009). Prostate cancer diet intervention trials have demonstrated that adopting plant-based diets can reduce markers of prostate cancer progression and alter prostate tumour gene expression, and might therefore inhibit recurrence (Ornish, Magbanua, Weidner, Weinberg, Kemp, Green et al., 2008; Ornish, Weidner, Fair, Marlin, Pettengill, Raisin et al., 2005; Saxe, Major, Nguyen, Freeman, Downs, & Salem, 2006). Recent reviews of diet and prostate cancer research identify obesity and excessive meat, fat and calorie intake as modifiable 'risk factors' in disease progression and recurrence (Berkow, Barnard, Saxe, & Ankerberg-Nobis, 2007; Demark-Wahnefried, 2007; Freedland & Aronson, 2009; Van Patten, de Boer, & Tomlinson Guns, 2008). Overall, there is growing evidence that healthy diets might improve long-term survival of men with prostate cancer, up to 40% of whom are at high risk for recurrence after treatment (Chan, Holick, Leitzmann, Rimm, Willett, Stampfer et al., 2006). As well, for men who manage their low-risk prostate cancer through

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active surveillance, a deferred treatment protocol, diet changes might allow them to extend delays or even avoid active treatments and their associated morbidities (Frattaroli, Weidner, Dnistrian, Kemp, Daubenmier, Marlin et al., 2008).

Given these findings there is need for nutrition guidance for prostate cancer survivors; however, little is known about what might constitute effective targeted interventions. Nutrition promotion efforts reveal that diet change is generally difficult to accomplish, stimulating efforts to develop more detailed conceptualizations of food choice processes (Furst, Connors, Bisogni, Sobal, & Falk, 1996; Raine, 2005). This work recognizes that food choice is influenced by complex interconnections among biological, environmental, economic, psychosocial and other determinants that interact within an individual's life context (Gedrich, 2003).

Gender is a key determinant of food choice, as demonstrated by evidence that throughout the Western world men's diets are different and often poorer than women's diets (Wardle, Haase, Steptoe, Nillapun, Jonwutiwes, & Bellisle, 2004). However, the intricate ways in which gender shapes men's eating habits are poorly understood (Roos, Lahelma, Virtanen, Prattala, & Pietinen, 1998). The influence of masculinity and gender relations on men's experience of prostate cancer is also complex but affords an integral context for understanding men's diets following prostate cancer. To develop effective nutrition interventions for men with prostate cancer, it is therefore important to consider the particular ways their food practices are shaped by gender.

The purpose of this chapter is to provide a synthesis of knowledge developments in men's gendered food practices and discuss the significance of this work in the context of prostate cancer survivorship. Specifically, in this chapter I synthesize the evidence around men's disinclination for diet change after prostate cancer, and discuss how gender shapes men's food practices. I outline how masculinity theory as depicted by Connell (1995), Courtenay (2000a,)

and others can increase our understandings about how masculinities, prostate cancer and men's food practices are connected. In reviewing the growing literature on masculinity and men's food practices, I describe how these understandings might guide intervention efforts. Drawing on the work of Lyons (2009) and recommendations by Schofield, Connell, Walker, Wood, & Butland (2000), I also explain how complex gender relations can influence men's health and food practices.

## **Methods**

Articles providing a broad perspective on diets of men with prostate cancer and men's food choice behaviours were selected by searching online databases, primarily the Web of Science (Science Citation Index Expanded, Social Sciences Citation Index, Arts and Humanities Citation Index) and EBSCO databases (Academic Search Complete, Biomedical Reference Collection, CINAHL, Humanities International Index, MEDLINE, PsycARTICLES), for articles published in 1987 through August 2009. Search terms included 'masculinity', 'men', 'men's health', 'gender', 'diet', 'food', 'food choice', 'prostate cancer', 'cancer', 'health' and 'health behaviour'. Because of the broad nature of many of these search terms, hundreds of titles were returned. Titles found were reviewed to ascertain relevance to the topic and those determined to be unrelated were discarded. Similarly, abstracts for the remaining titles were read and if determined relevant, the article was retrieved, read and included in this review. Consequently a wide range of articles including empirical reports, literature reviews and theoretical discussions addressing diets of cancer survivors, diet and prostate cancer intervention research, and the role of gender in shaping eating habits and health of men in Western countries were reviewed. While recognizing that constructions of masculinity vary across culture and place, and therefore within and between Western countries, the current research yielded insight into some prevailing patterns

across Western countries. Although it was not possible to focus on any one Western culture in this review, the various study locales are provided to signal acknowledgement that generalizations about masculinities across cultures cannot always be made. In this chapter I summarize literature addressing and informing dietary practices of prostate cancer survivors, and focus on how masculinities influence food choice, while signalling how gender relations theory might add important insights to advance those understandings.

## **Findings and Discussion**

### **Diet After Cancer**

The potential benefits of healthy eating and the opportunity or ‘teachable moment’ for diet education after a cancer diagnosis has stimulated interest in nutrition interventions for cancer survivors. However, reviews of Western large-scale diet and lifestyle assessments suggest that despite increased motivation for dietary change, most cancer survivors have the same behaviour risk factors as the general population and are unlikely to change their diets (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005; Jones & Demark-Wahnefried, 2006). As well, high levels of obesity and low levels of physical activity are prevalent in multi-site cancer survivors, often existing at similar levels found in the general population (Pinto & Trunzo, 2005). Although two studies have reported lower obesity levels and higher consumption of fruit and vegetables in North American male cancer survivors compared to non-cancer controls (Coups & Ostroff, 2005; Courneya, Katzmarzyk, & Bacon, 2008), most studies reveal male cancer survivors as less likely to have healthy diets than female cancer survivors. Healthy eating improvements including compliance with fruit and vegetable intake recommendations were lower among US prostate cancer survivors than breast and uterine cancer survivors (Blanchard, Courneya, &

Stein, 2008; Demark-Wahnefried, Peterson, McBride, Lipkus, & Clipp, 2000) and in men with prostate or colorectal cancer compared to women with breast or colorectal cancer (Patterson, Neuhouser, Hedderson, Schwartz, Standish, & Bowen, 2003). Some men with prostate cancer show reluctance to make long-lasting or comprehensive diet changes. For example, only 13% of 822 Austrian men reported adopting a low fat diet as part of their prostate cancer self-care (Ponholzer, Struhal, & Madersbacher, 2003). In one survey 25% of Swedish men newly diagnosed with localized prostate cancer reported they would prefer a shortened life span rather than reduce their consumption of beef or pork (Hopfgarten, Adolfsson, Henningsohn, Onelov, & Steineck, 2006). Overall, although research in this area is scarce, the disinclination for men with prostate cancer to change their diets appears to be a prevailing pattern.

Further evidence of reluctance for men with prostate cancer to make healthful diet changes comes from US clinical trials addressing diet change and survival. Difficulties with adherence to intervention diets and associated attrition problems might have contributed to inconclusive findings about the role of diet in prostate cancer recovery (Stull, Snyder, & Demark-Wahnefried, 2007). These trials required adherence to strict, low-fat, plant-based diets that are typically more extreme than general healthy eating guidelines for men with prostate cancer. Researchers have found it necessary to provide extensive nutrition education and counselling programs to achieve adherence and even then, success in attaining compliance with study protocols has been mixed. A few small US studies with interventions ranging from eleven weeks to six months that included counselling with nutritionists, regular support group meetings and/or individually tailored nutritional information modestly increased vegetable intake but did not achieve significant long-lasting diet improvements (Carmody, Olendzki, Reed, Andersen, & Rosenzweig, 2008; Nguyen, Major, Knott, Freeman, Downs, & Saxe, 2006; Parsons, Newman,

Mohler, Pierce, Paskett, & Marshall, 2008). Several larger trials were able to modestly increase fruit and vegetable consumption and/or decrease fat intake for US prostate cancer patients using more intensive interventions lasting 10 – 12 months (Demark-Wahnefried, Clipp, Lipkus, Lobach, Snyder, Sloane et al., 2007; Dewell, Weidner, Sumner, Chi, & Ornish, 2008; Link, Thompson, Bosland, & Lumey, 2004; Ornish et al., 2005). These dietary interventions were instrumental in conducting much needed clinical trials and achieved modest short-term diet changes, but were comprehensive and labour intensive and would be difficult to apply to larger patient populations. In addition, many were adapted from programs originally developed for women's diet interventions studies and were not gender savvy in their design and delivery (Demark-Wahnefried et al., 2007; Link et al., 2004; Parsons et al., 2008).

In summary, the literature suggests that men tend not to adhere to healthy eating guidelines nor improve their diets after a cancer diagnosis, and they may be less compliant to diet changes than women who have had cancer. This suggests that gender is an important determinant of men's dietary responses to prostate cancer.

### **Men, Masculinities and Prostate Cancer**

A growing body of literature has examined the role of gender in men's health and can inform our understandings of the food practices of men with prostate cancer. Men are more likely to suffer ill-health, have higher death rates for most major illnesses, and have shorter life expectancies than women. Worldwide, men live an average of 3.9 years less than women (Mathers, Sadana, Salomon, Murray, & Lopez, 2001), while US men live on average 5.2 years less than women and are more likely to suffer and die from the 12 leading mortality causes (Dodson, 2007). Similarly in Canada, men have a life expectancy that is approximately 4.7 years less than women (Statistics Canada, 2010). A physiological perspective, whereby biological

determinants based on sex are thought to govern differential health outcomes, has often been put forward to explain this disparity. In this 'sex destiny' view, men's health is determined by male specific anatomy (penis and testes) and physiology (testosterone), sex roles are seen as inherited and rigid, and therefore, men's negative health outcomes are inevitable (Courtenay, 2000a; Moynihan, 1998).

In contrast, a social constructionist perspective has developed, whereby gender is understood as conceptualizations of masculinity and femininity that people within a society develop, share and enact within everyday social exchanges and that are demonstrated by beliefs and practices that people embody and perform (Brickell, 2006). Dominant ideals of masculinity and femininity endure in society as models for action that guide and prescribe men's and women's behaviours. Following this perspective, men constantly construct and reconstruct their gender in ways that demonstrate varying relationships to dominant ideals of masculinity (Courtenay, 2000a; Moynihan, 1998; Phillips, 2006). 'Hegemonic masculinity' refers to normative ideals that men try to embody and emulate, amid the avoidance of what is perceived to be feminine behaviours, which produces and maintains male social dominance. There is significant variation in how men perform masculinity and therefore multiple masculinities exist as complicit, subordinate and marginalized to the normative form. Most men are complicit in sustaining hegemonic ideals regardless of their actual gendered performances. In addition, many men are not represented by the benchmarks of Western hegemonic masculinity, which typically include white, middle-class, educated and heterosexual men (Oliffe, Grewal, Bottorff, Dhesi, Bindy, Kang et al., 2010). 'Marginalized' masculinities are thus shaped by social structures including age, ethnicity, race and class, while 'subordinated' masculinities are most often shaped by sexual orientation. Within the gender order, hegemonic masculinity ascends to the highest

status above other masculinities and is defined by characteristics including autonomy and self-reliance and power over others. Performances of hegemonic masculinity are typified as being opposite to what is considered feminine behaviour and consequently, masculinity is understood as being constructed in relation to femininity (Connell, 1995; Connell & Messerschmidt, 2005). This has negative implications for men's health because men see many healthy behaviours as feminine and therefore to be avoided whilst unhealthy or risky behaviours are perceived as normative for men (Mahalik, Burns, & Syzdek, 2007).

In men's health masculinity is associated with reluctance to seek help, as demonstrated by evidence that men are generally poorer consumers of health care services and less likely to acknowledge symptoms of illness than women (Courtenay, 2000b; Galdas, Cheater, & Marshall, 2005; Lee & Owens, 2002). Adherence to masculine ideals has been implicated in men's poor health outcomes (Robertson, 2007; Schofield et al., 2000). For example, British men with benign prostate disease confessed to having little health knowledge or desire to learn and avoided health promotion activities and help seeking, even after experiencing long-term clinically relevant prostate symptoms (Cameron & Bernardes, 1998). Of course, not all men subscribe to these masculine ideals and the existence of multiple masculinities within and between men has enabled researchers to describe diversity as well as prevailing patterns among men's health practices. Some men may actively reject certain ideals of masculinity; however they are nonetheless influenced by these ideals, often resulting in men's generally poorer health outcomes (Connell, 1995; Donaldson, 1993; Sabo, 2000).

Masculinity also has considerable influence on men's experiences with cancer (Nicholas, 2000), especially prostate cancer. American men are less likely than women to have knowledge of and adopt cancer preventive health behaviours, including reducing dietary fat intake and

maintaining healthy body weights (Wilkinson, Vasudevan, Honn, Spitz, & Chamberlain, 2009). Overall, American and British men are more likely to suffer from and die of most types of cancer than are women (Cancer-Research-UK, 2009; Jemal et al., 2009). Western men also show poor psychosocial adaptation after a cancer diagnosis, suggesting masculinity might hinder men's acceptance and adoption of self-care cancer recovery care activities including improving diet (Kiss & Meryn, 2001). Differences in how men and women experience cancer are reflected in the field of psycho-oncology, which has traditionally focused its attention on the psychosocial adjustment of women after a cancer diagnosis. The implicit message is that men are expected to be stoic and better able to privately cope with cancer than women. The expectation to 'take it like a man' and not need or expect psychosocial services can also be perpetuated by physician and caregivers' gendered expectations and is reflected in doctor-patient communication (Olliffe & Thorne, 2007; Street, 2002). Consequently, Canadian men tend to avoid psychosocial health care although research indicates an unmet need for such services (Manii & Ammerman, 2008). These findings can help cancer researchers understand how men experience cancer differently than women, especially in the context of self-care activities such as diet behaviour change. Men might be unwilling to engage in self-care behaviours if they are thought of as contrary to what a man with cancer is 'supposed' to do (Moynihan, 2002).

Research examining men's experiences with prostate cancer has shown reciprocal and often negative relationships between masculinity and prostate cancer for British (Chapple & Ziebland, 2002), Israeli (Navon & Morag, 2003) and Australian men (Olliffe, 2005; Wall & Kristjanson, 2005). For example, some Australian men described how investigative diagnostic and treatment procedures disrupted their self-perceptions as men and negatively influenced their experiences involving treatment decision-making (Broom, 2004). Others described tolerating

unnecessarily painful biopsy procedures without anesthetic, demonstrating masculine stoic acceptance (Oliffe, 2004). Adherence to masculine ideals shaped some men's experiences with sexual and urinary dysfunction after definitive prostate cancer treatment and negatively influenced their psychosocial adjustment and mental health (Burns & Mahalik, 2007). These outcomes might negatively affect diet through changes in appetite or psychological distress related to urinary or fecal incontinence (Palmer, Fogarty, Somerfield, & Powel, 2003). Some Canadian men who managed their low-risk prostate cancer with active surveillance minimized their cancer by framing it to researchers as benign and not requiring their attention. This positioning suggested that masculine ideals of control and self-reliance might have limited their adoption of self-care activities (Oliffe, Davison, Pickles, & Mroz, 2009). From these findings it is apparent that masculinity is an important influence on men's health and may hinder self-care activities of men with prostate cancer. In considering the potential benefits of diet change, it is necessary to include consideration of how masculinity exerts influence on these men's food choices.

### **Men, Masculinities and Food**

Food consumption surveys confirm gender differences in Westerner's dietary habits, revealing that men consume more meat and alcohol, while women often eat more fruit, vegetables and fish, and/or have overall healthier diets (Jensen & Holm, 1999; Liebman, Propst, Moore, Pelican, Holmes, Wardlaw et al., 2003; Prattala, Paalanen, Grinberga, Helasoja, Kasmel, & Petkeviciene, 2007; Roos et al., 1998). These findings are not always consistent in that some North American nutrition surveys show men to be more likely to consume the recommended number of servings of fruits and vegetables and/or dairy products (Garriguet, 2006; Johnston, Taylor, & Hampl, 2000). However, this is associated with men's overall greater food

consumption rather than better diet quality, and most men surveyed ate less than the recommended number of servings. The consequence is that US men's less healthy diets are associated with increased risk for diet-related chronic disease compared to women (Millen, Quatromoni, Pencina, Kimokoti, Nam, Cobain et al., 2005). These gender differences in food consumption can be linked to diverse meanings of food and eating, including what constitutes 'healthy eating', domestic cooking ideals, and how gender relations influence family food practices. Each of these areas is reviewed below noting both dominant and alternative constructions of masculinity and food.

Research on gender and diet has shown that men ascribe different meanings to food and eating than women do. For example, in surveys conducted in 23 Western countries and a study in Australia, women typically framed the concept of 'dieting' as a means to attain and manage an idealized body shape and weight. In contrast, men tend to frame dieting as a means to attain fitness and maintain strength and work prowess (Wardle et al., 2004; Wright, O'Flynn, & Macdonald, 2006). Eating small, light meals is associated with femininity for Canadians (Chaiken & Pliner, 1987), while Western men typically envision meals as needing to be hearty and meat-centred and judge salads and soups as poor 'male' choices (Jensen & Holm, 1999). Such gendered food ideals are widespread in Western culture and may contribute to men's poor diets. An analysis of constructions of masculinity in articles published in *Men's Health* magazine (June-December, 2000) revealed unhealthy dietary behaviours as masculine 'makeovers' (Stibbe, 2004). Distributed in 43 countries around the world, this magazine provides an excellent example of the portrayal of Western hegemonic masculine ideals, which favour American, White, middle-class and youthful perspectives. Rather than cook at home, men were encouraged to eat convenience food and meat, and drink beer. Accordingly these

unhealthy behaviours were explicitly described and embraced as manly, while healthier behaviours such as vegetarianism or domestic cooking were denigrated and described as feminine, un-masculine and therefore to be avoided (Stibbe, 2004). Likewise, a study of young Australian men's food attitudes revealed fruits and vegetables as discordant with masculine 'culture' (Dumbrell & Mathai, 2008).

Meat consumption or "doing meat" in particular has been viewed as a way of signifying manliness (Bourdieu, 1984), but it might also vary in meaning according to social context. Masculine ideals including 'strong men', 'wealthy men', 'healthy men' or other conceptions of Western masculinity that can be invoked, influence how meat is perceived and consumed. Although all are framed as masculine, some explicitly reflect dominant ideals while others offer collateral identities by providing alternate justifications for differing meat consumption. For example a 'strong man' ideal might be embodied to justify the regular consumption of meat for enhancing muscular strength while other men might invoke 'a healthy man' ideal to justify reduced meat consumption (Sobal, 2005). Increased meat consumption has also been viewed as a sign of renewed traditional masculinity or a rejection of modern, effeminized or 'metrosexual' masculinity. In a US cultural analysis eating beef was re-affirmed as a way of re-claiming or strengthening traditional masculinity in the face of alternative masculinities that indicate femininity and signal weakness (Buerkle, 2009).

Men's perceptions of healthy eating also differ from those of women, who tend to assess healthy foods and healthy eating guidelines more favourably than men, as demonstrated in studies conducted in the US (Oakes & Slotterback, 2001; Rappoport, Peters, Downey, Mccann, & Huffcorzine, 1993), Finland (Roos et al., 1998), Australia (Turrell, 1997) and the UK (Gough & Conner, 2006). For example, the UK study found that men perceived healthy food as

unappealing, poor tasting and unsatisfying. Additionally, participants were cynical and dismissive of government produced healthy eating messages. These perceptions were identified as important barriers to healthy eating for these men (Gough & Conner, 2006). Because healthy eating recommendations often mimic ‘feminine’ ways of eating, including emphasis on vegetables and fruits and smaller portion sizes, and encourage decreased consumption of masculine foods (Jensen & Holm, 1999), ‘manly’ food habits are positioned as conflicting with healthy eating guidelines and health promotion efforts.

Men’s perceptions of healthy eating can vary by social class and culture, reflecting alternative masculine food ideals as seen in a study of Finnish carpenters and engineers whereby engineers displayed more middle class perspectives compared to carpenters when they framed healthy eating as acceptable for ‘fit men’ (Roos & Wandel, 2005). Likewise in a Canadian study, men who lived alone expressed alternate masculine ideals that might have been a function of the men’s higher social class, temporal changes in views about men and food, or the particular North American West Coast urban culture where the men lived (Sellaeg & Chapman, 2008). An analysis of the connections between food, masculinity and male body image in Western men’s fitness magazines demonstrated a shift whereby healthy eating facilitated the embodiment of masculine ideals of strength and fitness. Here, the pursuit of a muscular and lean male body represented the expression of masculine control or dominance of the weak, excessive and therefore feminine appetite. Food was portrayed as a scientific tool to be used in men’s battles to produce a rational masculine mind, the antithesis of female nurturing (Parasecoli, 2005). These findings showed how gendered notions about food and eating are perceived and perpetuated in the popular media, in this case to promote healthy eating as a conduit for male fitness. These perceptions are reflected in men’s food research, which found that American male college

athletes framed healthy eating in the context of attaining athletic prowess (Smart & Bisogni, 2001). Similarly, British men who pursued healthy lifestyles distanced healthy eating from feminine behaviour by disassociating their health practices from female health concerns and reframing their choices as performance based (Sloan, Gough, & Conner, 2009).

Men's relationships to domestic cooking have been another area of study for masculinity and food researchers and provide insight into men's food practices. With few exceptions, household food provision and preparation have predominated as domestic female endeavours. Accordingly, men who are not professional chefs are often portrayed as inept in the domestic kitchen. Bumbling, incompetent and clumsy, 'real' men are not expected to care about food and cooking (Julier & Lindenfeld, 2005). Finnish men embracing female perspectives on healthy eating tended to show masculine cooking perspectives, describing cooking as 'women's work', and distancing themselves from 'fancy' or domestic cooking (Roos & Wandel, 2005).

Alternatively, some social constructions of masculinity depict men as proficient home cooks, but only under certain circumstances. Men as cooks are typically carefully portrayed as gourmands, whereby masculine cooking is reframed as clean, efficient and 'urbane' and an active rejection of female domesticity (Hollows, 2002). The social portrayal of women as cooks and men as chefs continues in the media where the construction of the masculine home cook rejects 'regular' cooking as female domestic labour and reframes it as a fun, leisure masculine activity (Hollows, 2003). Thus men's cooking is decidedly different from domestic, everyday women's cooking where men tend to cook less than women (Harnack, Story, Martinson, Neumark-Sztainer, & Stang, 1998).

These widespread ideals of acceptable men's cooking practices have tended to position men's willingness to do domestic cooking as necessary for male autonomy and control. Young

urban Canadian bachelors presented positive views regarding men's involvement in cooking, believing it was important for their independence and self-sufficiency (Sellaeg & Chapman, 2008). Similarly men living in all-male environments of US urban firehouses demonstrated cooking prowess that they would not display at home because it was an expression of competency at work. In this environment, hyper-masculine language was used to separate the important work of cooking for other workingmen from feminized household food provision (Deutsch, 2005). Likewise, Nordic men who adopted more typically feminine cooking roles at home revealed that they did not simply reject masculine ideals. Rather, they redefined family food work as masculine projects or de-gendered that work as family food provision (Aarseth & Olsen, 2008).

These findings reveal men's perceptions of nutrition, healthy eating, household food work and provision and food choice as intricately connected to masculine ideals, and strongly implicated in men's typically poorer diets compared to women. Masculinities alone, however, are not solely responsible for shaping men's actual food practices and gender relations, most often the interactions between men and the women in their lives, must also be considered despite the lack of research in this area.

### **Gender Relations and Men's Food Practices**

When considering many men's food choice behaviours, the household context is a key consideration because most decisions about food occur within a family setting. Domestic food choices are rarely singular events but complex evaluations that involve negotiating divergent factors including likes and dislikes, deference and workload (Henson, Gregory, Hamilton, & Walker, 1998). Because North American women tend to control family food provision (Harnack et al., 1998), contribute more to family dietary quality (Schafer, Schafer, Dunbar, & Keith, 1999)

and express goals for healthy family diets (Beagan, Chapman, D'Sylva, & Bassett, 2008), it might be expected that men partnered with women would have healthy eating patterns. The fact that the opposite is commonly observed might be due to traditional feminine ideals that women provide their husbands with the food their men prefer rather than healthy food. This reflects the intricacy of heterosexual relationships, gender relations and the gendered expectations of food provision (Schofield et al., 2000). Such expectations have implicit assumptions, unspoken and deeply embedded in couple interactions (Beagan et al., 2008). They can also be consistent with concepts of masculine dominance and female subordination that influence women to defer to their husbands' wishes and preferences (DeVault, 1991).

These relationships might change in the context of chronic illnesses, including prostate cancer. For example, female partners have been reported to positively influence Swedish men's dietary health behaviours (Kullberg, Aberg, Bjorklund, Ekblad, & Sidenvall, 2008). Other research, however, has shown the opposite effect whereby efforts of some US prostate cancer survivors' wives to encourage their husbands to improve their diets, increase exercise and reduce smoking resulted in negative behaviour changes (Helgeson, Novak, Lepore, & Eton, 2004). Masculinity and gender relations theory suggests that the men's expression of masculine resistance to their wife's health promotion beliefs and activities may have been a salient determinant and demonstrates how complex gender relations might influence men's health practices (Schofield et al., 2000). However, the links between performances of masculinity and femininity in relation to men's health and food practices are poorly understood and warrant further investigation (Lyons, 2009).

## **Older Men in Food Research**

To date, most of the food behaviour literature has focused on men younger than those typically diagnosed with prostate cancer, and the research reviewed here represents the body of literature available. I recognize that younger men might perform masculinity differently than older men, however, there is insufficient research in this area to empirically support that conclusion. Role changes, transitions or turning points such as retirement or health events including being diagnosed with cancer have the potential to alter older men's perceptions of food and their health behaviours (Devine, 2005; Oliffe, 2009). Some studies have found that older men had positive perceptions about healthy eating; however, their knowledge of healthy eating and lack of health literacy were barriers to diet change for Australian (Drummond & Smith, 2006) and US men (Holmes & Gates, 2003). These findings indicate that nutrition education programs might benefit from increasing men's health decision-making literacy skills and knowledge. One community-cooking program for Canadian men over age 75 found that increasing men's cooking skills improved their healthy eating practices demonstrating that older men can learn to cook in a supportive group environment (Keller, Gibbs, Wong, Vanderkooy, & Hedley, 2004).

Other research on older men has shown how masculinity interacts with age to affect food choice. An American study assessing correlates of dietary behaviour from the health belief model of behaviour change found that older men reported higher self-efficacy for diet change than younger men. The authors speculated this might be due to a reframing of masculinity in older men and demonstrates how masculinities can shift with age improving men's capacity for making diet changes (Keith & Schafer, 1997). Alternatively, a study of 'frail' older American men (>75 years old and with mobility or daily living limitations) revealed a "pervasive need for the maintenance of masculinity", which prevented them from engaging in diet change. Although

good nutrition was an important part of their survival and physical functioning, men distanced themselves from food provision activities and framed knowledge and skills about healthy eating as female responsibilities (Moss, Moss, Kilbride, & Rubinstein, 2007). These findings illustrate the challenges that nutrition educators might have in engaging ill men in diet change, even if they are philosophically receptive to it. Overall these findings demonstrate the complexities of how gender, age and disease intersect to influence food choice behaviour for men with prostate cancer and how a better understanding of older men's perceptions about food and health is needed.

## **Conclusions**

This review confirms men's self-health activities, including food choice behaviours, are shaped by dominant ideals of masculinity. Although a plurality of masculinities exist, many dominant masculine ideals conflict with healthy eating practices resulting in men's inadequate diets and poor health outcomes. I argue that dominant ideals of masculinity can contribute to men's poorer prostate cancer outcomes by inhibiting their adoption of prostate-friendly diet recommendations and should be thoughtfully addressed in advocating diet change. There is little evidence on how to improve men's uptake of health services (Robertson, Douglas, Ludbrook, Reid, & van Teijlingen, 2008). However, nutrition education or counselling programs designed for men with prostate cancer would benefit from considering how gender relations and masculinity both facilitate and block healthy eating. There is currently no research on how masculinity influences the uptake of prostate cancer nutrition interventions. Qualitative research is valuable in identifying men's diet and health attitudes, beliefs and behaviours, and can inform intervention development, which in turn can promote healthier eating. Such studies could reveal

how social structures including age, class and race intersect with prostate cancer experiences to shape men's performances of masculinity through their food practices. This could provide an understanding of men's perceptions about the role of diet in health and prostate cancer recovery and how they experience diet and diet change. Research similar to that conducted with Finnish (Roos & Wandel, 2005) or British (Gough & Conner, 2006) men could be conducted on men with prostate cancer from different cultural groups to illuminate the role of multiple masculinities in shaping men's nutritional health. Although female partners are acknowledged to be important influences on men's food practices there is little research in this area. An understanding of how men's performances of masculinity are shaped by women's performances of femininity and how this is implicated in men's food choices is lacking (Lyons, 2009). Thus research on masculinity and hetero-normative food practices of men with prostate cancer is warranted and should include female partners. Other family structures should also be examined including men who live alone or in same-sex relationships. There are currently few studies on masculinity influences on food practices of men, especially older men, and none specifically on men with prostate cancer.

The findings reviewed here offer several avenues for designing nutrition interventions for men with prostate cancer, and where appropriate their female partners, while considering masculinity influences on men's food choices. Changing men's dietary perceptions can involve re-framing healthy eating as less feminine and/or more masculine. Although no research in this area has been conducted, this review suggests that some foods might be given a 'masculine makeover' by re-positioning healthy eating as expressions of masculine autonomy and self-control. For example, encouraging men to eat prostate friendly foods including broccoli or soy products could be framed as a means to maintain fitness or health in order to foster autonomy

and self-management in the face of chronic illness. Research on men who do engage in family food provision and healthy eating provides clues as to how masculinity can be reconstructed as societal norms shift over time and place. This suggests that embracing ‘newer’ masculine ideals around men’s involvement in family food provision or preparation might be more effective than attempting to counteract traditional masculine ideals. Here, for example, as Aarseth & Olsen, (2008) found, men’s food work could be framed as important and necessary aspects of ‘modern’ male provision for the family. As well, behaviour change within existing masculine ideals might be advanced by social marketing techniques to reach men in the places that they ordinarily congregate (Courtenay, 2004) including prostate cancer support groups and urology clinics. Although masculinity has often been framed as a problem in men’s health, some characteristic features can advance and/or be re-framed as health promoting (O'Brien, Hunt, & Hart, 2005; Sloan et al., 2009). For example, mobilizing masculine ideals of strength, self-reliance and athletic prowess might advance men’s consumption of fruit, vegetables and low-fat healthy diets as performance-based manly endeavours.

Men with prostate cancer might also be more willing to change, but whether educating this target group or men in the general population, widespread and diverse discourses on food choice behaviour and masculinities and gender relations will need to be studied, compared and incorporated into program planning. Continued and extensive research into nuanced and contextual understandings of the gendered and masculine meanings of eating for men is needed to further inform development of nutrition interventions for men with prostate cancer that are more effective in promoting diet change and in turn survivorship.

## References

- Aarseth, H., & Olsen, B. M. (2008). Food and masculinity in dual-career couples. *Journal of Gender Studies, 17*(4), 277-287.
- Beagan, B., Chapman, G. E., D'Sylva, A., & Bassett, B. R. (2008). 'It's just easier for me to do it': Rationalizing the family division of foodwork. *Sociology-the Journal of the British Sociological Association, 42*(4), 653-671.
- Berkow, S. E., Barnard, N. D., Saxe, G. A., & Ankerberg-Nobis, T. (2007). Diet and survival after prostate cancer diagnosis. *Nutrition Reviews, 65*(9), 391-403.
- Blanchard, C. M., Courneya, K. S., & Stein, K. (2008). Cancer survivors' adherence to lifestyle behavior recommendations and associations with health-related quality of life: Results from the American Cancer Society's SCS-II. *Journal of Clinical Oncology, 26*(13), 2198-2204.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, Massachusetts: Harvard University Press.
- Brickell, C. (2006). The sociological construction of gender and sexuality. *Sociological Review, 54*(1), 87-113.
- Broom, A. (2004). Prostate cancer and masculinity in Australian society: A case of stolen identity? *International Journal of Men's Health, 3*(2), 73-91.
- Buerkle, C. W. (2009). Metrosexuality can stuff it: Beef consumption as (heteromasculine) fortification. *Text and Performance Quarterly, 29*(1), 77 - 93.
- Burns, S. M., & Mahalik, J. R. (2007). Understanding how masculine gender scripts may contribute to men's adjustment following treatment for prostate cancer. *American Journal of Men's Health, 1*(4), 250-261.
- Cameron, E., & Bernardes, J. (1998). Gender and disadvantage in health: Men's health for a change. *Sociology of Health & Illness, 20*(5), 673-693.

- Cancer-Research-UK. (2009). CancerStats report - The excess burden of cancer in men in the UK: Cancer Research UK.
- Carmody, J., Olendzki, B., Reed, G., Andersen, V., & Rosenzweig, P. (2008). A dietary intervention for recurrent prostate cancer after definitive primary treatment: Results of a randomized pilot trial. *Urology*, 72(6), 1324-1328.
- Chaiken, S., & Pliner, P. (1987). Women, but not men, are what they eat - the effect of meal size and gender on perceived femininity and masculinity. *Personality and Social Psychology Bulletin*, 13(2), 166-176.
- Chan, J., Holick, C., Leitzmann, M., Rimm, E., Willett, W., Stampfer, M., et al. (2006). Diet after diagnosis and the risk of prostate cancer progression, recurrence, and death (United States). *Cancer Causes and Control*, 17(2), 199-208.
- Chapple, A., & Ziebland, S. (2002). Prostate cancer: Embodied experience and perceptions of masculinity. *Sociology of Health & Illness*, 24(6), 820-841.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, 19(6), 829-859.
- Coups, E. J., & Ostroff, J. S. (2005). A population-based estimate of the prevalence of behavioral risk factors among adult cancer survivors and noncancer controls. *Preventive Medicine*, 40(6), 702-711.
- Courneya, K. S., Katzmarzyk, P. T., & Bacon, E. (2008). Physical activity and obesity in Canadian cancer survivors. *Cancer*, 112(11), 2475-2482.
- Courtenay, W. H. (2000a). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine*, 50(10), 1385-1401.
- Courtenay, W. H. (2000b). Engendering health: A social constructionist examination of men's health beliefs and behaviours. *Psychology of Men and Masculinity*, 1(1), 4-15.
- Courtenay, W. H. (2004). Making health manly: Social marketing and men's health. *The Journal of Men's Health & Gender*, 1(2-3), 275-276.

- Demark-Wahnefried, W. (2007). Dietary intervention in the management of prostate cancer. *Current Opinion in Urology*, 17(3), 168-174.
- Demark-Wahnefried, W., Aziz, N. M., Rowland, J. H., & Pinto, B. M. (2005). Riding the crest of the teachable moment: Promoting long-term health after the diagnosis of cancer. *Journal of Clinical Oncology*, 23(24), 5814-5830.
- Demark-Wahnefried, W., Clipp, E. C., Lipkus, I. M., Lobach, D., Snyder, D. C., Sloane, R., et al. (2007). Main outcomes of the FRESH START trial: A sequentially tailored, diet and exercise mailed print Intervention among breast and prostate cancer survivors. *Journal of Clinical Oncology*, 25(19), 2709-2718.
- Demark-Wahnefried, W., Peterson, B., McBride, C., Lipkus, I., & Clipp, E. (2000). Current health behaviors and readiness to pursue life-style changes among men and women diagnosed with early stage prostate and breast carcinomas. *Cancer*, 88(3), 674-684.
- Deutsch, J. (2005). "Please pass the chicken tits": Rethinking men and cooking at an urban firehouse. *Food & Foodways*, 13(1/2), 91-114.
- DeVault, M. L. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
- Devine, C. M. (2005). A life course perspective: Understanding food choices in time, social location, and history. *Journal of Nutrition Education and Behavior*, 37(3), 121-128.
- Dewell, A., Weidner, G., Sumner, M. D., Chi, C. S., & Ornish, D. (2008). A very-low-fat vegan diet increases intake of protective dietary factors and decreases intake of pathogenic dietary factors. *Journal of the American Dietetic Association*, 108(2), 347-356.
- Dodson, D. C. (2007). Men's health compared with women's health in the 21st century USA. *The Journal of Men's Health & Gender*, 4(2), 121-123.
- Donaldson, M. (1993). What is hegemonic masculinity? *Theory and Society*, 22(5), 643-657.
- Drummond, M., & Smith, J. (2006). Ageing men's understanding of nutrition: Implications for health. *The Journal of Men's Health & Gender*, 3(1), 56-60.
- Dumbrell, S., & Mathai, D. (2008). Getting young men to eat more fruit and vegetables: A qualitative investigation. *Health Promotion Journal of Australia*, 19(3), 216-221.

- Frattaroli, J., Weidner, G., Dnistrian, A. M., Kemp, C., Daubenmier, J. J., Marlin, R. O., et al. (2008). Clinical events in prostate cancer lifestyle trial: Results from two years of follow-up. *Urology*, *72*(6), 1319-1323.
- Freedland, S. J., & Aronson, W. J. (2009). Dietary intervention strategies to modulate prostate cancer risk and prognosis. *Current Opinion in Urology*, *19*(3), 263-267.
- Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: A conceptual model of the process. *Appetite*, *26*(3), 247-265.
- Galdas, P. M., Cheater, F., & Marshall, P. (2005). Men and health help-seeking behaviour: Literature review. *Journal of Advanced Nursing*, *49*(6), 616-623.
- Garriguet, D. (2006). Overview of Canadians' eating habits. Nutrition: Findings from the Canadian Community Health Survey 2004. *Statistics Canada, Catalogue no. 82-620-MIE*(No. 2).
- Gedrich, K. (2003). Determinants of nutritional behaviour: A multitude of levers for successful intervention? *Appetite*, *41*(3), 231-238.
- Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine*, *62*(2), 387-395.
- Grant, W. B. (2004). A multicountry ecologic study of risk and risk reduction factors for prostate cancer mortality. *European Journal of Urology*, *45*(3), 271-279.
- Harnack, L., Story, M., Martinson, B., Neumark-Sztainer, D., & Stang, J. (1998). Guess who's cooking? The role of men in meal planning, shopping, and preparation in US families. *Journal of the American Dietetic Association*, *98*(9), 995-1000.
- Helgeson, V. S., Novak, S. A., Lepore, S. J., & Eton, D. T. (2004). Spouse social control efforts: Relations to health behavior and well-being among men with prostate cancer. *Journal of Social and Personal Relationships*, *21*(1), 53-68.
- Henson, S., Gregory, S., Hamilton, M., & Walker, A. (1998). Food choice and diet change within the family setting. In A. Murcott (Ed.), *The nation's diet: The social science of food choice*. New York: Addison Wesley Longman.

- Hollows, J. (2002). The bachelor dinner: Masculinity, class and cooking in Playboy, 1953-1961. *Continuum: Journal of Media & Cultural Studies*, 16(2), 143-155.
- Hollows, J. (2003). Oliver's twist: Leisure, labour and domestic masculinity in the Naked Chef. *International Journal of Cultural Studies*, 6(2), 229-248.
- Holmes, T. H., & Gates, G. E. (2003). Influences on fruit, vegetable and grain intake of older men. *Journal of Nutrition for the Elderly*, 22(3), 43-61.
- Hopfgarten, T., Adolfsson, J., Henningsohn, L., Onelov, E., & Steineck, G. (2006). The choice between a therapy-induced long-term symptom and shortened survival due to prostate cancer. *European Urology*, 50(2), 280-289.
- Jemal, A., Siegel, R., Ward, E., Hao, Y., Xu, J., & Thun, M. J. (2009). Cancer Statistics, 2009. *CA: A Cancer Journal for Clinicians*, 59(4), 225-249.
- Jensen, K. O. D., & Holm, L. (1999). Preferences, quantities and concerns: Socio-cultural perspectives on the gendered consumption of foods. *European Journal of Clinical Nutrition*, 53(5), 351-359.
- Johnston, C. S., Taylor, C. A., & Hampl, J. S. (2000). More Americans Are Eating "5 A Day" but Intakes of Dark Green and Cruciferous Vegetables Remain Low. *Journal of Nutrition*, 130(12), 3063-3067.
- Jones, L. W., & Demark-Wahnefried, W. (2006). Diet, exercise, and complementary therapies after primary treatment for cancer. *The Lancet Oncology*, 7(12), 1017-1026.
- Julier, A., & Lindenfeld, L. (2005). Mapping men onto the menu: Masculinities and food. *Food & Foodways*, 13(1/2), 1-16.
- Keith, P. M., & Schafer, R. B. (1997). Correlates of dietary change among younger and older men. *Journal of Nutrition For the Elderly*, 16(3), 33-46.
- Keller, H. H., Gibbs, A., Wong, S., Vanderkooy, P., & Hedley, M. (2004). Men can cook! *Journal of Nutrition For the Elderly*, 24(1), 71-87.
- Kiss, A., & Meryn, S. (2001). Effect of sex and gender on psychosocial aspects of prostate and breast cancer. *BMJ: British Medical Journal*, 323(7320), 1055.

- Kullberg, K., Aberg, A. C., Bjorklund, A., Ekblad, J., & Sidenvall, B. (2008). Daily eating events among co-living and single-living diseased older men. *Journal of Nutrition Health & Aging, 12*(3), 176-182.
- Lee, C., & Owens, R. G. (2002). Issues for a psychology of men's health. *Journal of Health Psychology, 7*(3), 209-217.
- Liebman, M., Propst, K., Moore, S. A., Pelican, S., Holmes, B., Wardlaw, M. K., et al. (2003). Gender differences in selected dietary intakes and eating behaviors in rural communities in Wyoming, Montana, and Idaho. *Nutrition Research, 23*(8), 991.
- Link, L. B., Thompson, S. M., Bosland, M. C., & Lumey, L. H. (2004). Adherence to a low-fat diet in men with prostate cancer. *Urology, 64*(5), 970-975.
- Lyons, A. C. (2009). Masculinities, femininities, behaviour and health. *Social and Personality Psychology Compass, 3*(4), 394-412.
- Mahalik, J. R., Burns, S. M., & Syzdek, M. (2007). Masculinity and perceived normative health behaviors as predictors of men's health behaviors. *Social Science & Medicine, 64*(11), 2201-2209.
- Manii, D., & Ammerman, D. (2008). Men and cancer: A study of the needs of male cancer patients in treatment. *Journal of Psychosocial Oncology, 26*(2), 87-102.
- Mathers, C. D., Sadana, R., Salomon, J. A., Murray, C. J., & Lopez, A. D. (2001). Healthy life expectancy in 191 countries, 1999. *The Lancet, 357*(9269), 1685-1691.
- Millen, B. E., Quatromoni, P. A., Pencina, M., Kimokoti, R., Nam, B.-H. O., Cobain, S., et al. (2005). Unique dietary patterns and chronic disease risk profiles of adult men: The Framingham nutrition studies. *Journal of the American Dietetic Association, 105*(11), 1723-1734.
- Moss, S. Z., Moss, M. S., Kilbride, J. E., & Rubinstein, R. L. (2007). Frail men's perspectives on food and eating. *Journal of Aging Studies, 21*(4), 314-324.
- Moynihan, C. (1998). Theories in health care and research - Theories of masculinity. *British Medical Journal, 317*(7165), 1072-1075.

- Moynihan, C. (2002). Men, women, gender and cancer. *European Journal of Cancer Care*, 11(3), 166-172.
- Navon, L., & Morag, A. (2003). Advanced prostate cancer patients' relationships with their spouses following hormonal therapy. *European Journal of Oncology Nursing*, 7(2), 73-80.
- Nguyen, J. Y., Major, J. M., Knott, C. J., Freeman, K. M., Downs, T. M., & Saxe, G. A. (2006). Adoption of a plant-based diet by patients with recurrent prostate cancer. *Integrative Cancer Therapies*, 5(3), 214-223.
- Nicholas, D. R. (2000). Men, masculinity, and cancer: Risk-factor behaviors, early detection, and psychosocial adaptation. *Journal of American College Health*, 49(1), 27-33.
- O'Brien, R., Hunt, K., & Hart, G. (2005). 'It's caveman stuff, but that is to a certain extent how guys still operate': Men's accounts of masculinity and help seeking. *Social Science & Medicine*, 61(3), 503-516.
- Oakes, M. E., & Slotterback, C. S. (2001). What's in a name? A comparison of men's and women's judgements about food names and their nutrient contents. *Appetite*, 36(1), 29-40.
- Oliffe, J. L. (2004). Anglo-Australian masculinities and trans rectal ultrasound prostate biopsy(TRUS-Bx): Connections and collisions. *International Journal of Men's Health*, 3(1), 43-60.
- Oliffe, J. L. (2005). Constructions of masculinity following prostatectomy-induced impotence. *Social Science & Medicine*, 60(10), 2249-2259.
- Oliffe, J. L. (2009). Health behaviors, prostate cancer, and masculinities: A life course perspective. *Men and Masculinities*, 11(3), 346-366.
- Oliffe, J. L., Davison, B. J., Pickles, T., & Mroz, L. (2009). The self-management of uncertainty among men undertaking active surveillance for low-risk prostate cancer. *Qualitative Health Research*, 19(4), 432-443.

- Oliffe, J. L., & Thorne, S. (2007). Men, masculinities, and prostate cancer: Australian and Canadian patient perspectives of communication with male physicians. *Qualitative Health Research, 17*(2), 149-161.
- Oliffe, J.L., Grewal, S., Bottorff, J.L., Dhesi, J., Kang, H.B.K, Ward, A., & Hislop, T. G. (2010). Masculinities, diet and senior Punjabi Sikh immigrant men: Food for Western thought? *Sociology of Health & Illness, 32*(5), 761-776.
- Ornish, D., Magbanua, M. J. M., Weidner, G., Weinberg, V., Kemp, C., Green, C., et al. (2008). Changes in prostate gene expression in men undergoing an intensive nutrition and lifestyle intervention. *Proceedings of the National Academy of Sciences, 105*(24), 8369-8374.
- Ornish, D., Weidner, G., Fair, W. R., Marlin, R., Pettengill, E. B., Raisin, C. J., et al. (2005). Intensive lifestyle changes may affect the progression of prostate cancer. *Journal of Urology, 174*(3), 1065-1070.
- Palmer, M. H., Fogarty, L. A., Somerfield, M. R., & Powel, L. L. (2003). Incontinence after prostatectomy: Coping with incontinence after prostate cancer surgery. *Oncology Nursing Forum, 30*(2), 229-238.
- Parasecoli, F. (2005). Feeding hard bodies: Food and masculinities in men's fitness magazines. *Food & Foodways, 13*(1/2), 17-37.
- Parsons, J. K., Newman, V., Mohler, J. L., Pierce, J. P., Paskett, E., & Marshall, J. (2008). The men's Eating and Living (MEAL) Study: A cancer and leukemia group B pilot trial of dietary intervention for the treatment of prostate cancer. *Urology, 72*(3), 633-637.
- Patterson, R. E., Neuhouser, M. L., Hedderson, M. M., Schwartz, S. M., Standish, L. J., & Bowen, D. J. (2003). Changes in diet, physical activity, and supplement use among adults diagnosed with cancer. *Journal of the American Dietetic Association, 103*(3), 323-328.
- Phillips, S. P. (2006). Risky business: Explaining the gender gap in longevity. *The Journal of Men's Health & Gender, 3*(1), 43-46.
- Pinto, B. M., & Trunzo, J. J. (2005). Health behaviors during and after a cancer diagnosis. *Cancer, 104*(S11), 2614-2623.

- Ponholzer, A., Struhal, G., & Madersbacher, S. (2003). Frequent use of complementary medicine by prostate cancer patients. *European Urology*, 43(6), 604-608.
- Prattala, R., Paalanen, L., Grinberga, D., Helasoja, V., Kasmel, A., & Petkeviciene, J. (2007). Gender differences in the consumption of meat, fruit and vegetables are similar in Finland and the Baltic countries. *European Journal of Public Health*, 17(5), 520-525.
- Raine, K. D. (2005). Determinants of healthy eating in Canada: An overview and synthesis. *Canadian Journal of Public Health-Revue Canadienne De Sante Publique*, 96(Suppl 3), S8-S14.
- Rappoport, L., Peters, G. R., Downey, R., Mccann, T., & Huffcorzine, L. (1993). Gender and age-differences in food cognition. *Appetite*, 20(1), 33-52.
- Robertson, L., Douglas, F., Ludbrook, A., Reid, G., & van Teijlingen, E. (2008). What works with men? A systematic review of health promoting interventions targeting men. *BMC Health Services Research*, 8(141), DOI: 10.1186/1472-6963-1188-1141.
- Robertson, S. (2007). *Understanding men and health: Masculinities, identity, and well-being*. Maidenhead ; New York: McGraw Hill/Open University Press.
- Roos, E., Lahelma, E., Virtanen, M., Prattala, R., & Pietinen, P. (1998). Gender, socioeconomic status and family status as determinants of food behaviour. *Social Science & Medicine*, 46(12), 1519-1529.
- Roos, G., & Wandel, M. (2005). "I eat because I'm hungry, because it's good, and to become full": Everyday eating voiced by male carpenters, drivers, and engineers in contemporary Oslo. *Food & Foodways*, 13(1/2), 169-180.
- Sabo, D. (2000). Men's health studies: Origins and trends. *Journal of American College Health*, 49(3), 133-142.
- Saxe, G. A., Major, J. M., Nguyen, J. Y., Freeman, K. M., Downs, T. M., & Salem, C. E. (2006). Potential attenuation of disease progression in recurrent prostate cancer with plant-based diet and stress reduction. *Integrative Cancer Therapies*, 5(3), 206-213.
- Schafer, R. B., Schafer, E., Dunbar, M., & Keith, P. M. (1999). Marital food interaction and dietary behavior. *Social Science & Medicine*, 48(6), 787-796.

- Schofield, T., Connell, R. W., Walker, L., Wood, J. F., & Butland, D. L. (2000). Understanding men's health and illness: A gender-relations approach to policy, research, and practice. *Journal of American College Health, 48*(6), 247-256.
- Sellaeg, K., & Chapman, G. E. (2008). Masculinity and food ideals of men who live alone. *Appetite, 51*(1), 120-128.
- Sloan, C., Gough, B., & Conner, M. (2009). Healthy masculinities? How ostensibly healthy men talk about lifestyle, health and gender. *Psychology & Health, iFirst*(1), 1 - 21 DOI 10.1080/08870440902883204.
- Smart, L. R., & Bisogni, C. A. (2001). Personal food systems of male college hockey players. *Appetite, 37*(1), 57-70.
- Sobal, J. (2005). Men, meat and marriage: Models of masculinity. *Food & Foodways, 13*(1/2), 135-158.
- Statistics Canada (2010). Deaths 2007. Catalogue no. 84F0211X retrieved from <http://www.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=84F0211X&lang=eng>
- Stibbe, A. (2004). Health and the social construction of masculinity in Men's Health magazine. *Men & Masculinities, 7*(1), 31-51.
- Street, R. L. (2002). Gender differences in health care provider-patient communication: Are they due to style, stereotypes, or accommodation? *Patient Education and Counseling, 48*(3), 201-206.
- Stull, V. B., Snyder, D. C., & Demark-Wahnefried, W. (2007). Lifestyle interventions in cancer survivors: Designing programs that meet the needs of this vulnerable and growing population. *Journal of Nutrition, 137*(1), 243S-248S.
- Turrell, G. (1997). Determinants of gender differences in dietary behavior. *Nutrition Research, 17*(7), 1105-1120.
- Van Patten, C. L., de Boer, J. G., & Tomlinson Guns, E. S. (2008). Diet and dietary supplement intervention trials for the prevention of prostate cancer recurrence: A review of the randomized controlled trial evidence. *The Journal of Urology, 180*(6), 2314-2322.

- Wall, D., & Kristjanson, L. (2005). Men, culture and hegemonic masculinity: Understanding the experience of prostate cancer. *Nursing Inquiry, 12*(2), 87-97.
- Wardle, J., Haase, A. M., Steptoe, A., Nillapun, M., Jonwutiwes, K., & Bellisle, F. (2004). Gender differences in food choice: The contribution of health beliefs and dieting. *Annals of Behavioral Medicine, 27*(2), 107-116.
- Wilkinson, A. V., Vasudevan, V., Honn, S. E., Spitz, M. R., & Chamberlain, R. M. (2009). Sociodemographic characteristics, health beliefs, and the accuracy of cancer knowledge. *Journal of Cancer Education, 24*(1), 58-64.
- Wright, J., O'Flynn, G., & Macdonald, D. (2006). Being fit and looking healthy: Young women's and men's constructions of health and fitness. *Sex Roles, 54*(9-10), 707-716.

## CHAPTER 3.

# PROSTATE CANCER, MASCULINITY AND FOOD: RATIONALES FOR PERCEIVED DIET CHANGE<sup>2</sup>

### Introduction

Prostate cancer survivorship and lifestyle issues have gained increased attention in Western countries as more men are being diagnosed and living longer with the disease (Jemal, Siegel, Ward, Hao, Xu, & Thun, 2009). The role of nutrition in prostate cancer prevention and recovery has attracted interest in recent decades due to observations that typical Western eating patterns, high in meat and fat while low in fruit and vegetable consumption, are associated with high incidence and mortality (Sonn, Aronson, & Litwin, 2005). Dietary modifications that decrease meat and fat intake and increase fruit and vegetable consumption can reduce prostate specific antigen (PSA) markers of disease progression in some men with low-grade prostate cancer (Carmody, Olendzki, Reed, Andersen, & Rosenzweig, 2008; Nguyen, Major, Knott, Freeman, Downs, & Saxe, 2006; Ornish, Weidner, Fair, Marlin, Pettengill, Raisin et al., 2005). Although PSA testing is a crude measure of prostate cancer progression, emergent evidence suggests that diet might be a valuable adjunct to conventional treatment(s) for some men with low-grade disease. Reviews of evidence for the protective and therapeutic nature of low-fat plant-based diets and controlling overweight and obesity to improve prostate cancer recovery are also promising (Berkow, Barnard, Saxe, & Ankerberg-Nobis, 2007). Although more definitive studies are needed, many researchers and care providers have argued that the preliminary evidence is compelling enough that these diet factors should be included in prostate cancer

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nutrition care guidelines (Demark-Wahnefried, 2007). As well, healthy eating recommendations have been made for prostate cancer patients to prevent or manage common co-morbidities in older men, such as cardiovascular disease and diabetes (Moyad, 2004).

As a result of these recommendations and widespread media reports linking diet and prostate cancer management, men and their caregivers have become increasingly interested in nutrition education and dietary modifications (Demark-Wahnefried, Peterson, McBride, Lipkus, & Clipp, 2000). As uptake of screening increases and definitive treatments improve, the number of men diagnosed with and surviving prostate cancer will increase. This will further increase demand for diet information and nutritional services. Therefore health care providers need to make accessible effective nutrition information and services to assist men with prostate cancer to improve their diets. Yet research reveals that few men diagnosed with prostate cancer actually make significant or long-lasting diet changes (Patterson, Neuhouser, Hedderson, Schwartz, Standish, & Bowen, 2003). Additionally, some patients choose to sacrifice potential increases in survival time rather than adopt healthier eating patterns (Hopfgarten, Adolfsson, Henningsohn, Onelov, & Steineck, 2006). Together these observations point to the need to better understand how men who have prostate cancer make food choices; such understandings are required to improve the effectiveness of nutrition education or dietary counselling programs.

Health behaviour theories attempt to explain why individuals make food choices by examining complex interactions among various health determinants (Glanz, Rimer, & Lewis, 2002). Behavioural determinants of food choice have been conceptualized as individual (physiological, personal and behavioural) and collective (social, cultural, environmental and political) (Furst, Connors, Bisogni, Sobal, & Falk, 1996; Raine, 2005; Wetter, Goldberg, King, Sigman-Grant, Baer, Crayton et al., 2001). Although gender has been depicted as a health

determinant, the ways gender influences diet have not been fully explored in food choice models. Much of the research on gender and food has focused on household food provision and women's food choices (DeVault, 1991), but studies focused on gender and men's food choice processes are scarce. One way gender may influence food choice is by shaping men's food ideals including dietary understandings and healthy eating perceptions; however, little is known about how this might occur (Paquette, 2005).

Masculinity theory provides a framework for better understanding men's health behaviours, including their dietary knowledge, perceptions, attitudes and food practices. Gender is conceptualized as socially constructed and performed through people's daily activities and social interactions and thus men and women demonstrate masculinities or femininities respectively by embodying and enacting idealized or hegemonic 'manly' or 'womanly' practices (Connell, 1995; Connell & Messerschmidt, 2005). This can be problematic for men's health because many health promotion practices, including nutritional self-care, are perceived as feminine and as a result men might signify their alignment to hegemonic masculinity by avoiding these and engaging in less healthy 'manly' practices (Courtenay, 2000). Few men fully embody hegemonic masculinity and hence multiple masculinities emerge in and around masculine ideals and are shaped by social context (including culture, ethnicity, race, economics and/or sexual orientation). Thus multiple, complex and sometimes contradictory, masculine health and food ideals are found in contemporary Western society.

The few studies that have examined how social constructions of masculinity might be implicated in men's health and dietary behaviours have reported typical masculine ways of describing food as fuel or a necessity to satisfy hunger and ensure bodily performance (Roos, Prattala, & Koski, 2001; Smart & Bisogni, 2001). A minority of men expressed more feminine

diet evaluations such as caring about food and health; however food as health promotion remained framed as women's concerns (Roos & Wandel, 2005; Sellaeg & Chapman, 2008). Cynicism about healthy eating messages and an overall perception of healthy food as inferior and unsatisfying are barriers to healthy eating for some men (Gough & Conner, 2006). Additionally, some older men's lack of concern about diet and health was attributed to low health-literacy skills, lack of interest in self-care and reliance on female partners for health care (Drummond & Smith, 2006).

Much of this research has focused on healthy and younger men, although recently the importance of maintaining masculine identity in older frail men was implicated in shaping their self-care activities (Moss, Moss, Kilbride, & Rubinstein, 2007). However, no published studies have addressed men's perceptions of food and health after a health crisis, and specifically in the context of prostate cancer. Accordingly, the aim of this study was to describe men's perceptions of their diets and diet changes in response to their prostate cancer, and illuminate the reasons underpinning diet changes (or lack thereof) in their recovery and self-care.

## **Methods**

The qualitative research design and methodology employed in this study was guided by grounded theory methods, including concurrent data collection and analysis and the use of inductive reasoning to generate theoretical explanations about the processes by which men make diet-related decisions (Strauss & Corbin, 1998). The research utilizes a social constructivist perspective whereby people are understood to create meaning about the world through dynamic social processes. In this sense knowledge and understandings about food, eating and health are constructed through daily social interactions and reproduced through food practices. Likewise, the product of interpretive research about people's food perceptions and practices presented here

is understood to be co-created by researcher and participant as described by Charmaz (2006) in her approach to grounded theory methods. Ethics committees approved all procedures and institutional ethical guidelines were followed (see Appendix 2 - ethics certificate).

Study participants were recruited by distributing notices in a urology clinic in a western Canadian hospital, prostate cancer support groups (PCSGs), and prostate cancer forums (see Appendices 3 and 4 - recruitment materials). Eligible participants had been diagnosed with prostate cancer for no longer than five years, were living in non-institutional settings with independent household food provision, and were fluent in English. The sample was primarily a convenience sample, but when possible, purposive sampling was used to select participants from a variety of social backgrounds (e.g., different education levels and incomes), and prostate cancer experiences (e.g., different cancer grades and stages). Concurrently, using theoretical sampling, interview questions were adjusted as data collection progressed to explore the dimensions of emerging themes. For example, I explored the domain ‘orientation towards prostate cancer’ by seeking informants with differing cancer severity and by asking probing questions about how they interpreted the nature of their cancer (e.g., as cured or managed) and how this influenced their food perceptions and practices. The final sample included 14 Anglo-Canadian men who lived with female partners and ranged in age from 48 to 78. As shown in Table 3.1, most were retired, college educated and middle-class and had been diagnosed with low-risk prostate cancer for which a variety of treatments were undertaken.

<b>Characteristic</b>	<b>Frequency</b>	<b>Characteristic</b>	<b>Frequency</b>
<b>Age (mean 66)</b>		<b>Disease Risk (Self-reported)**</b>	
<50	1	Low	8
50-59	2	Moderate	3
60-69	6	High	3
70-79	5	<b>Months since Diagnosis</b>	
<b>Work Status</b>		<12	4
Retired	9	12-23	5
Part-time	2	24-35	2
Full-time	3	36-47	1
<b>Treatments*</b>		48-60	2
ADT & EBR	3	<b>Months since First Treatment</b>	
ADT & RP	3	<12	6
ADT & RP & EBR	1	12-23	0
AS	3	24-35	1
AS (BT pending)	1	36-47	1
HIFU	1	48-60	2
RP	2	Untreated	4

\*RP = radical prostatectomy; EBT = external beam radiation;  
AS = active surveillance; ADT = androgen deprivation therapy; BT = brachytherapy;  
HIFU = high intensity focused ultrasound  
\*\*Estimated from Gleason and Stage scores when available

Table 3.1 Summary of participant characteristics

### **Data Collection**

Data were collected through individual, private, semi-structured, in-depth interviews lasting 60 to 90 minutes. Prior to interviews, participants provided informed consent and were given ‘food journal’ diaries to record eating events over one week (see Appendix 5 – consent form, Appendix 6 – interview guide, and Appendix 7 – food journal template). Food journals are useful in eliciting discussions about food choices and illuminating tacit diet understandings (Ristovski-Slijepcevic & Chapman, 2005; Sellaeg & Chapman, 2008). Demographic information, disease characteristics and treatment histories were also collected (see Appendix 8 –

demographic form) and field notes were taken (see Appendix 9 – field notes form). The candidate (LWM) conducted all interviews in the men’s homes and was sensitive to and prepared for the unique challenges facing researchers when interviewing male participants about health and illness (Oliffe & Mróz, 2005). The interviewer was a man in his 40s who presented himself as a nutrition student, and as a competent, informed learner seeking the unique perceptions of the participants without judgment, rather than as a health or nutrition ‘expert’. Interview questions addressed issues including beliefs about the role of diet in health and prostate cancer prevention and recovery, healthy eating understandings and practices, and the impact of prostate cancer on diet. Some questions were personalized, guided by individual entries from the participant’s food journal, which allowed for more detailed discussion about specific food choices. Interviews were digitally recorded, transcribed verbatim and checked by the interviewer for accuracy. In appreciation of participants’ contribution to the research, they were given a \$30 honorarium.

### **Data Analysis**

Interview transcripts were conceptually coded by the interviewer, whereby emergent concepts and themes were labelled with identifying codes (Charmaz, 2006). This was done using Atlas/ti<sup>TM</sup> software, a program designed to facilitate organising, storing and retrieving data (Weitzman & Miles, 1995). Employing constant comparison analysis, open codes were grouped under descriptive abstract categories and emerging themes were defined in memos (Hallberg, 2006). Coding and analysis was discussed and developed at investigative team meetings (see Appendix 10 – coding schedule example). Through this iterative process major concepts and themes were identified, summarized and compared to the interview data to ensure theoretical accuracy. As data collection and analysis proceeded, theoretical sampling techniques were used to ensure that information obtained from the participants afforded rich descriptions of emergent

themes (Strauss & Corbin, 1998). Trustworthiness was enhanced through data triangulation (interviews, food journals and field notes).

## Results

The themes that emerged regarding participants’ understandings of diet, health, self-care and the role of diet in prostate cancer care underpin each participant’s personal rationale for changing or not changing his diet on an on-going basis after diagnosis. Participants described various dietary patterns, which reflected these understandings and represented varied degrees of perceived diet change (or lack thereof). This is illustrated in the ‘Constructing rationales for perceived diet change’ framework (see Figure 3.1).

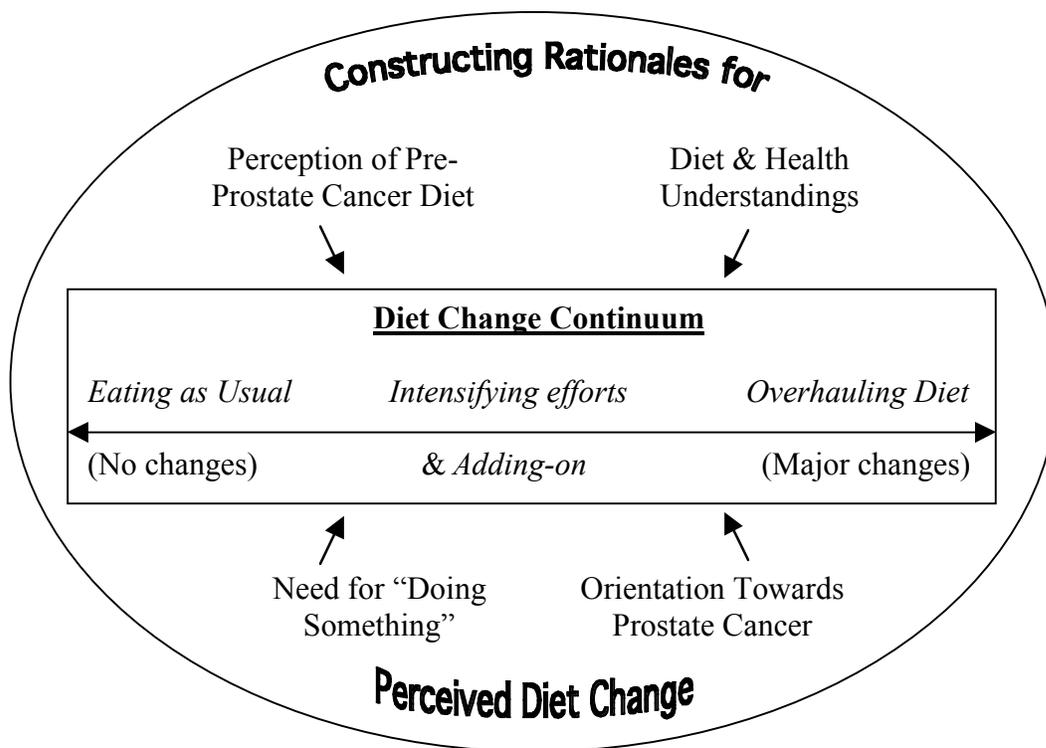


Figure 3.1 Constructing Rationales for Perceived Diet Change.

In this model diet change is conceptualized as existing along a ‘diet change continuum,’ ranging from no changes to major changes, that forms the core of the framework. Although a few men reported making no significant or on-going changes and were ‘eating as usual’ at the time of their interview, most participants described making minor diet changes (labelled ‘intensifying efforts’ and/or ‘adding on’) and several men described making major changes (labelled ‘overhauling diets’). Participants were grouped in distinct clusters along the diet change continuum but their reported diet behaviour was variable and sometimes overlapped clusters. However, analysis of the explanations men provided for their food choices revealed four main domains that best informed diet cluster patterns. These were grouped under the overarching theme ‘constructing rationales for perceived diet change’ and labelled: a) perception of pre-prostate cancer diet, b) diet and health understandings, c) orientation towards prostate cancer, and d) need for ‘doing something’ about their cancer. Each domain had a range of dimensions, and domains were evaluated and combined in complex ways by the men. The following describes each diet pattern cluster and how participants’ narratives reflected these four domains differently in their constructions of rationales for their diet pattern and perceived diet changes or lack thereof. Illustrative quotes are identified with participant labels numbered from P1 to P14. Specific participants’ characteristics including age, disease risk or treatment did not appear to inform observed dietary patterns.

### **Eating as Usual: No Diet Change**

Three men reported having made no changes or minor, temporary diet changes and at the time of interview were eating as they had before their prostate cancer diagnoses.

**a) Perception of pre-prostate cancer diet: “Already had a healthy diet.”** The men who were ‘eating as usual’ perceived they already had a healthy diet before they were diagnosed,

and because eating healthily had not prevented their prostate cancer, it was thought to be unimportant in their recovery. One man commented that “I’ve always eaten healthily and I will continue to eat healthily but I’m not expecting it to cure cancer” (P2). Another participant made a similar comment, saying: “I’m eating the way I always ate... All the stuff that’s supposed to keep you from getting prostate cancer, I can’t eat enough of that stuff... I guess I’d just eat the way I was” (P7).

**b) Diet and health understandings: Diet does not affect prostate cancer recovery.**

Although participants acknowledged the importance of diet in general health, these men did not believe that diet change could influence their prostate cancer because of its idiopathic nature. As one man said, “It’s not a disease that once you’ve got it diet’s going to do much for you” (P2). They discounted scientific evidence connecting diet with prostate cancer and believed diet change was unlikely to assist them in their recovery or survival. As one man asserted, when it came to diet “there’s no data on prostate cancer, there’s absolutely no reliable information about what works and what doesn’t” (P6). Another man elaborated that although nutrition experts might have some evidence, he mistrusted them and resisted diet changes.

Oh, I don’t think the evidence is in. I mean I’m not saying that they don’t have evidence that certain foods are good ... I’m not saying that they don’t know that, but I don’t believe it. I mean I think that so called cures occur occasionally for reasons, which people don’t really understand, and food I don’t think has much to do with it. (P2)

**c) Orientation towards prostate cancer: “Won the war”.** Positioning themselves as having effectively managed their prostate cancer through biomedical treatments permitted these men to continue ‘eating as usual’ or as one participant suggested about diet “you might as well go out and do what you want” (P2). This participant further refuted the need for diet change

quipping that the benign nature and slow growth of prostate cancer would probably result in him dying of something other than prostate cancer.

Another man made a few minor diet changes during medical treatments but in presuming he was cured he abandoned them after treatments were completed. Returning to pre-cancer eating habits marked his return to a normal life and re-engagement with physical activities, having ‘won the fight’ against cancer. His use of a war and victory metaphor to describe his treatment(s) revealed the bracketing of his prostate cancer and a desire to erase the treatment challenges and focus on the hard-fought win: “I took the all out war approach to cancer and it looks like we won and so now we have peace and I’m not going to make my life unpleasant” (P6). Returning to pre-cancer eating patterns designed primarily for weight control as part of his athletic training and performance marked prostate cancer as a challenging but transitory time now passed.

**d) Need for doing something: Already doing enough.** Only one man in this group expressed a need for ‘doing something’ about his prostate cancer during his “all out war approach” (P6); however that need ended with his treatments. ‘Eating as usual’ was more important to him than eating for prostate cancer in maintaining a normal life after he had determined that the war was over. Likewise for the other men who were ‘eating as usual’, undergoing conventional treatments and maintaining their previously healthy diets and lifestyles satisfied their need to be doing something, because they decided that they were already doing enough about their cancer.

### **‘Intensifying Efforts’ and/or ‘Adding-on’: Minor Diet Change**

Most participants made minor diet changes in response to prostate cancer and were grouped together as ‘intensifying efforts’ in healthy eating and/or ‘adding-on’ to their usual diets.

The most common changes were ‘adding-on’ natural health products including lycopene, nutritional supplements including selenium, and ‘prostate friendly’ foods including soy products, tomatoes or broccoli, to their regular diets. Alternatively, ‘intensifying efforts’ were general, modest, healthy eating improvements including eating more vegetables and less red meat. Changes were typically viewed as minor, easily made and complementing their previously held healthy eating knowledge and beliefs. Most changes were integrated as part of broader health improvements and described in vague, general terms that signified eating more healthily such as “eating more carefully,” “being stricter about diet” and “paying more attention to diet”. Because most men who engaged in ‘adding-on’ to their diets also began ‘intensifying efforts’ these patterns are subsequently discussed together.

**a) Perception of pre-prostate cancer diet: Healthy, but could ‘do better’.** Similar to those ‘eating as usual’, many participants in this group perceived they already had healthy diets before their diagnoses and that major changes were not warranted. However, they differed by conceding that their diets needed some improvement and used this as impetus for minor changes. They framed diet changes as a personal responsibility or something that they ‘should’ do to improve their health. For example, one man explained, “I’ve always had a good diet but I’ve got to be more strict about it since the prostate thing” (P8). Learning about prostate-healthy eating confirmed another man’s previously held beliefs about diet and his desire to “just be conscious about what I eat” (P5). ‘Adding on’ and ‘intensifying efforts’ were both parts of his recovery plan:

I'm just doing things a little bit more intensely, and maybe varying or supplementing what I used to eat with things such as blueberries and sardines and fish. That's really I think the only, the best way to say it is that I'm intensifying, always trying on a healthy diet, but now I'm just doing it a little bit more intensely and more consciously. (P5)

**b) Diet and health understandings: Diet might affect prostate cancer.** Confident of diet's role in good health, participants in this group eagerly recounted prostate-specific diet discourses heard from support groups, public forums and the media. Some asserted that specific foods and supplements might suppress prostate cancer, and potentially be more effective than traditional medicine. One man snacked on walnuts and almonds believing they were "more anti-cancer fighting" than peanuts and "the more you can get into that, I think it's far better for you than all the medicine they can ever shove into you" (P4). Others began taking supplements and eating certain vegetables because of hearing that they were beneficial for prostate cancer. This was often coupled with reducing red-meat because they had heard that excessive meat consumption was harmful for men with prostate cancer.

Despite these diet changes, participants subsequently revealed uncertainty about the therapeutic value, seemingly contradicting some previously stated beliefs. For example several men drank soymilk for its curative properties but admitted they were unsure it was effective. Despite hoping that diet change might help, most participants in this group admitted they did not fully understand potential connections between diet and prostate cancer. They cited anecdotal evidence about prostate friendly supplements and foods and, although uncertain, expressed "oh well, maybe try that" (P9) as long as it wasn't too expensive, difficult to prepare or find, or potentially harmful. When asked if they thought diet change might directly help with prostate cancer recovery a common response was "I don't know but I'm going to try" (P5). Uncertainty

about dietary influence on cancer was juxtaposed with an acceptance that diet influences other health concerns including heart disease, diabetes or high cholesterol. One man grappled with differentiating how diet connected with various diseases, but remained certain that the prostate gland was less directly affected:

I think diet is important. Yeah, somehow or other there's something that impacts on your system. Your cholesterol in particular, I'm sure diet impacts on that. I can't say about the prostate though. You know, it's basically just sitting there. I don't think it gets any, you know, nutrition. I mean obviously it does or else it wouldn't be still kicking but I can't think of any nutrition in particular that would help it. (P9)

Changes initially made to fight prostate cancer were ultimately framed as worthwhile because they were beneficial for general health, and there was still a possibility that they would provide a “better shot” at prostate cancer recovery. Although participants revealed uncertainty regarding the impact of diet on prostate cancer, they were willing to consider scientific evidence for potential benefits, even if they remained unconvinced of its efficacy.

**c) Orientation towards prostate cancer: Living with prostate cancer.** As participants adapted to living with prostate cancer, these men positioned cancer as a chronic condition. This was reflected in how they incorporated diet change into their daily lives as part of coping with having prostate cancer. Despite concluding he was cured of prostate cancer after his radical prostatectomy, one man hoped minor diet changes would benefit his general health and recovery. His desire for a good retirement included eating for pleasure; however, the constant threat of recurrence kept him attentive to his diet and he was prepared to intensify his diet change efforts in the future if needed:

I'm not there trying to increase my chances of surviving prostate cancer because I think that's pretty well been taken care of, if it turns out that there's a PSA shows up well then I'll probably get a little excited again and then go on, figure out what to do. But then I'll probably start learning a lot more about fine-tuning my diet or whatever, but mostly we're now kind of sort of general health ... we'd like to have a good retirement. (P14)

The fear of progression or recurrence expressed by many men was part of the uncertainty inherent to living with prostate cancer. This was mediated by the hope that diet change could assist their long-term survival, as cancer became part of their daily lives.

**d) Need for doing something: Doing something to help.** Despite their uncertainty about how diet might influence prostate cancer recovery, healthy eating changes were framed as a personal way of 'doing something' to help themselves. These men presented themselves as autonomous, capable of change and in control: "I figure, if I can do anything to help myself I'll do it, and if it's intensifying my diet, I'm going to do that" (P5).

Diet change offered participants an opportunity to self-manage the uncertainties of living with prostate cancer. This was framed as a desire to help themselves by improving their health and helping them cope with cancer. One man described how making diet changes was an obvious and perhaps default position because "what else can you do, you know, I can sweep the deck [but] it ain't going to fix my prostate cancer" (P8). Diet, exercise and a positive attitude were important parts of his self-care and helped him live with the uncertainties of having cancer by doing something to ensure his well-being.

There were limits to the amount of effort men in this group were willing to make to 'do something' in relation to diet to aid their recovery. Most men initiated and maintained minor diet changes as long as they were convenient, non-disruptive and affordable. As such, these men's changes were framed as feasible, sustainable and not requiring major shifts in eating

habits and beliefs, and were consistent with existing long-term and ongoing changes and previous patterns of self-care.

### **Overhauling Diet: Major Diet Change**

Four men perceived making comprehensive diet changes after being diagnosed with prostate cancer and began ‘overhauling’ their diets. The changes described included becoming vegetarian, eating organic and whole foods, increasing consumption of what they considered healthy foods including vegetables and decreasing consumption of unhealthy foods including processed or fast foods, and following popular diet trends including the Pritikin diet or pH balanced eating.

**a) Perception of pre-prostate cancer diet: Diet needs radical change.** Participants in this group differed from those who made no changes or minor changes, by perceiving their diets as deficient and in need of radical change to aid their recovery and healing. This involved re-evaluating previous dietary beliefs and habits and (re)engaging in self-care. One man talked about the importance of not hindering healing by eating what he perceived to be unhealthy foods and described a moment of self-discovery as he committed to cutting out unhealthy foods to assist his healing from treatment as well as recovery from prostate cancer. “Now that I’ve finished my prostate treatment, it’s like okay, now we’re going to get smart about what we’re doing about diet to be sure that we don’t adversely influence the healing by something we’re eating.” (P1). He further acknowledged that eating healthy foods as a means to maintaining health was considerably more important than eating for pleasure since his diagnosis with prostate cancer. Another participant emphasized how important and extreme his dietary beliefs and food choice modifications were by exclaiming, “If you said to me a year ago, ‘It’s a better idea to eat organic’, then I would have told you to go to hell!” (P11).

**b) Diet and health understandings: Diet affects health.** Although these diet changes might have been precipitated by their prostate cancer diagnosis, they were framed as more important for general health rather than specifically for prostate cancer. One man described how his diet improvements were intended to increase his overall health and survival: “I want to live a longer life and I want to live it well in the absence of disease. And diet is one of the few things I can do that would help” (P1). Although some changes were designed specifically for prostate cancer, the men didn’t abstract them from general health but rather described how general health improvements might aid their cancer recovery. The youngest participant, a 48-year-old man on active surveillance, enthusiastically described his self-health activities and was hopeful that changes to his diet and lifestyle would enhance his immune system, help manage his cancer and increase his chances of avoiding treatment:

So what I’ve tried to do is a combination of the recommendations for diet or specifically for prostate cancer and some are just for cancer in general. And some of it just has to do with the fact that it’s supposed to help your immune system, to make it better because there’s a belief ... that if your immune system is in tiptop shape then you can beat cancer just like you can heal from anything else. (P3)

Most of the general diet changes were designed to help participants avoid or combat other illnesses, live longer and have generally healthier lives.

**c) Orientation towards prostate cancer: “That was then, this is now”.** Whether participants developed new understandings of the role of diet in health, or returned to previously held healthy-eating beliefs, ‘overhauling diet’ represented increased engagement with self-care that the men perceived as significantly changing their eating behaviours. Although participants might have missed some aspects of their old diets including eating more meat or fast food, they often minimized this. They perceived having prostate cancer as a turning point in their lives, and

their diet changes as marking a new way of life. When asked if he was happy with his new vegetarian diet, one participant replied: “Absolutely, yeah, yeah, I’ve got no complaints. The question I continually get asked is ‘Well gee don’t you just miss that great big fat steak?’ Or whatever the case may be. Nah, under the circumstances that was then and this is now ... no, I don’t” (P10). These men were devoted to healthier diets and planned on maintaining them indefinitely. This represented a lifelong commitment to healthy eating that extended beyond prostate cancer to encompass general health.

**d) Need for doing something: “Taking custody” of health.** Like other men who made diet changes, ‘overhauling diet’ became a way of ‘doing something’ for self-health or as one man explained, having a healthy diet was “my way of being able to take some custody over the issues that I’m confronted with” (P10). ‘Overhauling diet’ was framed as a major and vital endeavour that could enhance recovery from prostate cancer and treatment-induced morbidities. One man described how he eliminated fast, processed and junk foods, which had been major parts of his diet and began choosing foods on the basis of their alkalizing effect on his body pH. Although onerous and requiring much attention, he considered this vital to his survival and when asked if these changes were difficult to maintain replied emphatically:

Well, no, because you’ve got two choices - to live or die, okay?! To be healthy or to be unhealthy. So like I’m a very - if I make my mind up, that’s what’s going to happen, come hell or high water. I get on that case and I stay on that case. (P11)

In addition to nutritional health, these diet changes were also perceived as important psychological boosts to the men’s self-care:

Because the mind-body connection is really important. Being positive about your treatment and etcetera, etcetera has a huge influence on how well your healing is going to take place. So having something, knowing that you have something you can do can have a big influence, I think. (P1)

## **Discussion**

Findings drawn from this data add to a growing body of knowledge about food choice and diet change processes by describing a diet change model specifically addressing the experiences of men with prostate cancer. Several other models have presented overviews of food choice processes for healthy adults (Falk, Bisogni, & Sobal, 1996; Furst et al., 1996; Sobal & Bisogni, 2009; Wetter et al., 2001) and diet change processes for adults faced with diet-related health crises (Falk, Bisogni, & Sobal, 2000; Janas & Bisogni, 1993); the ‘Constructing rationales for perceived diet change’ model presented here complements and expands these by focusing specifically on men’s food choices and how prostate cancer influences their dietary decision making.

The Cornell food choice research group (Furst et al., 1996; Sobal & Bisogni, 2009) conceptualized food choice as a complex process whereby life course influences shapes a person’s personal food system, which in turn helps them develop strategies to guide individual food choice events. Comprehensive and broad in scope, this model provides a useful framework for conceptualizing food choice processes of distinct groups of adults. The study findings detail how food ideals and understandings of health and nutrition were important influences on men’s food choices, and in a similar vein to Falk et al. (1996) and Sellaeg & Chapman (2008) I was able to locate a discrete sub-population using this food choice model.

Although popular and professional discourses about general benefits of diet change exist, there is a lack of standard dietary guidelines for men with prostate cancer. In the absence of

medical certainty, men interested in diet must therefore interpret and evaluate multiple dietary discourses as they contemplate their diets and potential diet changes. Consequently, this allowed me to examine the process study participants went through as they considered the possibility and necessity of diet change, and the nature and degree of any changes they were willing to make.

Other diet change models have focused on people experiencing diet-related health crises, but who had already decided to change their diets and enrolled in diet change programs. These models consequently described how, but not why, diet changes were created, managed and maintained by participants. One such model described the ‘game plans’ that hypercholesterolemic adults constructed to help them achieve their dietary goals to lower their cholesterol (Janas & Bisogni, 1993). Likewise the stages of change health behaviour framework was used to create a model that described the stages that participants in an intensive heart rehabilitation program went through as they attempted diet change (Falk et al., 2000). Participants in both of these studies differed from the current study because they were already committed to changing their diets and believed that such changes would reduce their disease risk. Consequently, the processes and rationales that they used to justify diet changes were not explored and rationales justifying not changing diets were excluded since only people who changed their diets were included in these studies.

Study findings reported here show that diet change decision making for men with prostate cancer is a complex process. Involved were multiple considerations, which were used to construct rationales for not changing or changing their diet and if warranted, to determine how any changes would be made. These considerations included participants’ pre-cancer diet perceptions, diet and health understandings, orientation towards prostate cancer, and their need to ‘do something’ for self-care. These considerations can be interpreted in view of recent

knowledge developments in the role of masculinity in men's health behaviours, which are often in stark contrast to women's health behaviours (Courtenay, 2000). For example, the current findings contrasted with those from a study on breast cancer survivors, which showed that although women's perspectives on healthy eating were related to their beliefs about relationships between diet and breast cancer (Chapman & Beagan, 2003), whether or not women changed their diets after breast cancer did not consistently relate to these beliefs (Beagan & Chapman, 2004). Unlike the men in the current study, these women did not rationalize their dietary (in)actions with cognitive beliefs. Instead, they described intricate considerations of their social, cultural, and economic context. These social, relational and contextual issues were not salient considerations for men in the current study, which suggests that gender influenced the men's rationales for diet change. This reflects individualistic and autonomous characteristics of masculinity, as well as the more self-controlled or pragmatic approach characteristic of men with regards to food (Roos & Wandel, 2005; Smart & Bisogni, 2001).

Study findings demonstrate how gender is implicated in constructing rationales for diet change (or lack thereof) through men's perceptions of relationships between food, health and prostate cancer. Varying perceptions and practices around diet, health, prostate cancer and self-care shaped participants' dietary habits, to reveal distinct dietary patterns. Differences in these patterns illustrate the complex and sometimes contradictory meanings of eating for men as they experienced prostate cancer. How participants aligned themselves with masculine dietary ideals was a salient contributor to the nature and degree of their diet changes, reflecting re-framed masculine ideals around diet and self-care and demonstrating the plurality of masculinities (Connell, 1995) implicated in how men 'do' diet.

All study participants demonstrated an interest and knowledge of healthy eating, which contrasts with traditional masculine lack of concern over diet and health promotion (Courtenay, 2000). They also articulated confidence in the importance of healthy eating for general health and well-being; however, each expressed uncertainty about the role of diet in prostate cancer recovery, regardless of perceived diet changes made (or lack thereof). This positioning reflects contradictory public discourses about the inconclusive evidence around diet, prostate cancer and survival rates (Dennis, Snetselaar, Smith, Stewart, & Robbins, 2004; Simon, 2005), conflicting 'best evidence' interim dietary guidelines (Moyad, 2006a, 2006b) and calls for more research before making specific prostate cancer diet recommendations (Meyer & Gillatt, 2002; Van Patten, de Boer, & Tomlinson Guns, 2008). Likewise, their uncertainty also reveals masculine autonomy and reflects men's disconnections from food preparation, diet and perhaps self-health, all of which limited some participants' interest in diet change activities. Despite this uncertainty some men made diet changes, the nature and degree of which depending on their pre-prostate cancer diet perceptions, orientation towards prostate cancer and need for 'doing something' for self-care.

Men who continued 'eating as usual' perceived their pre-prostate cancer diets as already healthy enough and therefore dismissed the need for diet change. Despite an interest in healthy eating, these men drew on other traditional masculine ideals of rational self-management related to their diet and health understandings, orientation towards prostate cancer and lack of need for 'doing something'. They cited a lack of evidence concerning the efficacy of diet changes for prostate cancer survival, which prevented them from considering diet changes. Linkages between diet and prostate cancer were consequently positioned by participants as tentative and fragile, and strong scepticism and cynicism emerged, similar to that identified in a study of

British men (Gough & Conner, 2006). Eating as usual and the lack of need for ‘doing something’ was also positioned as an informed and rational choice closely linked to participants’ perceptions of having ‘won the war’ against prostate cancer and a desire to return to a normal life. Similarly, a study of men undertaking active surveillance for prostate cancer revealed men’s propensity for ‘living a normal life’ as a means to avoid further stress (Oliffe, Davison, Pickles, & Mroz, 2009). The desire to return to a pre-cancer lifestyle (including diet) might explain why many men who experience prostate cancer resist long-term diet changes (Patterson et al., 2003) or are willing to sacrifice potential increased survival time rather than change their diet (Hopfgarten et al., 2006).

In contrast, the other study participants engaged in varying degrees of diet change that demonstrated varying alignment to dominant masculine ideals and the complexity and contradictions found in food related masculinities. Similar to men who did not change their diets, participants who made minor changes perceived their diets as already healthy and were also uncertain if diet changes could directly influence prostate cancer recovery, despite perceived general health benefits. However, they differed by managing their uncertainty by positioning their prostate cancer as a chronic condition requiring ongoing management and therefore expressing a need to ‘do something’ about it. They confided that they “should” improve their diets revealing both a need to ‘do something’ more for their recovery and a perceived moral responsibility for healthier eating. The ‘should syndrome’ is used to describe tension created when someone’s beliefs about healthy eating do not correspond with their actual, but less healthy, practices (Paisley, Sheeshka, & Daly, 2001). This tension is exacerbated by the contradictions between masculine norms and personal practices that emphasize healthy diets. Using Robertson’s (2007) schema this equates to a ‘don’t care/should care’ dichotomy whereby

the men struggle with masculine ideals, which expect a ‘don’t care’ attitude about what men eat. The ‘don’t care’ ideals disrupt the ‘healthy citizen’ ideals embedded in men’s health promotion (Robertson, 2007). Participants resolved these competing and somewhat contradictory positions by making minor diet changes, suggesting some reformulation of masculine ideals to both enable and limit healthy eating. This positioning was reinforced by participants’ perceptions of their prostate cancer as a chronic condition, which required minor but ongoing management. The study findings support and extend the work of Sloan, Gough, & Conner (2009) who similarly found that healthy men framed their concern for and investment in self-health activities as action-oriented and autonomous, and therefore, distinctly different to ‘feminine’ concerns about health.

In contrast to ‘intensifying efforts,’ the minor diet change practice of ‘adding-on’ was framed as therapeutic, a form of complementary and alternative medicine (CAM) to maximise recovery. Taking nutritional or natural health supplements was acceptable because it was a convenient form of insurance disengaged from domestic eating. An autonomous and perhaps pragmatic practice that was also disconnected from feminine ideals as an action-oriented masculine activity, CAM usage for men with cancer has previously been described as a type of hopeful insurance used to fight cancer and prolong life, an action-oriented and pragmatic masculine approach that, similar to diet changes found in this study, did not require complete belief in its efficacy (Evans, Shaw, Sharp, Thompson, Falk, Turton et al., 2007).

Several participants perceived their diets as requiring radical improvement and despite their uncertainty of its efficacy, strongly believed in the importance of healthy eating and engaged in major changes of ‘overhauling diet’. These men positioned prostate cancer as an important turning point (Devine, 2005) in their lives, which required significant self-

management as part of coping with cancer. Their strong desire for ‘doing something’ about their cancer to improve their health and survival influenced the extent of subsequent changes. Such major changes including adopting vegetarian diets would be necessary to match diets shown to reduce markers of prostate cancer progression in recent diet trial studies (Ornish et al., 2005) and would probably require major shifts in dietary beliefs and practices for most men. Similar adoption of significant self-care activities was previously identified as an opportunity for some men to manage the uncertainty of having untreated prostate cancer (Bailey, Wallace, & Mishel, 2007; Oliffe et al., 2009). The concern and urgency participants expressed about their cancer permitted men to justify adopting dramatic self-care activities as their personal responsibility and best operating under their control. Participants framed diet change activities as important, masculine, action-oriented and autonomous endeavours, which suggested that they reformulated masculine ideals to position diet change as the wise and rational choice.

### **Strengths and Limitations**

The small number and demographic homogeneity of the participants in this qualitative study limits the transferability of findings. Most participants were Caucasian, middle class, well educated and attended PCSGs. All participants were self-selected and therefore may have been more interested in discussing diet, health and prostate cancer than most men. Despite this, a variety of ages, treatments and differing grades and stages of prostate cancer provided some diversity in the men’s experiences. This permitted a deep understanding of participants’ perceptions around diet and prostate cancer and allowed me to reach data saturation for this small group.

However, future research might assess the diet and health understandings of men from other socio-demographic groups and from men who do not attend PCSGs. As well, longitudinal

studies that incorporate objective measures of dietary intake would allow for comparison with men's subjective assessments of their diets. Researchers could also assess relationships between participant characteristics such as age, disease risk or treatment type and diet change response.

I also acknowledge that the research context might have influenced these findings and that participants might have talked differently about health and eating to me as a 'nutrition student' than to other interviewers. However the men were eager to relay their opinions, perceptions and knowledge about nutrition and food and appeared to use the interview as an opportunity to express their agreement or disagreement with current nutrition discourses, confirm their eating practices as healthy or to seek nutrition advice. All of the participants expressed genuine interest in presenting their personal accounts of their dietary understandings and food practices with comfort and ease. This was recorded in field notes, which described participants' non-verbal signals indicating their degree of comfort. For example a typical observation was that men appeared relaxed and assumed comfortable seating positions and typically smiled and laughed while speaking with enthusiasm.

## **Conclusions**

The diet change model for men with prostate cancer presented in this chapter expands existing food choice models by exploring men's perceptions of diet in the context of a significant health event and through a gender lens. Study findings also provide directions for ways in which dietary interventions might be developed for men with prostate cancer by considering their varying perceptions of diet, health, prostate cancer recovery and need for self-care. Findings suggest informed discussion of the healthfulness of current and previous diets is an important aspect of counselling men with prostate cancer. Given men's uncertainty about the evidence relating diet and prostate cancer in contrast to their acceptance to other diet-health connections,

diet change promotion in prostate cancer care should target overall health rather than prostate health (Jayachandran & Freedland, 2008). Because many diet changes that are prostate friendly are also heart healthy, they might be promoted as best practice models (Moyad, 2004). Motivational messages for diet change might be needed for some men, rather than (or prior to) 'how-to' action-oriented dietary advice. Being diagnosed with prostate cancer has been proposed as a teachable moment for evaluating dietary practices and, if necessary, making diet change (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005). This might benefit from an understanding of men's orientation towards their prostate cancer and if they express a need to 'do something' more or different around diet for their self-care. Positioning diet change as a form of adaptive coping and important, action-oriented and autonomous enterprise would best mobilize men's masculine ideals to take up prostate cancer protective diets.

## References

- Bailey, D. E., Wallace, M., & Mishel, M. H. (2007). Watching, waiting and uncertainty in prostate cancer. *Journal of Clinical Nursing, 16*(4), 734-741.
- Beagan, B. L., & Chapman, G. E. (2004). Eating after breast cancer: Influences on women's actions. *Journal of Nutrition Education and Behavior, 36*(4), 181-188.
- Berkow, S. E., Barnard, N. D., Saxe, G. A., & Ankerberg-Nobis, T. (2007). Diet and survival after prostate cancer diagnosis. *Nutrition Reviews, 65*(9), 391-403.
- Carmody, J., Olendzki, B., Reed, G., Andersen, V., & Rosenzweig, P. (2008). A dietary intervention for recurrent prostate cancer after definitive primary treatment: Results of a randomized pilot trial. *Urology, 72*(6), 1324-1328.
- Chapman, G. E., & Beagan, B. (2003). Women's perspectives on nutrition, health, and breast cancer. *Journal of Nutrition Education and Behavior, 35*(3), 135-141.
- Charmaz, K. (2006). *Constructing grounded theory*. London ; Thousand Oaks, California: Sage Publications.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society, 19*(6), 829-859.
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine, 50*(10), 1385-1401.
- Demark-Wahnefried, W. (2007). Dietary intervention in the management of prostate cancer. *Current Opinion in Urology, 17*(3), 168-174.
- Demark-Wahnefried, W., Aziz, N. M., Rowland, J. H., & Pinto, B. M. (2005). Riding the crest of the teachable moment: Promoting long-term health after the diagnosis of cancer. *Journal of Clinical Oncology, 23*(24), 5814-5830.

- Demark-Wahnefried, W., Peterson, B., McBride, C., Lipkus, I., & Clipp, E. (2000). Current health behaviors and readiness to pursue life-style changes among men and women diagnosed with early stage prostate and breast carcinomas. *Cancer*, 88(3), 674-684.
- Dennis, L. K., Snetselaar, L. G., Smith, B. J., Stewart, R. E., & Robbins, M. E. (2004). Problems with the assessment of dietary fat in prostate cancer studies. *American Journal of Epidemiology*, 160(5), 436-444.
- DeVault, M. L. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
- Devine, C. M. (2005). A life course perspective: Understanding food choices in time, social location, and history. *Journal of Nutrition Education and Behavior*, 37(3), 121-128.
- Drummond, M., & Smith, J. (2006). Ageing men's understanding of nutrition: Implications for health. *The Journal of Men's Health & Gender*, 3(1), 56-60.
- Evans, M. A., Shaw, A. R. G., Sharp, D. J., Thompson, E. A., Falk, S., Turton, P., et al. (2007). Men with cancer: Is their use of complementary and alternative medicine a response to needs unmet by conventional care? *European Journal of Cancer Care*, 16(6), 517-525.
- Falk, L. W., Bisogni, C. A., & Sobal, J. (1996). Food choice processes of older adults: A qualitative investigation. *Journal of Nutrition Education*, 28(5), 257-265.
- Falk, L. W., Bisogni, C. A., & Sobal, J. (2000). Diet change processes of participants in an intensive heart program. *Journal of Nutrition Education*, 32(5), 240-250.
- Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: A conceptual model of the process. *Appetite*, 26(3), 247-265.
- Glanz, K., Rimer, B. K., & Lewis, F. M. (2002). *Health behavior and health education: Theory, research, and practice* (3rd ed.). San Francisco: Jossey-Bass.
- Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine*, 62(2), 387-395.
- Hallberg, L. R.-M. (2006). The "core category" of grounded theory: Making constant comparisons. *International Journal of Qualitative Studies on Health & Well-Being*, 1(3), 141-148.

- Hopfgarten, T., Adolfsson, J., Henningsohn, L., Onelov, E., & Steineck, G. (2006). The choice between a therapy-induced long-term symptom and shortened survival due to prostate cancer. *European Urology*, *50*(2), 280-289.
- Janas, B. G., & Bisogni, C. A. (1993). Conceptual model for dietary change to lower serum cholesterol. *Journal of Nutrition Education*, *25*(4), 186-192.
- Jayachandran, J., & Freedland, S. J. (2008). Prevention of prostate cancer: What we know and where we are going. *American Journal of Men's Health*, *2*(2), 178-189.
- Jemal, A., Siegel, R., Ward, E., Hao, Y., Xu, J., & Thun, M. J. (2009). Cancer Statistics, 2009. *CA: A Cancer Journal for Clinicians*, *59*(4), 225-249.
- Meyer, J. P., & Gillatt, D. A. (2002). Can diet affect prostate cancer? *BJU International*, *89*(3), 250-254.
- Moss, S. Z., Moss, M. S., Kilbride, J. E., & Rubinstein, R. L. (2007). Frail men's perspectives on food and eating. *Journal of Aging Studies*, *21*(4), 314-324.
- Moyad, M. A. (2004). Improving overall men's health and potentially reducing the risk of certain cancers via serum markers and risk assessment for coronary heart disease. *Urologic Oncology-Seminars and Original Investigations*, *22*(6), 485-489.
- Moyad, M. A. (2006a). Step-by-step lifestyle changes that can improve urologic health in men, Part I: What do I tell my patients? *Primary Care: Clinics in Office Practice*, *33*(1), 139-163.
- Moyad, M. A. (2006b). Step-by-step lifestyle changes that can improve urologic health in men, Part II: What do I tell my patients? *Primary Care: Clinics in Office Practice*, *33*(1), 165-185.
- Nguyen, J. Y., Major, J. M., Knott, C. J., Freeman, K. M., Downs, T. M., & Saxe, G. A. (2006). Adoption of a plant-based diet by patients with recurrent prostate cancer. *Integrative Cancer Therapies*, *5*(3), 214-223.
- Oliffe, J. L., Davison, B. J., Pickles, T., & Mroz, L. (2009). The self-management of uncertainty among men undertaking active surveillance for low-risk prostate cancer. *Qualitative Health Research*, *19*(4), 432-443.

- Oliffe, J. L., & Mróz, L. (2005). Men interviewing men about health and illness: Ten lessons learned. *The Journal of Men's Health & Gender, 2*(2), 257-260.
- Ornish, D., Weidner, G., Fair, W. R., Marlin, R., Pettengill, E. B., Raisin, C. J., et al. (2005). Intensive lifestyle changes may affect the progression of prostate cancer. *Journal of Urology, 174*(3), 1065-1070.
- Paisley, J., Sheeshka, J., & Daly, K. (2001). Qualitative investigation of the meanings of eating fruits and vegetables for adult couples. *Journal of Nutrition Education, 33*(4), 199-207.
- Paquette, M. C. (2005). Perceptions of healthy eating - State of knowledge and research gaps. *Canadian Journal of Public Health, 96*(Suppl 3), S15-S19.
- Patterson, R. E., Neuhouser, M. L., Hedderson, M. M., Schwartz, S. M., Standish, L. J., & Bowen, D. J. (2003). Changes in diet, physical activity, and supplement use among adults diagnosed with cancer. *Journal of the American Dietetic Association, 103*(3), 323-328.
- Raine, K. D. (2005). Determinants of healthy eating in Canada: An overview and synthesis. *Canadian Journal of Public Health, 96*(Suppl 3), S8-S14.
- Ristovski-Slijepcevic, S., & Chapman, G. E. (2005). Integration and individuality in healthy eating: Meanings, values, and approaches of childless, dual earner couples. *Journal of Human Nutrition and Dietetics, 18*(4), 301-309.
- Robertson, S. (2007). *Understanding men and health: Masculinities, identity, and well-being*. Maidenhead; New York: McGraw Hill/Open University Press.
- Roos, G., Prattala, R., & Koski, K. (2001). Men, masculinity and food: Interviews with Finnish carpenters and engineers. *Appetite, 37*(1), 47-56.
- Roos, G., & Wandel, M. (2005). "I eat because I'm hungry, because it's good, and to become full": Everyday eating voiced by male carpenters, drivers, and engineers in contemporary Oslo. *Food & Foodways, 13*(1/2), 169-180.
- Sellaeg, K., & Chapman, G. E. (2008). Masculinity and food ideals of men who live alone. *Appetite, 51*(1), 120-128.
- Simon, H. B. (2005). Diet, testicular cancer, and prostate cancer. *Harvard Men's Health Watch, 9*(12), 8.

- Sloan, C., Gough, B., & Conner, M. (2009). Healthy masculinities? How ostensibly healthy men talk about lifestyle, health and gender. *Psychology & Health, iFirst(1)*, 1 - 21 DOI 10.1080/08870440902883204.
- Smart, L. R., & Bisogni, C. A. (2001). Personal food systems of male college hockey players. *Appetite, 37(1)*, 57-70.
- Sobal, J., & Bisogni, C. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine, 38(0)*, 37-46.
- Sonn, G. A., Aronson, W., & Litwin, M. S. (2005). Impact of diet on prostate cancer: A review. *Prostate Cancer and Prostatic Diseases, 8(4)*, 304-310.
- Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks: Sage Publications.
- Van Patten, C. L., de Boer, J. G., & Tomlinson Guns, E. S. (2008). Diet and dietary supplement intervention trials for the prevention of prostate cancer recurrence: A review of the randomized controlled trial evidence. *The Journal of Urology, 180(6)*, 2314-2322.
- Weitzman, E. A., & Miles, M. B. (1995). *Computer programs for qualitative data analysis: A software sourcebook*. Thousand Oaks, California: Sage Publications.
- Wetter, A. C., Goldberg, J. P., King, A. C., Sigman-Grant, M., Baer, R., Crayton, E., et al. (2001). How and why do individuals make food and physical activity choices? *Nutrition Reviews, 59(3)*, S11-S20.

## **CHAPTER 4.**

# **GENDER RELATIONS, PROSTATE CANCER AND DIET: RE-INScribing HETERO-NORMATIVE FOOD PRACTICES<sup>3</sup>**

### **Introduction**

Diet might influence the growth of low-risk prostate cancer and could be a valuable adjunct to patient care (Ornish, Magbanua, Weidner, Weinberg, Kemp, Green et al., 2008; Saxe, Major, Nguyen, Freeman, Downs, & Salem, 2006); however, men do not typically change their diets following diagnosis (Blanchard, Courneya, & Stein, 2008). This might partly reflect men's lack of interest in self-care and typically poorer diets compared to women (Wardle, Haase, Steptoe, Nillapun, Jonwutiwes, & Bellisle, 2004). Health behaviours like diet change are complex and shaped by multiple determinants including gender, and an emergent body of research has described how masculinities shape men's health practices (Gough, 2006).

Masculinity theory (Connell, 1995) offers a framework for conceptualising how adherence to dominant masculine ideals might shape men's health and food practices (Courtenay, 2000); however, the roles that men's female partners play are poorly understood. Food choice is shaped by social relationships and women often take diet leadership roles (Schafer, Schafer, Dunbar, & Keith, 1999). This is especially salient to heterosexual men who often rely on female partners for nutrition and primary health care, and in the context of prostate cancer these practices are normalised as a key part of what is often referred to as a 'couples' disease (Gray, Fitch, Phillips, Labrecque, & Fergus, 2000).

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<sup>3</sup> A version of this chapter has been submitted for publication. Mróz, L.W., Chapman, G.E., Oliffe, J.L. and Bottorff, J.L. (2010) Gender relations, prostate cancer and diet: Re-inscribing hetero-normative food practices

Complex gender interactions between men and women contribute to men's health practices and explicit use of gender-relations frameworks are key to unravelling these linkages (Schofield, Connell, Walker, Wood, & Butland, 2000). In the context of prostate cancer, a gender-relations approach can illuminate how gender and diet are negotiated and co-constructed by couples. These analyses afford insights to how couples' performances of masculinity and femininity interact to shape men's diets and nutritional health. In this chapter the gender relations framework outlined below was used to examine how interactions between men and women shape the food practices of men who experience prostate cancer.

### **Background: Masculinity, Femininity and Men's Health**

Men in Western countries are more likely than women to suffer and die from many leading causes of death (Dodson, 2007). These health disparities are attributed in part to men's poor health behaviours, including poor uptake of health promotion messages, avoiding help seeking and engaging in risky behaviours. In men's health studies, hegemonic masculinity and the plurality of masculinities emerge and illuminate health disparities within and between men and women from a social constructionist perspective whereby gender is produced and reproduced through daily practices. Hegemonic masculinity is defined as having specific characteristics including self-reliance and stoicism as well as power differentials in which women and some men are subordinate. Men's behaviours as masculine performances can also be constructed in opposition to what women ordinarily do. Embedded here is male privilege and patriarchal power yet men might 'pay' for this power by experiencing ill health (Connell, 1995). Masculinity is implicated in men's experiences with prostate cancer, and men have often been forced to reformulate their masculine ideals as a result of losses (e.g., impotence and incontinence) invoked by prostate cancer and its treatments (OliFFE, 2005). Men might cope with

such challenges by bolstering other aspects of their masculine identity including ideals of control and self-reliance as compensatory measures (OliFFE, Davison, Pickles, & Mroz, 2009).

There is, however, significant variation in how men experience and express masculinity. Hegemonic masculinity ascends as a set of dominant ideals and practices supported by multiple alternative masculinities and shaped by social context. Although few men embody hegemonic masculinity, most are complicit in maintaining this hierarchy (Connell & Messerschmidt, 2005). Femininity is positioned as opposing and subordinate to masculinity and many women are guided by dominant feminine ideals or ‘emphasised’ femininity as a counterpart or complement to hegemonic masculinity (Howson, 2006). Just as men usually perform alternative rather than hegemonic masculinities, most women perform alternative or ‘ambivalent’ femininities, which represent varying degrees of compliance or resistance to male dominance. Masculinity theory hinges on relationality between idealized gender performances to maintain gender hegemony; consequently, expressions of masculinity and femininity cannot be fully understood without knowledge of, or reference to, one another (Robertson, 2007).

Gender is an important determinant of nutritional health as evidenced by men’s typically poorer diets and higher risk for chronic disease compared to women (Millen, Quatromoni, Pencina, Kimokoti, Nam, Cobain et al., 2005). Specific foods and eating styles that contribute to gender inequality in health, including meat consumption and consuming large heavy meals, are often positioned as masculine (Bourdieu, 1984). Yet most aspects of food and diet, including shopping, cooking, healthy eating and being concerned about nutrition and health are traditionally feminine domains (Vartanian, Herman, & Polivy, 2007). A small but growing literature focused on masculinity and men’s food practices shows that men’s perceptions of healthy eating reflect societal masculine food ideals, and are typically positioned as contradictory

to healthy eating guidelines. Domestic food provision, cooking and attention to healthy eating are often framed as feminine endeavours and therefore to be avoided by men unless necessary (Sellaeg & Chapman, 2008; Sobal, 2005). Cynicism towards government directed nutrition messages and perceptions of healthy foods as ‘unsatisfying’ are barriers to some men’s healthy eating practices and are interpreted as reflecting masculine ideals of strength, rationality and autonomy (Gough & Conner, 2006). These findings suggest that many men’s food practices are partly shaped by masculine food ideals.

Although masculinity theory offers a way of conceptualising men’s health and food practices, Lohan (2007) suggests that men’s health studies would benefit from integrating research on gender inequality in health with masculinity and men's health research in order to develop a ‘critical studies on men’ approach. Promised within this critical approach are more nuanced understandings of men’s health in relation to women, which would build on feminist research that has examined how gender shapes women’s lives. Feminist perspectives often frame gender inequality in food work as constituting patriarchy whereby women are subordinate to men (DeVault, 1991). Women might also position family food work as an expression of traditional feminine ideals of nurturing and caring (Lupton, 2000) and/or means for maintaining power or control within the ‘domestic sphere’ (Furst, 1997).

Linkages between masculinities and femininities are theoretically and empirically underdeveloped, especially in the context of masculinity and men’s health research, which has lacked gender relations analyses (Lyons, 2009). This is problematic because men’s experiences around health issues such as prostate cancer are often influenced by female partners, with both positive and negative effects on men’s health behaviours (Bottorff, Oliffe, Halpin, Phillips, McLean, & Mroz, 2008; Gray et al., 2000; Helgeson, Novak, Lepore, & Eton, 2004; Soloway, Soloway,

Kim, & Kava, 2005). These findings suggest complex interactions between men and women contribute to both health opportunities and constraints for men, and underscore the need for developing gender relational approaches.

Intersections between masculinity and femininity in food practice research are also poorly understood. Compartmentalizing men's and women's 'food worlds' offers little understanding of how masculinity and femininity interact in shaping couple food dynamics and men's nutritional health. Lyons (2009) recommends that food and health research incorporate a gender relations perspective that examines how performances of masculinity and femininity maintain traditional power dynamics or 'gender order' between men and women, and thus shape men's health behaviours. With this in mind I addressed the following question in this chapter: How do heterosexual gender relations shape couples' food practices when the man experiences prostate cancer?

## **Methods**

Qualitative grounded theory methodology employed in this study included concurrent data collection and analysis and development of emergent themes through inductive reasoning and constant comparison (Charmaz, 2006). Institutional ethics approval was obtained and followed (see Appendix 2 – ethics approval certificate). Study participants were recruited from a urology clinic in a western Canadian city hospital and nearby prostate cancer support groups (see Appendix 3 and 4 - recruitment materials). Although primarily a convenience sample, purposive sampling was employed when possible to provide a variety of prostate cancer experiences and social backgrounds. Eligible participants were all fluent in English including men who had been diagnosed with prostate cancer within the previous five years and their cohabiting female partners who lived together in non-institutional settings with independent household food

provision. Informed consent was obtained and participants were given a \$30 honorarium (see Appendices 5 and 11 – consent forms).

Data were collected by the candidate (LWM) through individual in-depth, semi-structured interviews of 60-90 minutes duration held in participants' homes (see Appendices 6 and 12 – interview guides). Interviews were conducted privately, with men interviewed separately from women. Field notes and demographic information were collected at the interview (see Appendix 9 - field note form; Appendices 8 and 13 - demographic forms). Individual, private interviews allowed participants freedom to express themselves and to avoid interruptions, differences of opinion and power dynamics that conducting joint couple interviews might have permitted (Morris, 2001). Open-ended interview questions were used to solicit participants' understandings about diet and food practices in the context of prostate cancer, and their roles in the men's diets. Questions were adjusted as data collection progressed to test and develop emerging themes. Interviews were digitally recorded, transcribed verbatim, and checked for accuracy. Atlas/ti™ software was used to facilitate coding of the transcripts, whereby concepts were labelled with identifying codes (see Appendix 10 - sample coding schedule). Using constant comparison, initial open codes were grouped under descriptive abstract categories from which emerging themes were described in memos. Themes and major concepts were compared to newly collected data and discussed at research team meetings. Dyad summary memos were prepared for each couple that described influences on household diets, the roles that each partner assumed in food provision and how food work was negotiated and conducted (see Appendix 14 – dyad summary template). These memos helped organise analysis of emergent codes, categories and themes that focused on performances of masculinity and femininity through couples' accounts of food practices. Themes derived from coding were organized,

compared and described in memos and were interpreted using a gender relations framework (Lyons, 2009).

Fourteen married heterosexual couples were recruited (see Appendix 15 – participant characteristics). Participants were between 45 and 78 years old and most self-identified as Canadian-European heritage except for two women who were of Canadian-Asian heritage. Most participants were college-educated, middle-class and retired. Most men were diagnosed with low-risk prostate cancer for which a variety of treatments were used. The terms ‘husband’ and ‘wife’ are used to describe participants because each couple was married and participants routinely used these terms. Findings from the 28-interview data set are presented with illustrative quotes and labelled by gender (i.e., M = men or W = women) and couple ‘C1’ to ‘C14’.

## **Findings**

Accounts of the participants’ food practices revealed that although men became more interested in their diets following prostate cancer, couples tended to mutually constrain the nature and extent of men’s engagement in food work. Participants depicted women as natural food leaders, often positioning them as ‘mothers’ in control of men’s ‘child-like’ dietary practices. Doing so sustained hetero-normative food roles, whereby women controlled the domestic food sphere but also carefully negotiated support for men’s diet changes through deference to men’s food preferences and maintenance of hegemonic power dynamics. These themes are illustrated below using the gender relations framework previously described.

### **Men Increase Diet Involvement**

Most men reported developing interest in nutrition and becoming more involved in their diets following their prostate cancer diagnosis. They researched and collected prostate cancer

specific nutrition information and/or recipes, often sharing these findings with their wives.

Although a few men described making substantial healthy eating changes, the majority reported minor diet changes, which most often involved eating certain foods or taking supplements. The most common prostate cancer associated changes included eating less red meat, replacing it with fish and poultry. Other changes included eating more tomato products, broccoli and other vegetables, usually framed as additions to men's regular eating habits rather than integral components of their daily diets. Many men also reported increasing shopping and/or assisting their wife in food preparation. One man perceived his new interest in gathering food as a significant change brought about by prostate cancer:

It (having prostate cancer) really did make a difference on how I perceived food because I would go to [grocery store] and then I'd start looking around for what's good and I'd come home with more stuff and things than she might have bought ... and I was kind of proud that I was doing that. (C14M)

Other researchers have identified how masculinity is often associated with consuming red meat and disinterest in healthy eating, while femininity is associated with preferences for vegetables, seeking nutrition information, cooking, and doing the bulk of domestic food work (Jensen & Holm, 1999; Roos, Lahelma, Virtanen, Prattala, & Pietinen, 1998). The ways the men in this study became more involved with diet suggest shifting masculine practices that depart from idealised hegemonic masculine performances. This 'feminization' of being interested or invested in a healthy diet is also representative of an atypical masculinity. Correspondingly, men's increased involvement in family food work might disrupt some women's feminine food ideals, as Furst (1997) found in women who framed food provision as a form of nurturing and expression of femininity. Related to this study findings reveal how men and women negotiated diet and food work by mutually constraining men's engagement with diet, maintaining women's

food leadership amid sustaining hetero-normative gender power relations. Each of these strategies is described below.

### **Men as “Sous Chefs”**

Men reported continuing with the typically masculine food work they had done prior to their cancer diagnosis, including preparing special dishes (e.g., chili), making their own breakfast or lunch (e.g., granola or sandwiches), reheating leftovers and barbequing. Although most men became more interested in diet after their diagnosis, couples typically limited the extent of their increased involvement, framing men’s food work as ‘helping out’ their wives rather than assuming responsibility for diet.

Men who reported shopping often did so at their wife’s request or with the guidance of a shopping list: “I mean I go out and help her sometimes, or if we need something and I’m coming back from somewhere I’ll stop at the market and get it.”(C11M) One man described this relationship by referring to his wife, as the “head chef” while his role was that of “sous chef.” (C7M) In accordance, wives were typically positioned as household food leaders and the indispensable conduit for men’s healthy diets.

Participants’ rationales for men being less involved in diet reflected and preserved what DeVault (1991) previously described as traditional gendered food ‘roles’. Most couples described men’s shopping and cooking skills as inadequate compared to women’s. One woman commented: “Stuff that comes into the house that’s probably not healthy is when [my husband] goes shopping, he throws things into the cart. ... Typical guy, I guess.” (C9W) Her husband agreed with her assessment, further clarifying that he did not prepare food because: “She doesn’t trust my culinary skills.” (C9M). In contrast men often praised and affirmed their wife’s food work skills.

Participants also indicated that they left health and dietary considerations to women because of women's superior nutrition knowledge and concern about healthy eating. Women were described as "more fussy" or "more health conscious" than men who were conversely framed as "useless" or "more relaxed" about healthy eating. Women confirmed the perspective that men were less concerned about nutrition than them. One woman was sceptical about her husband's new interest in healthy eating, suggesting: "I just don't think that's ever been his priority. I think he eats when he's hungry."(C9W).

Overall, comments about men's lack of skills and interest in food and nutrition were often invoked to support the limited extent to which they engaged in their diets. These findings are reflected in other research where women's disproportionate contributions to family food work have been rationalised in terms of women's expertise, enjoyment and fairness (Lupton, 2000) or the notion that it is 'just easier' for women to do family food work than men (Beagan, Chapman, D'Sylva, & Bassett, 2008).

### **Women as Leaders in Food and Health**

Participants' accounts of men's limited diet involvement and skills were supported by several themes apparent in their descriptions of women's food leadership, including assumptions that food work is women's domain, that their attention to healthy eating is essential and sufficient, and that their husbands are like children who need to be supervised and directed.

**Food and health work as feminine.** The assumption that nutrition, food work and the kitchen are women's domain was reflected in men's comments about how "gladly" their wives cooked for them and that their food work was not to be interfered with:

My attitude is that [my wife] is such a good cook and she takes such good care of me in general and is so nice about all of this stuff that it would be inconsiderate of me to pressure her to cook differently than she feels like cooking. And it's really her business. (C6M)

When another man was asked about the division of food-related work in his home, his justification for not cooking indicated not only appreciation for his wife's skills, but also that he was careful not to disrupt a convenient and well established arrangement anchored in a traditional gendered division of labour:

She does a great job and doesn't seem to mind it. I'm not dumb, I'm not gonna [laughs] ... I'll, you know, do some dishes and clean some things and [laughs] ... we divide up everything, like I do all the finances and everything else. ... I'm just spoiled really. (C14M)

Positioning women this way as natural leaders in family food work reflects longstanding gender norms and confirms previous research which frames this as a way for women to express their femininity as a 'proper' socially affirmed wife or mother through nurturing their husband and family (Charles & Kerr, 1988; DeVault, 1991; Sidenvall, Nydahl, & Fjellstrom, 2000). Similar to these previous findings, most women in this study were complicit with women's 'natural' leadership in household diet.

Some women appeared uncomfortable with their husband's new interest in diet and described how they 'permitted' their husbands' to help out, although only with supervision: "I'll let him go out and he buys the vegetables and the fruits." (C4W) or "I let him use the kitchen." (C5W) Framing men's help as provisional and based on granting permission reveals how women positioned themselves to control and oversee family food work. Careful regulation of men's involvement in family food provision displayed here supports other researchers'

suggestions that maintaining gender food roles allows women to maintain control of household diet and their domestic sphere (Furst, 1997; Lupton, 2000).

**Women's leadership in diet changes is essential and sufficient.** Women's food responsibilities extended beyond provision of meals to encompass primary responsibility for nutritional health, a role that often took on increased importance following their husbands' prostate cancer diagnosis. This was linked to broader expectations that men's health was often women's responsibility. Explicit about the importance of wives' health management role, was one man who affirmed the practice as normative:

If it wouldn't be for her I wouldn't be alive today. I have always said that, and a lot of the men I've talked to, different men that are married, they always say that it's their wives that either pushed them to get the tests done or pushed them to keep their diet on track... I can just sit there and say, yeah, that woman is responsible for keeping him going, you know. (C13M)

This man's wife confirmed his assessment, describing in detail how she convinced her husband to seek medical care and the importance of her presence at doctor appointments to accurately take direction and ask the "hard" questions. These findings are confirmed by medical professionals who have also noted the centrality women in men's help-seeking and compliance with medical advice (Seymour-Smith, Wetherell, & Phoenix, 2002).

For some participants, nutrition was framed as a couple's collaborative project, as one man said: "When I was diagnosed, [my wife] and I began thinking about. 'What do we need to do diet-wise to support my treatment [and] my healing?'" (C1M). For another couple, when the husband became interested in healthy eating after his prostate cancer diagnosis and decided to become vegetarian, the feasibility of doing that was heavily reliant on his wife's willingness to work toward that change:

She's approached this as a, we're in it together.... She's found herself in a situation, right, here is it me with prostate cancer and so she's, I see that she's immersed herself in a healthy way like in a sense there's something I can do to, to assist with this difficult time etc., etc., so she spends an awful lot of the, or she's more vigilant about extracting recipes and ideas and things like that than I am. (C10M)

Findings that women were significant in men's care were consistent with other reports which frame prostate cancer as a couple's disease, and women instrumental in prostate cancer recovery (Gray et al., 2000; Maliski, Heilemann, & McCorkle, 2002). Several women described that any diet changes they made were designed to increase the couple's overall health rather than specifically for his prostate cancer. A woman clarified: "I'm not thinking just of his prostate, I'm just thinking of both of us just trying to eat better"(C14W). Consequently, while many women were aware of the diet information that their husbands found and brought home, they tended to disregard it.

One justification for ignoring this information was that this research was seen as the man's personal project and irrelevant to women's longstanding expertise in family food provision. This was demonstrated by a woman who ignored her husband's supplement usage because she was too busy to include it in her food work:

I hate to say it but I'm sort of listening, but I'm not really. I have to deal enough with my own stuff that I don't really – if he wants to take it (supplements) and it's been recommended and he's heard at the support group that that's what he should be taking. (C7W)

This finding supports previous work by Miller & Brown (2005) that suggested some couples became disengaged in dietary change management after one spouse was diagnosed with type 2 diabetes. In contrast a desire to maintain a normal life led other families to assimilate diet

changes into daily family practices when one member of a couple was diagnosed with celiac disease or heart disease (Gregory, 2005). Gray et al (2000) also found that couples attempted to prevent prostate cancer from interfering with maintaining a normal life, including preserving couples' existing relationships. Findings in this study suggest an explanation for some of the differences between findings in these other studies, demonstrating how couples' food practices can be interpreted as preserving pre-existing gendered food relationships regardless of diet changes made.

**Women as mothers, men as children.** Mutually framing men as incompetent around health and food work prompted some couples' food relationships to become parental whereby women infantilized men and adopted mother roles. Men were complicit with this arrangement by disclosing lack of self-control and a childish need for supervision. Women reported hiding snack foods and treats, portioning food to control overeating at meals, "nagging" and other strategies for monitoring and manipulating men's diets. As one woman explained: "I hide things. (laughs) He's terrible! He's like a little kid. Because if I don't he will completely demolish something."(C2W) Despite describing his annoyance at her "nagging" and attempts to control his eating, her husband agreed with her assessment: "Yeah. I mean if there's cookies in the house I'll eat them. If there's chocolate in the house I'll eat it."(C2M)

Even men who became more involved in their diets recognised how important this maternal role was in helping them curb their undisciplined practices. One man described his child-like taste preferences as a source of conflict with his wife and as barriers to healthier eating saying: "It's like if you ask a kid if he wants. I want all the gooey yummy things and maybe I don't want to eat kale tonight." (C10M)

The infantilization of men demonstrated by couples in this study echoes contemporary discourses regarding men's health. Lyons & Willott (1999) suggested that media portrayals of men being childish and unrealistic about their health care, while women were framed as responsible for changing men's health, represented a "man as infant" discourse. Health professionals can also invoke this discourse in their assessment of men's poor help seeking behaviours, as reported by Seymour-Smith et al. (2002) in a study revealing how men ignored emergent health issues until their female partners "ordered" them to seek medical help.

These findings suggest that a key aspect of gendered food practices in heterosexual couples involves positioning men as incompetent around nutrition, and in reifying women's control within the domestic food sphere and men's health and diets. In this sense, women in this study devalued their husband's attempts to engage in family food work to maintain their food control. Furthermore, findings suggest that men were powerless (like children) in making food changes on their own because women dominated family food politics and practices. However, power dynamics, which are scrutinized further in the next section, revealed women's 'control' of food existed amid larger gender power structures.

### **Maintaining Hetero-normative Gender Power Relations.**

As described above, participants' accounts of food practices suggested that women controlled the domestic food sphere and consequently their husband's diets. Gender relations theory, however, requires illuminating how gender performances are implicated in gender hegemony and patriarchal power structures (Schippers, 2007). Consequently, further analysis demonstrates the complexity of couples' power dynamics around food, indicating women's apparent control of food as ambiguous. Most women also described deferring to their husbands' food preferences and carefully negotiating how they supported men's involvement in diet to

avoid disrupting men's masculine identity. Thus women demonstrated 'emphasised' femininity, which reduced conflict and supported men's aspirations for hegemonic masculinity (Howson, 2006). These practices can be interpreted as reflections of traditional gender roles and relations embedded within gender hegemony and as illustrated in the following section, these practices might reinforce patriarchal power structures (Bourdieu, 2001).

**Women deferred to husbands' preferences.** Despite women's apparent control of the family diet, men had notable influence on women's shopping and cooking and there were many examples of women's deference to their husbands' food preferences. One man jokingly referred to his wife as "my personal chef" because she prepared his favourite meals. For another couple the husband began directing his wife's food provision; accordingly she planned and cooked family meals around his prostate cancer specific food preferences. Although she recognised that he was directing her efforts, she framed the family diet changes as jointly made because she was the main food provider:

We work together, [my husband] and I, and he's doing a lot of reading and he explains things to me and I've been helping him in that way regarding eating, cooking the meals and changing our food. (C3W)

For most other couples this power dynamic was less explicit and women minimized their husbands' influence on their food provision. Food routines for these couples were developed over many years whereby women learned their husbands' food likes and dislikes, and men expected their wives to shop and cook with their preferences in mind. One woman reported that although she remained the final food decision maker, she often deferred to her husband's tastes regardless of his prostate cancer:

Well, I mean I do the shopping and I'm not going to buy something that I know he doesn't like, to cook. But normally speaking, I might say, "What would you like for dinner between this, this and this that I've got?" (C11W)

Men supported this arrangement and described how although day-to-day cooking was their wife's responsibility, overall food decisions were tacitly understood to consider his preferences and prostate cancer, and were thus jointly made. These findings support early works that demonstrate that women's domestic food work is often done in deference to men's preferences and might therefore constitute male dominance (Charles & Kerr, 1988; DeVault, 1991).

**Men undervalued women's food work.** Although appreciative of their food provision, men tended to undervalue, minimize and/or appeared unaware of the substantial amount of food work their wives did. Planning, shopping and cooking meals was invisible work to many men as demonstrated when several could not recall specific details about the diet changes their wives made for them. This reflects traditional gendered food practices whereby men undervalue women's unpaid domestic food work, and has been interpreted as a form of male dominance by other researchers (e.g., DeVault, 1991; Kemmer, 2000; Lupton, 2000). For example, one man stated: "She doesn't (plan meals). There's very little planning with my wife. (laughs) We'd come home and she can have a meal ready in a half hour! ... Well, she knows what's in the fridge." (C4M)

One woman recognised that her husband undervalued her food work in comparison to his 'man's work' around the house. She perceived that: "I think he has a little 'lensing' system, which is if what I'm doing is less important than what he's doing then I should cook the meal." (C1W) Positioning men's work as important and women's food work as subordinate may have

allowed some couples to bolster men's masculine identities amid men's prostate cancer related emasculations by reinforcing traditional gender roles.

**Women's support as "cheerleaders" not "bus drivers"**. Many women were pleased that their husbands were interested in healthy eating and glad to have help in shopping and cooking. However, women were careful to avoid forcing their husbands into food work and described their roles as supportive and feminine, or as one woman referred to herself, a "cheerleader" (C1W) of her husband's diet changes. Several women described cautiously supporting rather than leading their husband's diet changes. They acted as 'background supporters' similar to the supportive style of women who attended prostate cancer support groups (Bottorff et al., 2008). One woman described how she balanced her role as nurturer with her husband's preferences through careful negotiation of power dynamics whereby she remained submissive to his wishes around food provision. In her opinion, he would resist diet changes she made unless he thought that he had some control over decision-making. This demonstrated the delicate balance between her performance of ambivalent femininity as nurturer and supporter of his interest in healthy eating with his dominance and need for autonomy:

I felt that I was probably taking more responsibility for [my husband's] diet than *he* was sometimes, and I realize it was partly me feeling like he should do the very best here, you know, with your diet. And then I realized well, I just had to back off with that outlook. It's his life, right? He has to make decisions for what he wants, and I can cook things that are healthy and that's the part I can do but I didn't want to get into saying, "Oh, I think you should be eating that."(C1W)

Another woman agreed that despite her main role as food provider, diet change decisions had to be jointly made because he needed to have ownership over any changes he made:

We're kind of taking control a bit more, we're taking [laughing] control well it sounds like I'm driving the bus, I'm not really but, you know, I support [my husband] with what he wants to do and then sometimes I remind him when I, I think, you know, "Did you go for your walk today?" You know, that kind of thing. (C10W)

Camouflaging her food control was important to directing his diet and health changes. She carefully supported and helped him to make healthy changes. Evaluated together, the finding that women appear to control domestic food, yet do so in deference to men illustrates how gender hegemony shapes, and is supported by, couples' performances and co-constructions of masculinity and femininity.

## **Discussion and Conclusions**

Overall, the findings demonstrate the interplay of performances of femininity and masculinity in shaping household food practices of men with prostate cancer. Together, men and women limited men's deeper engagement in their diets by mutually positioning women as natural household food leaders and men as unskilled in such matters. By re-inscribing hetero-normative gender roles, couples bolstered men's alignment to hegemonic masculinity by allowing them to maintain distance from feminine concerns about healthy eating while reinforcing women's emphasised femininity through nurturing food practices.

Using a gender relations framework illuminated how these performances of gender help maintain gender hegemony. This has implications for improving our understanding of men's nutritional health by exposing unseen links between genders in the context of food, men's nutritional health and prostate cancer. Previous food practice research has focused on either masculinity and food or femininity. For example, masculine food ideals have typically been linked to athleticism or performance whereas feminine concerns about nutrition embrace health

and well-being (Roos & Wandel, 2005; Sloan, Gough, & Conner, 2009; Smart & Bisogni, 2001). These previous findings demonstrate that masculinities are implicated in men's food choices in many ways and because these choices are often seen as unhealthy, must be considered in men's food practices research.

Similarly, research on femininity and food has shown how most aspects of family food provision and attention to healthy eating are framed as feminine. Feminist writing on women and food has interpreted this as constituting patriarchy (e.g., Charles & Kerr, 1988; DeVault, 1991), although others have noted that women's performance of femininity through food can allow women to maintain control of their domestic sphere (Furst, 1997; Lupton, 2000; Sidenvall et al., 2000). However, despite the large amount of research on gender and food, there has been a notable lack of attention to the connections between men and women's food worlds (Lyons, 2009; Schofield et al., 2000). Findings from this study illuminate such links and demonstrate how women and men can work in concert to maintain traditional gender roles and hetero-normative power dynamics that simultaneously put women in control of family food, but also position them subordinate to men.

These findings are novel in that they specifically address gender relations around food and the nutritional health of men with prostate cancer. Although masculinity has been implicated in the health of men with prostate cancer (e.g., Chapple & Ziebland, 2002; Oliffe, 2009), their food practices are poorly understood. Likewise, although men's food practices research has begun to examine masculinity and food it has not grappled with how to assist men to eat healthier diets when confronted with a health crisis. Findings demonstrate that understandings of masculinity and food are incomplete without corresponding understandings of femininity in the context of heterosexual couples, who have also been shown to strive to

maintain a sense of control and normalcy in their lives to help manage the impact of prostate cancer (Maliski et al., 2002). Themes previously found in ‘prostate cancer couples’ including “stopping illness from interfering with everyday life” and “keeping relationships working” indicate that maintaining traditional gender food roles and hence power structures, might be an important part of this management (Gray et al., 2000). The current study findings suggest that to ensure effectiveness, dietary interventions for men with prostate cancer must carefully consider gender relations that support performance of hegemonic masculinity through men’s food practices.

Limiting men’s diet involvement as found in the participants’ accounts of family food practices supports men’s masculinity but also prevents men from deeper engagement with their diets. Although men might be instrumental in collecting prostate cancer related nutrition information and recipes, the findings suggest that women are often key to mobilising that knowledge. Furthermore, by ignoring men’s diet involvement women might inadvertently stifle men’s investment in their diets, muting their responsibility for nutritional self-health.

Although men might express interest in food many men are unlikely to independently make what they perceive as feminine changes such as eating less red meat or increasing vegetable consumption. Likewise women seem unlikely to permit their husbands to assume significant control of family food provision since this would require relinquishing control of their domestic sphere and challenge feminine nurturing ideals. This suggests that nutrition interventions might work best for some couples within (rather than attempting to change) their existing gender relations. Therefore, some nutrition programs for men with prostate cancer might work best to assist women with adopting acceptable, feasible and sustainable family diet changes.

Alternatively, researchers and nutrition educators can acknowledge the significant role of hetero-normative gender relations without reinforcing them. Nutrition interventions for men with prostate cancer might aim to change existing gendered food-related power structures by increasing men's diet engagement. Challenging hetero-normative power dynamics is difficult; however, if we expect men to become deeply engaged with their own health and diets, then we must consider how this disrupts men's masculinity and women's leadership roles in this arena.

The study findings presented here illuminate men and women's gendered foodways, suggesting we need to help couples to be aware of how gender is shaping their food practices and health. Men's perceptions of healthy eating might be considered in nutrition interventions in ways that support their masculinity while simultaneously eliciting increased interest and agency in food and eating. Promoting alternative 'insurance' masculine healthy eating ideals that support healthy eating might allow men to engage in diet while preserving masculine identity. Likewise, interventions might support women in fostering men's increased engagement in their diets and family food work and create a 'new couple norm'.

The findings of this study are based on heterosexual couples living in a large Western Canadian city and therefore are not espoused as generalisable to other settings and other family structures including single living and/or same-sex partnered men where gender roles might differ. However, the findings demonstrate that careful illumination of tacit gendered food ideals can expand our understanding of men's food practices and reveal how men's diets can be shaped by complex power dynamics. Further research on the intersections between men's and women's food worlds and how hetero-normative power dynamics are implicated is needed to improve our understanding of how gender shapes men's diets in a variety of household settings and cultural milieus.

## References

- Beagan, B., Chapman, G. E., D'Sylva, A., & Bassett, B. R. (2008). 'It's just easier for me to do it': Rationalizing the family division of foodwork. *Sociology-the Journal of the British Sociological Association*, 42(4), 653-671.
- Blanchard, C. M., Courneya, K. S., & Stein, K. (2008). Cancer survivors' adherence to lifestyle behavior recommendations and associations with health-related quality of life: Results from the American Cancer Society's SCS-II. *Journal of Clinical Oncology*, 26(13), 2198-2204.
- Bottorff, J. L., Oliffe, J. L., Halpin, M., Phillips, M., McLean, G., & Mroz, L. (2008). Women and prostate cancer support groups: The gender connect? *Social Science & Medicine*, 66(5), 1217-1227.
- Bourdieu, P. (1984). *Distinction: A Social Critique Of The Judgement Of Taste*. Cambridge, Massachusetts: Harvard University Press.
- Bourdieu, P. (2001). *Masculine Domination*. Stanford, California: Stanford University Press.
- Chapple, A., & Ziebland, S. (2002). Prostate cancer: Embodied experience and perceptions of masculinity. *Sociology of Health & Illness*, 24(6), 820-841.
- Charles, N., & Kerr, M. (1988). *Women, food and families*. Manchester, UK: Manchester University Press.
- Charmaz, K. (2006). *Constructing grounded theory*. London; Thousand Oaks, California: Sage Publications.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, 19(6), 829-859.
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine*, 50(10), 1385-1401.

- DeVault, M. L. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
- Dodson, D. C. (2007). Men's health compared with women's health in the 21st century USA. *The Journal of Men's Health & Gender*, 4(2), 121-123.
- Furst, E. L. (1997). Cooking and femininity. *Women's Studies International Forum*, 20(3), 441-449.
- Gough, B. (2006). Try to be healthy, but don't forgo your masculinity: Deconstructing men's health discourse in the media. *Social Science & Medicine*, 63(9), 2476-2488.
- Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine*, 62(2), 387-395.
- Gray, R. E., Fitch, M., Phillips, C., Labrecque, M., & Fergus, K. (2000). Managing the impact of illness: The experiences of men with prostate cancer and their spouses. *Journal of Health Psychology*, 5(4), 531-548.
- Gregory, S. (2005). Living with chronic illness in the family setting. *Sociology of Health & Illness*, 27(3), 372-392.
- Helgeson, V. S., Novak, S. A., Lepore, S. J., & Eton, D. T. (2004). Spouse social control efforts: Relations to health behavior and well-being among men with prostate cancer. *Journal of Social and Personal Relationships*, 21(1), 53-68.
- Howson, R. (2006). *Challenging Hegemonic Masculinity*. New York: Routledge.
- Jensen, K. O. D., & Holm, L. (1999). Preferences, quantities and concerns: Socio-cultural perspectives on the gendered consumption of foods. *European Journal of Clinical Nutrition*, 53(5), 351-359.
- Kemmer, D. (2000). Tradition and change in domestic roles and food preparation. *Sociology-the Journal of the British Sociological Association*, 34(02), 323-333.
- Lohan, M. (2007). How might we understand men's health better? Integrating explanations from critical studies on men and inequalities in health. *Social Science & Medicine*, 65(3), 493-504.

- Lupton, D. (2000). 'Where's me dinner?': Food preparation arrangements in rural Australian families. *Journal of Sociology*, 36(2), 172-186.
- Lyons, A. C. (2009). Masculinities, femininities, behaviour and health. *Social and Personality Psychology Compass*, 3(4), 394-412.
- Lyons, A. C., & Willott, S. (1999). From suet pudding to superhero: Representations of men's health for women. *Health*, 3(3), 283-302.
- Maliski, S. L., Heilemann, M. V., & McCorkle, R. (2002). From "death sentence" to "good cancer": Couples' transformation of a prostate cancer diagnosis. *Nursing Research*, 51(6), 391-397.
- Millen, B. E., Quatromoni, P. A., Pencina, M., Kimokoti, R., Nam, B.-H. O., Cobain, S., et al. (2005). Unique dietary patterns and chronic disease risk profiles of adult men: The Framingham nutrition studies. *Journal of the American Dietetic Association*, 105(11), 1723-1734.
- Miller, D., & Brown, J. L. (2005). Marital interactions in the process of dietary change for type 2 diabetes. *Journal of Nutrition Education and Behavior*, 37(5), 226-234.
- Morris, S. M. (2001). Joint and individual interviewing in the context of cancer. *Qualitative Health Research*, 11(4), 553-567.
- Oliffe, J. L. (2005). Constructions of masculinity following prostatectomy-induced impotence. *Social Science & Medicine*, 60(10), 2249-2259.
- Oliffe, J. L. (2009). Health behaviors, prostate cancer, and masculinities: A life course perspective. *Men and Masculinities*, 11(3), 346-366.
- Oliffe, J. L., Davison, B. J., Pickles, T., & Mroz, L. (2009). The self-management of uncertainty among men undertaking active surveillance for low-risk prostate cancer. *Qualitative Health Research*, 19(4), 432-443.
- Ornish, D., Magbanua, M. J. M., Weidner, G., Weinberg, V., Kemp, C., Green, C., et al. (2008). Changes in prostate gene expression in men undergoing an intensive nutrition and lifestyle intervention. *Proceedings of the National Academy of Sciences*, 105(24), 8369-8374.

- Robertson, S. (2007). *Understanding men and health: Masculinities, identity, and well-being*. Maidenhead; New York: McGraw Hill/Open University Press.
- Roos, E., Lahelma, E., Virtanen, M., Prattala, R., & Pietinen, P. (1998). Gender, socioeconomic status and family status as determinants of food behaviour. *Social Science & Medicine*, 46(12), 1519-1529.
- Roos, G., & Wandel, M. (2005). "I eat because I'm hungry, because it's good, and to become full": Everyday eating voiced by male carpenters, drivers, and engineers in contemporary Oslo. *Food & Foodways*, 13(1/2), 169-180.
- Saxe, G. A., Major, J. M., Nguyen, J. Y., Freeman, K. M., Downs, T. M., & Salem, C. E. (2006). Potential attenuation of disease progression in recurrent prostate cancer with plant-based diet and stress reduction. *Integrative Cancer Therapies*, 5(3), 206-213.
- Schafer, R. B., Schafer, E., Dunbar, M., & Keith, P. M. (1999). Marital food interaction and dietary behavior. *Social Science & Medicine*, 48(6), 787-796.
- Schippers, M. (2007). Recovering the feminine other: Masculinity, femininity, and gender hegemony. *Theory & Society*, 36(1), 85-102.
- Schofield, T., Connell, R. W., Walker, L., Wood, J. F., & Butland, D. L. (2000). Understanding men's health and illness: A gender-relations approach to policy, research, and practice. *Journal of American College Health*, 48(6), 247-256.
- Sellaeg, K., & Chapman, G. E. (2008). Masculinity and food ideals of men who live alone. *Appetite*, 51(1), 120-128.
- Seymour-Smith, S., Wetherell, M., & Phoenix, A. (2002). "My wife ordered me to come!": A discursive analysis of doctors' and nurses' accounts of men's use of general practitioners. *Journal of Health Psychology*, 7(3), 253-267.
- Sidenvall, B., Nydahl, M., & Fjellstrom, C. (2000). The meal as a gift: The meaning of cooking among retired women. *Journal of Applied Gerontology*, 19(4), 405-423.
- Sloan, C., Gough, B., & Conner, M. (2009). Healthy masculinities? How ostensibly healthy men talk about lifestyle, health and gender. *Psychology & Health*, iFirst(1), 1 - 21 DOI 10.1080/08870440902883204.

- Smart, L. R., & Bisogni, C. A. (2001). Personal food systems of male college hockey players. *Appetite, 37*(1), 57-70.
- Sobal, J. (2005). Men, meat and marriage: Models of masculinity. *Food & Foodways, 13*(1/2), 135-158.
- Soloway, C. T., Soloway, M. S., Kim, S. S., & Kava, B. R. (2005). Sexual, psychological and dyadic qualities of the prostate cancer 'couple'. *BJU International, 95*(6), 780-785.
- Vartanian, L. R., Herman, C. P., & Polivy, J. (2007). Consumption stereotypes and impression management: How you are what you eat. *Appetite, 48*(3), 265-277.
- Wardle, J., Haase, A. M., Steptoe, A., Nillapun, M., Jonwutiwes, K., & Bellisle, F. (2004). Gender differences in food choice: The contribution of health beliefs and dieting. *Annals of Behavioral Medicine, 27*(2), 107-116.

## **CHAPTER 5.**

### **DISCUSSION AND INTEGRATION OF STUDY FINDINGS**

It is clear that tastes in food cannot be considered in complete independence of the other dimensions of the relationship to the world, to others, and to one's own body. (Bourdieu, 1984:193)

Growing evidence demonstrates that gender is a determinant of men's food perceptions and practices and might therefore influence diet change or nutrition intervention uptake for men who have been diagnosed with prostate cancer. Consequently the objective of this study was *to explore how masculinity and gender relations are implicated in shaping dietary understandings and food practices of men with prostate cancer*. Findings presented in this dissertation contribute to these scholarly understandings. In this chapter, I present an integrated discussion of the study findings, discuss the strengths and limitations of the research, some complexities of doing gender research, my role as researcher and describe how the findings can inform men's nutrition program development and future research in diet change practices of men with prostate cancer.

#### **Masculinities and Food after Prostate Cancer**

The research presented in this dissertation addresses gaps in understandings of how social constructions of masculinity are implicated in the food practices of men with prostate cancer. Findings reveal masculinities as an important influence on men's perceptions of diet and diet change. As reviewed in Chapter 2, previous explorations of masculinity and food indicate that 'real' (hegemonic) Western men are expected to perform masculine ideals by ignoring healthy

eating messages and typically (over)consuming meat or eating heavy high-fat, high calorie meals (Courtenay, 2000; Moynihan, 1998; Robertson, 2007; Sobal, 2005). Other literature presented in Chapter 2 suggests these expectations may be problematic for men with prostate cancer because masculine food ideals and practices designed to portray them as the “stronger sex” are contrary to prostate cancer primary and secondary protective dietary recommendations (Jensen & Holm, 1999; Moyad, 2006a, 2006b). Men with prostate cancer face a dilemma: although consuming low-fat vegetarian diets might offer survival benefits, this requires reducing consumption of a traditionally male food (meat), consuming more feminine foods (vegetables) and adopting more feminine eating patterns (low-fat, vegetarian). The literature synthesis presented in Chapter 2 further suggests that the combination of the feminized anti-prostate cancer diet and emasculations linked to prostate cancer experiences poses a threat to the men’s masculinity (e.g., Oliffe, 2005) that may be at least partly responsible for men’s avoidance of diet change following prostate cancer (e.g., Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005).

Empirical findings presented in this dissertation suggest that the role of masculinities in shaping food practices of men with prostate cancer is not straightforward. All of the men who participated in this study expressed interest in nutrition and healthy eating and most believed they engaged in some, albeit minor, healthy eating changes after their prostate cancer diagnoses. However, men positioned these changes in ways that can be seen to reflect masculine ideals and consequently de-linked from feminine healthy eating concerns. They invoked multiple masculine ideals of autonomy and self-control in constructing rationales for their diet changes rather than reporting more traditional feminine ideals linking diet and health. These findings can be interpreted within Connell’s (1995, 2005) conceptualisation of hegemonic masculinity theory, which allows and accounts for multiple masculinities as contextually shaped by interactions

between agency and social structures. Experiencing chronic disease might therefore provide a context for men to express alternative masculinities that justify them paying more attention to their nutritional health than typical for men, as some participants did in this study. Alternative masculinities, similar to the ‘healthy’ or ‘strong man’ ideals described by Sobal (2005), were invoked by some participants to justify reduced, and therefore non-hegemonic, meat consumption in the attainment of healthy and strong male bodies.

Men in this study who described making diet changes rationalised these by citing the increased need for self-care during cancer recovery and the importance of diet for continued performance as men. This confirms findings reported in other masculinity and food studies addressing men’s food practices. Like previous reports about male fire-fighters (Deutsch, 2005) and engineers (Roos & Wandel, 2005) who engaged in traditionally feminine eating practices, some men in this study described their food practices in ways that can be interpreted as emerging from ideals of autonomy, self-control and being action-oriented. Although engaging in some food practices traditionally seen as feminine, these practices were described by the men in masculine ways, and typically distinct from womanly concerns about nutrition and healthy eating.

Other participants acknowledged the significance of having cancer, but situated their prostate cancer as a chronic and manageable condition, similar to men in another study who framed their prostate cancer as a “good cancer” (Maliski, Heilemann, & McCorkle, 2002). Together these constructs allowed men some to leverage their interest in nutrition and diet but did not warrant becoming engaged in nutrition in explicitly feminine ways. These findings support the conceptual framework developed in Chapter 2, in that despite their increased interest/involvement in nutrition, the men might have been attempting to preserve their

threatened masculinity and compensate for a ‘crisis in masculinity’ presented by prostate cancer experiences by reframing eating in masculine ways rather than invoking more traditional feminine healthy eating ideals to describe their perceived diet changes.

Experiencing prostate cancer might therefore offer an occasion or turning point where some men can overlook expected masculine food practices and change their diets to improve their health and recovery. However, the relationship between masculinities, diet and prostate cancer is more complex as evidenced by the degree and nature of diet changes reported by participants. Although men in this study professed more ‘masculinised’ interest in nutrition and made minor diet changes, most tended to avoid wide-ranging, extensive changes. None of the men, even those who perceived themselves as making major diet changes, reported becoming deeply engaged in or assumed control of their diets independent of their wives. Some men searched for diet information and began shopping and helping with food preparation but in avoiding ‘excessive’, feminine interest in nutrition or healthy eating, none became household food leaders. Despite their assertions of autonomy and self-control all of the men in the current study nonetheless relied on their female partners to guide and provide for their dietary needs, which restricted their personal, direct diet change engagement regardless of how they framed their perceived diet changes. This demonstrated traditional or hetero-normative domestic gender performativity that supports previous research on gender and food practices where women are leaders in household food provision (e.g., De Vault, 1991).

In summary these findings are reflected within the framework in Chapter 2 by demonstrating that masculine ideals shaped how men in the study perceived diet and diet changes. Although they became interested in nutrition they distanced their involvement from typically feminine nutrition concerns by reframing their food perceptions and practices in ways

that can be interpreted as reflecting masculine ideals. But there was a limit to how far reframing of food ideals would permit the men to engage in their own diets suggesting that a threat to masculinity prevented them from further involvement. Because they did not become more deeply engaged in their diets, (e.g., by assuming more traditional leadership feminine family food provision ideals and roles) there was a need to explore how the men's actual diet change practices occurred within a family context. The need to include a family context was reflected in the literature review and synthesis, which showed a lack of knowledge of the complex contributions that gender relations plays in shaping many men's health, food practices and prostate cancer experiences. The empirical study presented in this dissertation demonstrates that masculinities did not solely account for the limits to the men's diet changes and that gender relations were also implicated. How intricate gender relations linked to broader societal gendered power structures contributed to the men's diet change practices are discussed in the next section.

### **Masculinities and Femininities: Gender Relations and Power Dynamics**

Study findings presented in Chapter 4 of this dissertation provide a unique analysis of the intersection of expressions of gender through family food work. Men performed masculinity by limiting their dietary engagement and deferring responsibility for diet leadership to their wives. This was done in relation to women's performances of femininity through nurturing food practices and control of household food provision. Overall both men and women mutually worked to re-inscribe hetero-normative food roles that kept men out of the women's domestic food sphere. Doing so maintained the men's masculinity, the women's femininity and a stable couple power dynamic that ultimately shaped the men's diets and nutritional health. Although

couples were not asked how long they were married these relationships appeared to be longstanding and well established.

These findings provide a new and important understanding of men's food practices that build on Bourdieu's (1984) classic work where he recognised the complexity of gendered power dynamics in food. He suggested that despite male social dominance, when women avoid excessive meat consumption, they derive a local power or "authority" over men from doing so, as evident by the disgust that they might experience through its over-consumption:

Meat, the nourishing food par excellence, strong and strong-making, giving vigour, blood and health, is the dish for men, who take a second helping, whereas the women are satisfied with a small portion. It is not that they are stinting themselves; they really don't want what others might need, especially the men, the natural meat eaters, and they derive a sort of authority from what they do not see as a privation. Besides, they don't have a taste for men's food, which is reputed to be harmful when eaten to excess (for example, a surfeit of meat can 'turn the blood', over-excite, bring you out in spots etc.) and may even arouse a sort of disgust. (Bourdieu, 1984:192)

However, despite Bourdieu's (1984) early work there has been little attention to gender relations and food until recently. The importance of power relations has been noted in gender theory (Connell, 1995; Connell & Messerschmidt, 2005; Courtenay, 2000) but remained theoretically and empirically under-developed (Schippers, 2007). This study adds to this understanding by demonstrating how societal power structures are reproduced in couple interactions that prevent men from becoming more engaged in their diets. Female partners are known to play important roles in the health of men with prostate cancer and the findings presented provide a unique perspective not previously seen in the literature: women's accounts

of the men's diets and diet changes. Available here are new insights into how gender relations can constrain and/or provide permission and affirmation for men's food practices.

Masculinity is performed in relation to femininity and therefore understanding men's food practices is contingent on exploring femininities and food. Although Connell (1995) described gender relations as contextual and societal, she also noted that individual heterosexual relationships could be framed as micro versions of larger societal interactions. Thus gender relations is not just how masculinity is defined in relation to femininity, but also exists on a dyad level for heterosexual couples as shown by how study couples' expressions of gender interrelated. In the same way that social constructions of masculinity shape men's perceptions of food, women are influenced by social ideals of appropriate feminine food practices. Women in this study performed traditional feminine framing of food provision practices by shopping and cooking for their husbands as a form of nurturing as previously reported (Furst, 1997; Lupton, 2000). Women (and their husbands) positioned femininity as embodied by 'mothers' and carers, and therefore, important 'wifely' contributors to their husband's nutritional health. In contrast, participants positioned men as at best uninterested and at worst 'childish' and inept in nutrition and food work demonstrating how couples' interactions and gender relations were implicated in shaping the men's diets. Women maintained control of the couple's domestic food sphere, and in doing so preserved feminine ideals while simultaneously bolstering their husbands' masculinity by allowing them to maintain a masculine 'distance' from feminine dietary concerns and domestic food provision practices.

These findings demonstrate how gender relations maintain traditional power structures within the home and confirm Bourdieu's (2001) observation in Male Domination, that it is the

sexual division of labour that shapes and is shaped by patriarchy and gender inequality; thus men and women have distinctly different domestic roles:

The social order functions as an immense symbolic machine tending to ratify the masculine domination on which it is founded: it is the sexual division of labour, a very strict distribution of the activities assigned to each sex, of their place, time and instruments; it is the structure of space, with the opposition between the place of assembly or the market, reserved for men, and the house, reserved for women. (Bourdieu, 2001:9)

These findings also validate Lyons' (2009) admonition that taking into consideration gender relations provides a more complete picture of men's food practices than masculinity and food research currently offers and provides directions in reconstructing masculine food ideals.

We need to bear in mind that a gender relations approach is essential, and we cannot afford to focus on reconstructing masculinity along more healthy lines independently of femininity, or their interaction. (Lyons, 2009:408)

From this discussion it is apparent that exploring how men perceive diet and diet change provides important information on how masculinity helps shape their dietary perceptions and food practices. However, it is also evident that understanding men's health requires an exploration of how masculinities interact with femininities within couple dyads to shape men's food practices. This dissertation demonstrates that such understandings can be obtained by considering the relational intersections of masculine and feminine performances of food practices and how they sustain hetero-normative power dynamics and men's hegemonic masculine dietary ideals and ultimately their food practices. This is especially important in the context of prostate cancer because of the idiosyncratic and emasculating nature of the disease

and treatment sequelae. Women might attempt to bolster men's hegemonic masculinity by preventing them from experiencing further emasculations such as engaging in feminine self-care practices, in this case engaging in diet change. This research suggests that such attempts might be motivated by more than women's concern for the men's masculine identities but also to reinforce the women's feminine identity and retain their control of the domestic sphere, (re)stabilise couple power dynamics and ultimately sustain gender hegemony.

### **Intersectionality of Race, Class and Age**

These findings demonstrate how masculinities and gender relations can be interpreted as contributors to men's food perceptions and practices; however, the contributions of other health determinants are also acknowledged. Issues of ethnicity, race, age and class for example have not been explored within this data set but are thought to intersect with gender in shaping health behaviours in complex ways (Schulz & Mullings, 2006). In this sense, gender can be conceptualised as performed relative to social constructions of these determinants. For example, as Bourdieu (1984) found, tastes in certain foods signified class distinctions that might also be interpreted as class-based productions of alternative masculinities. Likewise ethnic or race differences in performances of masculinities might be expected.

Thus men from different classes might perform different masculine food ideals; however this analysis was not conducted on this small data set with relatively upper-middle class participants. There were no apparent class based patterns in men's adherence to masculine ideals using couple earnings as a marker for class. Several of the lowest earning couples (C4, C8, C12 and C13) made minor diet changes, although the highest earning couples (C7, C14, C11, C10, C9, C3) were found in all diet change clusters (none, minor and major). Likewise, age might contribute to differences in performances of gender, however, in this study the youngest couples

(C3 and C10) displayed similar gender relations patterns as the oldest couples (C1 and C2) where traditional gender roles were found. These findings demonstrate that the intersections of race, age and class with gender although beyond the mandate of this research study, need further investigation (Schulz & Mullings, 2006).

## **Reflections on the Research Process**

Some strengths and limitations of this qualitative research project are related to the nature of this approach to scientific enquiry and the goals of the research. Because little is known in this area, I sought to explore participants' perceptions of diet and diet change to discover how men with prostate cancer, and their female partners, perceive diet and food practices. I was therefore interested in exploring the participants' subjective understandings of reality, which helped me explain and find meaning in their social behaviours around diet (Charmaz, 2006; Morse & Field, 1995). In this section I outline some strengths and limitations of the research, discussed in relation to sampling characteristics, data collection, conducting separate interviews, my role as a researcher, and rigour and trustworthiness of the research.

### **Sampling Characteristics**

The small number of participants in this study can be viewed as a limitation because findings from this research cannot be generalised to other populations; however, that was not the goal of this study. The sample size of 28 allowed for in-depth explorations of the dietary issues of each participant and consequently much richer detail than could be obtained from larger sample sizes, and is considered adequate for qualitative studies of this nature (Sandelowski, 1995).

Although primarily a convenience sample, purposive sampling was attempted to ensure that the 14 couples recruited were able to provide relevant information to enhance the developing understanding of how gender and gender relations were implicated in their food choices. Hence for the purpose of this research, participants were heterosexual couples who were cohabiting, responsible for their own food provision and the men were interested in talking about diet.

There were several challenges I experienced in recruiting a wide variety of men and their female partners for this study. To recruit participants, I attended prostate cancer support group meetings, information forums and clinics. Recruitment was generally difficult because men with prostate cancer, their partners and caregivers were typically reluctant to discuss diet or become involved in research. At some venues I was allowed to distribute notices and brochures while at others I was permitted to directly approach men or couples. I talked to potential recruits at length to pre-screen them for eligibility before inviting them to participate. Many of the men who approached me with interest in this study had been long-term (more than 5 years) prostate cancer survivors and therefore ineligible for my study. Similarly, single men and men who did not wish their wife's involvement in the research were also ineligible.

Asking men to complete food journals was sometimes useful in eliciting the men's engagement with their diets and involvement in this research. Several men expressed interest in keeping journals and were eager to comply with this part of the research. However, completing a food journal was a deterrent for many other men who lost interest in this study when they understood the time commitment in completing a journal, and then declined to participate. Similarly, some men declined when they realised that their wife was expected to participate as well, citing that they did not think she would be interested.

For the majority of couples it was the man who initially approached or contacted me, except for one couple where a woman ‘volunteered’ her husband to me. Because of this I also attempted to recruit men through their female partners, however, most of these attempts failed, and I re-focused my recruitment attempts on men who were willing to talk to me about diet. Consequently men in this study might not represent a majority of men who are typically expected to be uninterested in diet and would not wish to participate in such a study.

Although I attempted theoretical sampling to recruit a diverse group of participants this was not always possible with the time and resources available for a small pilot project of this kind. Consequently I relied primarily on available volunteers who tended to be well-educated, middle-class and of Euro-Canadian background and most men were diagnosed with low-risk cancer (see Appendix 15 – participant characteristics). Thus the resulting participants reflected the characteristics of the majority of attendees at the recruitment venues. Ideally, I would have preferred a larger selection of couples to theoretically sample from but I did not have sufficient numbers of volunteers to do this adequately. Regardless, I was able to recruit a range of ages, a couple with co-habiting young children and two men with wives of Asian-Canadian heritage. Otherwise, this was a moderately homogeneous, convenience sample, thus diet perceptions of men with prostate cancer from other socio-economic groups or living situations were not well-represented. Nevertheless, participants gave detailed and rich accounts of their dietary perceptions and food practices that allowed me to develop an in-depth theoretical understanding of the diet and diet change understandings of this group of men and women.

### **Data Collection**

Findings from this research gave rich and deep insight into this particular context, which contributes to growing theoretical understandings of why men engage in certain food practices.

This was achieved by engaging the participants in in-depth interviews in their homes. Open-ended questions allowed for maximum flexibility and participants were freely able to describe their perceptions, feelings, beliefs, attitudes and practices in detail. Because the interviews were not restricted to specific questions I was able to explore new ideas as they arose for each participant and tailor questions to each participant accordingly.

The food journals that the men completed assisted in this by providing concrete examples of eating events and allowed the men to think deeply about their diets. Thus the interviews were relaxed, informal and conversational, which provided relevant data with thick descriptions of these understandings from an ‘insiders’ perspective (Dilley, 2000). The flexibility in research design allowed for some aspects of theoretical sampling within the confines of convenience sampling. Accordingly I adjusted some participants’ interview questions about their food practices as data collection progressed and therefore was able to explore and saturate different concepts more fully as they emerged.

### **Separate Interviews**

Interviews were conducted individually and privately to allow the participants freedom to express themselves with candour and without censure from their partners. This was especially important for interviewing the men who might have otherwise relied on their wives to answer for them if couples were interviewed together. This was reflected by the tendency of some men to ask their wife to complete their food journals for them and for some of the women to offer to ‘help out’ with the men’s interviews to ensure that the ‘proper’ account of family food practices was provided. For example, even though they were instructed to fill out their food journals independently, two men relied on their wives to do it for them and another asked his wife to type

it for him and ensure that it was accurate. Even so, a few men had difficulty in remembering or talking about some healthy eating details and at times deferred questions to their wives' interviews rather than answer for themselves. This suggested that for some men, if his wife had attended the interview with him, the man would have asked for her input rather than provide his own perceptions.

In addition, food and eating can be contentious issues for some couples. Several participants were critical of their spouse's food practices and some couples disagreed on the nature and extent of the men's diet involvement. For example, one man perceived that he made major diet changes, despite his wife's assertions that she already provided him a healthy diet and dismissed his changes as minor and unimportant. This is especially salient since the gender relations framework used required examining gender power structures, which might also be sources of couple contention.

Generally, the men easily discussed their dietary practices, especially their less-healthy habits, which they might not have felt free to do so if their wives were present. Likewise, the women were free to describe their husbands' eating habits with candour that might have been hindered by the men's presence. Although conducting joint interviews might have provided a different, dyadic dimension to the data, the issues of intrusion, power dynamics and differences of opinion persuaded me to conduct separate and private interviews (Morris, 2001). Future and larger studies might benefit from conducting both joint and separate interviews to explore these issues more fully, however, this was beyond the scope of this project. Therefore, to ensure that gender relations was fully explored in the interviews, I probed each participant about their partner's and their own roles in household food practices. In this way I was able to expose

individual food roles and tacit power relations within couples that might not have been uncovered in dyad interviews.

### **My Role as Researcher**

I recognise that as the researcher, I was a co-constructor of these interviews and that the resulting analyses emerged from my interpretations of the data. Interviews were guided and enhanced by my training and experiences in interviewing men about prostate cancer and health (e.g., Oliffe, Davison, Pickles, & Mroz, 2009). As a male researcher I felt prepared to interview other men about topics men are often unable or unwilling to discuss: nutrition and prostate health (Oliffe & Mróz, 2005).

As a man, power issues might have been at play in either men's or women's interviews. Women might have interpreted my interest in their food perceptions as a form of verification of their femininity and nurturing of their husbands. Alternatively some might have felt threatened by questions about their household food provision practices. For example, a few of the women seemed reluctant to be interviewed and only agreed to do so at their husband's request. It was challenging for me to get some of them to talk in-depth about some of the issues and they were not interested in long, deep discussions. For some of these women, it was apparent that household food was their domain and that their husband's interest in food did not concern them or alter their usual food provision. However, most of the women appeared eager to talk to me about their husbands' diets to ensure I understood the 'truth' and not just the men's (incomplete) understandings of the women's food provision. Likewise men might have been threatened by questions about their personal food perceptions because they might have interpreted my interest

as a 'test' of their masculinity. However, since most of the men eagerly volunteered for the study, they were patient and willing participants.

Having a women interviewer might have created a different interview interaction, but I remained open and tried to maintain a 'neutral' demeanour to ensure participants were at ease to speak freely. Other than gender, my age and educational background might have been more of an influence on the interview outcomes. Because I identified myself as a nutrition student, participants tended to view me as 'young' and a 'nutrition expert' and they might have used the interviews as a means to explain, justify and verify their beliefs and knowledge about diet and prostate cancer. This was less apparent for a few of the younger participants who viewed me more as a peer than a 'young' student. Likewise issues of class and education might have influenced the interviews. For example, two of the men were professors and one woman was a dietitian, who might have viewed the interview as an opportunity for mentoring. Alternatively, several of the participants were trades or service workers and might have been intimidated by my education. I therefore strove to present myself as a competent and interested learner seeking the participants' unique perceptions and beliefs about diet without judgement.

I also acknowledge that my own background, education, class and theoretical sensitivity contributed to all aspects of this research. I was trained in molecular biology and nutritional biochemistry and approach diet and healthy eating from a traditional scientific stance. My belief in the efficacy of diet for prostate cancer survivorship influenced my attitudes towards diet and self-care and would have helped shape the design and delivery of interviews. For example I assumed that the men would be interested in making healthy diet changes specifically for prostate cancer and thus initially directed questions in that direction.

As a social science researcher embracing a constructionist understanding of masculinity and gender relations I was prepared to critically examine men and women's performances of gender through food, thus exposing those tacit assumptions often held by people as natural and unquestioned. This presented a challenge during the interviews as I questioned the naturalness of men's and women's food 'roles' as the participants described them. I wished to understand their perspectives yet also not appear to contest their beliefs. This was not always easy to accomplish and there were questions that were not well received because they challenged participants' beliefs. For example when I asked some men about their roles in food provision they interpreted my questioning to imply that they should be more engaged in family food and consequently defended their lack of food work involvement. These tensions were negotiated differently with each participant and were part of the 'messiness' associated with this type of research.

Tacit understandings about food and gender extended into the data analysis where my own assumptions about men's and women's gender ideals sometimes delayed me gaining a deeper understanding of the data. For example, I at first assumed that women's control of the domestic food signified a challenge to gender hierarchy rather than existing within patriarchy. This illustrates the challenges of examining social structures, which guide both the participants' and researcher's beliefs and behaviours. As a man questioning gender food roles I was keenly aware of my own privileged interpretations of diet and food roles in society and in my own marriage. Although a man, I felt that I could view and interpret gender issues from a unique position as both a student of gender theory, and also as an 'outsider' from traditional hetero-normative couple roles because my spouse is also a man. My position within a subordinated masculinity offered me a novel view of masculinity and gender relations that a more

‘hegemonic’ man might not have experienced thus allowing a different dimension to the analysis and research product.

### **Rigour and Trustworthiness of the Research**

My knowledge and experience helped shape the interviews and subsequent analysis; however, I strove to ensure that the findings were represented in the data and therefore left a detailed audit trail of codes, and memos to document how the analysis was conducted and to enhance the study rigour and trustworthiness (Morse & Field, 1995). Several methods were used to enhance trustworthiness of the findings. In-depth interviews were conducted to ensure rich and meaningful discussions with participants. Both men with prostate cancer and their female partners were interviewed to provide alternate and sometimes diverse perspectives on the men’s food practices. Data triangulation was performed by using different sources of data including, food journals, field notes and dyad summaries. Periodic team meetings were held with my supervisory committee to discuss the data as coding, analysis and writing progressed to enhance the credibility of the findings.

### **Implications for Future Research**

Because this study group was somewhat homogeneous, the dietary perceptions of different sub-groups of men, including single-living, institutionalised, younger men, men with cohabiting children, men living in same-sex relationships and men from other social class, cultures and ethnicities should be included in future research. Findings from this project might help inform future development of food habit survey instruments and health promotion programs targeting men with prostate cancer. In addition these insights would assist oncology/nutrition researchers to incorporate greater understandings of how gender influences men’s dietary

perceptions and practices in relation to health and disease. For example, surveys might explore the extent to which the rationales men provided for diet change (or lack thereof) are prevalent in various groups of men.

The food choice process model as presented by the Cornell food choice research group (Furst, Connors, Bisogni, Sobal, & Falk, 1996; Sobal & Bisogni, 2009) would benefit from incorporating information on gender based food choice research. These findings suggest that men's food choices are shaped by gender in several ways that are different to women that could inform model constructs. Men's food ideals and personal factors that influence food choice are shaped by masculine food ideals. Masculinity might also shape men's 'value negotiations', described in the model as necessary for developing personal food systems because men might have different value systems about food than women. These findings also show that masculinity and femininity interact to influence men's food choices. Although men might perceive food and food choices differently than women, their overall food practices also appear more heavily influenced by such interactions in their social context. Generally, men's food interactions with women as described here, suggest that the context of food choices are important, especially the social context of gendered relations. Further research is needed to determine how gender can be incorporated more fully into this model to illustrate the differences in men and women's food choice processes.

### **Implications for Practice**

Research findings from this project will contribute to ongoing research and development of nutrition education and support services for men with prostate cancer, enhancing the ability of these programs to meet the specific needs of their client population. Increased understanding of the nutrition education and support needs of men with prostate cancer and their families will

have policy implications regarding the provision of nutrition services within cancer care. Health promotion programs might consider how masculinity might influence the uptake of nutrition services and how women might be appropriately involved. Findings demonstrate that exploring masculinity alone is necessary but insufficient for understanding men's diets. Nutrition education and program planning for men is complex and findings show how understanding gender relations and the role that women play in men's diets is essential for success.

Nutrition intervention program developers need to understand that reframing healthy eating as masculine might change men's perceptions about food but might not necessarily change their food practices. Program developers must also consider how food practices are constructed within couple dynamics and how interventions might disrupt or sustain these power relations. Therefore nutritionists must consider how the women in the lives of men with prostate cancer will respond to nutrition programs and men's increased interest in food. Interventions that do not oppose hetero-normative gender food roles might work for some couples that are unlikely to change traditional food practices, and therefore the women should be targeted for diet change. Other approaches might encourage men and women to consider how these gender food roles constrain men and their food practices, and then encourage men to become more involved in their own diets. Incorporating knowledge of how gender and gender relations shapes the diet perceptions and food practices of men with prostate cancer and their female partners will ensure that these programs are comprehensible, efficacious and ultimately relevant to clinical practice (Davison, 2003). As results of ongoing research clarify the biological relationships between diet and prostate cancer, the knowledge provided by this study will be critical for development of programs that will result in the behaviour changes needed to reduce prostate cancer morbidity and mortality.

## Conclusions

This project adds to the growing body of literature in men's health and food practices, which seeks to explain why men eat what they eat and why men's diets are often unhealthy compared to women. Findings from this dissertation contribute to ongoing men's health research by showing how men's food choice behaviour, and consequently their nutritional health, is shaped by psychosocial influences, including gender, masculinity and femininity, family and gender relations. Furthermore, this study extends current understandings by examining food choices of a previously unstudied subgroup of men who have experienced prostate cancer, and includes their female partners.

Jean Anthelme Brillat-Savarin, the French philosopher and gastronome, associated food and cuisine with a person's character when he wrote in 1825: "Tell me what kind of food you eat, and I will tell you what kind of man you are" (Brillat-Savarin, 1825/1854). Findings from this dissertation demonstrate how this is true for men with prostate cancer nearly two centuries later: how food practices are linked to what it means to be a man in modern Western society, and how experiencing prostate cancer creates a dilemma for men who must decide what kind of man they want to embody through the kind of food they eat. Hegemonic gender theory has been useful in showing how masculinity shapes constructions of food ideals and how they contribute to men's perceptions of food and their actual food practices. These findings address a knowledge gap by illuminating these constructions in previously unstudied contexts, prostate cancer, and framed with gender relations. By responding to Lyon's (2009) appeal for an integration of gender relations to masculinity and men's health research, I add a novel dimension to understanding how interactions between men and women must also be better understood. Women are also influenced by hegemonic masculine ideals about how the men in their lives

should act around food, as well as feminine ideals guiding their own behaviours. In the context of prostate cancer, these findings demonstrate how couple's expressions of masculinity and femininity interact to shape and constrain men's food practices. These insights increase our understanding of men's food choice behaviour and inform future research in men's nutritional health practices and assist nutrition programmers in developing services for men with prostate cancer, and the women in their lives.

## References

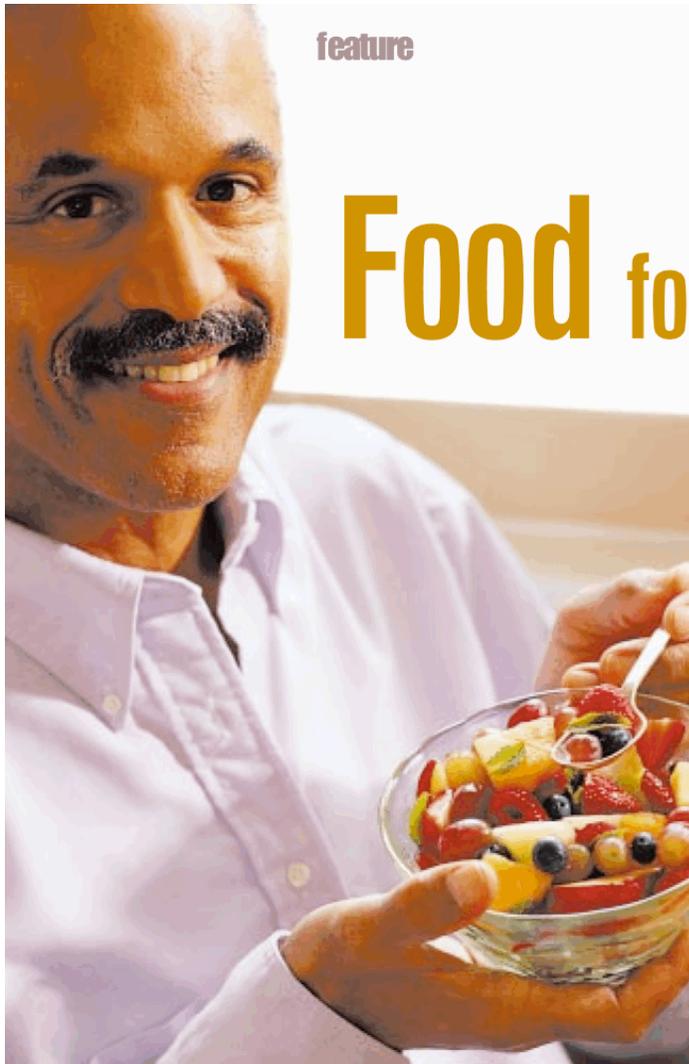
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, Massachusetts: Harvard University Press.
- Bourdieu, P. (2001). *Masculine domination*. Stanford, California: Stanford University Press.
- Brillat-Savarin, J. A. (1825/1854). *Physiologie du Gout, ou Meditations de Gastronomie Transcendante (Fayette Robinson trans.)*. Philadelphia: Lindsay&Blakiston p25 (Original work published 1825).
- Charmaz, K. (2006). *Constructing grounded theory*. London; Thousand Oaks, California: Sage Publications.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society, 19*(6), 829-859.
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine, 50*(10), 1385-1401.
- Davison, B. J. (2003). Utilizing research to guide clinical practice in prostate cancer education. *Oncology Nursing Forum, 30*(3), 377-379.
- Demark-Wahnefried, W., Aziz, N. M., Rowland, J. H., & Pinto, B. M. (2005). Riding the crest of the teachable moment: Promoting long-term health after the diagnosis of cancer. *Journal of Clinical Oncology, 23*(24), 5814-5830.
- Deutsch, J. (2005). "Please pass the chicken tits": Rethinking men and cooking at an urban firehouse. *Food & Foodways, 13*(1/2), 91-114.
- DeVault, M. L. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
- Dilley, P. (2000). Conducting successful interviews: Tips for intrepid research. *Theory Into Practice, 39*(3), 131-137.

- Furst, T., Connors, M., Bisogni, C. A., Sobal, J., & Falk, L. W. (1996). Food choice: A conceptual model of the process. *Appetite*, 26(3), 247-265.
- Furst, E. L. (1997). Cooking and femininity. *Women's Studies International Forum*, 20(3), 441-449.
- Jensen, K. O. D., & Holm, L. (1999). Preferences, quantities and concerns: Socio-cultural perspectives on the gendered consumption of foods. *European Journal of Clinical Nutrition*, 53(5), 351-359.
- Lupton, D. (2000). 'Where's me dinner?': Food preparation arrangements in rural Australian families. *Journal of Sociology*, 36(2), 172-186.
- Lyons, A. C. (2009). Masculinities, femininities, behaviour and health. *Social and Personality Psychology Compass*, 3(4), 394-412.
- Maliski, S. L., Heilemann, M. V., & McCorkle, R. (2002). From "death sentence" to "good cancer": Couples' transformation of a prostate cancer diagnosis. *Nursing Research*, 51(6), 391-397.
- Morris, S. M. (2001). Joint and individual interviewing in the context of cancer. *Qualitative Health Research*, 11(4), 553-567.
- Morse, J. M., & Field, P.-A. (1995). *Qualitative research methods for health professionals* (2nd ed.). Thousand Oaks: Sage Publications.
- Moyad, M. A. (2006a). Step-by-step lifestyle changes that can improve urologic health in men, Part I: What do I tell my patients? *Primary Care: Clinics in Office Practice*, 33(1), 139-163.
- Moyad, M. A. (2006b). Step-by-step lifestyle changes that can improve urologic health in men, Part II: What do I tell my patients? *Primary Care: Clinics in Office Practice*, 33(1), 165-185.
- Moynihan, C. (1998). Theories in health care and research - Theories of masculinity. *British Medical Journal*, 317(7165), 1072-1075.
- Oliffe, J. L. (2005). Constructions of masculinity following prostatectomy-induced impotence. *Social Science & Medicine*, 60(10), 2249-2259.

- Oliffe, J. L., Davison, B. J., Pickles, T., & Mroz, L. (2009). The self-management of uncertainty among men undertaking active surveillance for low-risk prostate cancer. *Qualitative Health Research, 19*(4), 432-443.
- Oliffe, J. L., & Mróz, L. (2005). Men interviewing men about health and illness: Ten lessons learned. *The Journal of Men's Health & Gender, 2*(2), 257-260.
- Robertson, S. (2007). *Understanding men and health: Masculinities, identity, and well-being*. Maidenhead; New York: McGraw Hill/Open University Press.
- Roos, G., & Wandel, M. (2005). "I eat because I'm hungry, because it's good, and to become full": Everyday eating voiced by male carpenters, drivers, and engineers in contemporary Oslo. *Food & Foodways, 13*(1/2), 169-180.
- Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing & Health, 18*(2), 179-183.
- Schippers, M. (2007). Recovering the feminine other: Masculinity, femininity, and gender hegemony. *Theory & Society, 36*(1), 85-102.
- Schulz, A. J., & Mullings, L. Eds. (2006). *Gender, Race, Class, and Health: Intersectional Approaches*. San Francisco, California: Jossey-Bass.
- Sobal, J. (2005). Men, meat and marriage: Models of masculinity. *Food & Foodways, 13*(1/2), 135-158.
- Sobal, J., & Bisogni, C. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine, 38*(0), 37-46.

## APPENDICES

Appendix 1. Food for Thought © Parkurst, 2003 (Used by permission from *Our Voice*)



feature

# Food for thought

How diet affects prostate cancer growth

by Dr. Neil Fleshner

**S**ome unique features of prostate cancer convince us that diet may be a major factor behind its development. In addition, changing your diet, even after you're diagnosed, may change how the disease behaves and slow down its growth.

### Around the world

Epidemiologic studies that attempt to uncover risks or protective factors associated with prostate cancer provide some telling hints about its ultimate cause. The first has to do with how it varies around the world. Extremely common in Western nations, this disease is

**Dr. Neil Fleshner** is Head of Urology at the University Health Network and of the Genitourinary Cancer Program at Princess Margaret Hospital, in Toronto.

actively rare in other parts of the world — especially the Far East. In countries such as Japan, China and Thailand, few men are diagnosed with, or die from, prostate cancer.

Two possibilities exist to help explain this phenomenon. The first is that Asian populations may be protected by heredity from prostate cancer, the second that elements in their environment (food, culture, levels of pollution) work against the development of the condition. To sort out this issue of “genes versus environment,”

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researchers have studied Asians who've migrated to the West. In these groups, the risk of developing prostate cancer increases considerably — by the second generation, it's virtually the same as that of native Westerners. The suggestion here is that environmental factors such as diet, and not genes, are primarily responsible for most prostate cancers. On the contrary, if the explanation were genetics, Asian men would still have a low chance of developing the disease once they've moved to the West.

Scientists have also gained insight into the origins of prostate cancer from autopsy studies examining the prostates of men who die from other causes. These have been done in various countries, and many of them have concluded that the chances of possessing microscopic amounts of prostate cancer cells are universal! Men in both low-risk nations, like China and Japan, and high-risk Western countries, seem to develop small amounts of prostate cancers as they age. The difference lies in the quantity — compared to men in the West, Asian men have only small amounts of cancer at autopsy. It seems that the development of the very first cluster of prostate cancer cells is less important than the rate at which those cells grow. In other words, most men in Asia have small amounts of prostate cancer cells, but these grow so slowly that the vast majority of them die at a ripe old age from something else.

#### **You are what you eat**

One recent autopsy study shows us that prostate cancer cells are already present in 30% of men in their 30s! This means that we might have literally decades in which to act to slow or stop these cells from multiplying. In addition, the growth of these existing cells appears to be affected by diet. It's entirely possible that changing dietary practices may contribute to slowing disease progression in men diagnosed with prostate cancer, or reducing the chance of recurrence in a patient who's already undergone surgery or radiotherapy.

#### **No quick fix**

Future research will help to prove the worth of these nutrients as cancer fighters beyond a

### **Cut the fat**

**Fat consumption** is one of the major dietary differences between men in Asia and the West. An average North American male consumes between 35 and 40% of all calories from fat, compared to Asian men whose caloric intake is made up of 20-25% fat. Studies show that, compared to men without prostate cancer, men who have the disease tend to eat more fat. Saturated fats — from animal products such as meats and cheese — appear to raise the risk of cancer more than unsaturated (plant-derived) fats. A Québec City study of men with prostate cancer who consumed high amounts of saturated fat found that their tumours grew three times faster. What's the message here? The number one recommendation is to reduce fat intake to 20-25% of total calories and to minimize the amount you get from animal sources.



### **Selenium**

**Selenium**, a trace element, is difficult to get in a consistent manner because intake depends on the concentration of selenium in the soil in which your food was grown. For instance, a vegetable grown in Brazil may be high in selenium, whereas the same one produced in Canada may have low concentrations. Canada is considered a low-selenium country. In fact, the only food with a consistently rich source of selenium is the Brazil nut. Dietary supplements with selenium are available.

The interest in selenium as a means of preventing prostate cancer came from a skin cancer prevention study involving 1,200 men. Participants were randomly selected to receive either selenium or placebo. The results, analyzed ten years later, showed that while skin cancers were not prevented, the men allocated to selenium had a 66% less chance of getting prostate cancer. Once again, these results are particularly valid and interesting because they come from a randomized trial (see Vitamin E, above). More laboratory studies, including some from Toronto, have shown that the growth of human prostate cancer cells is slowed by selenium. Supplemental selenium is considered safe at the recommended dose of 200 micrograms per day.



### **Vitamin E**

**Vitamin E**, also known as alfatocopherol, is a natural antioxidant found in oils from plants such as nuts or avocados and other cooking oils. Vitamin E is a fatty substance, so getting enough of it in a low-fat diet may require supplementation with natural source capsules.

The vitamin E/prostate cancer prevention link is relatively new. A large study aimed at using vitamin E to help reduce lung cancer in the 1990s found that although it wasn't successful in cutting down on the incidence of this cancer, it lessened the odds of developing prostate cancer by 30% after four years — and, even better, of dying from it by 41% after six years. Further, since these data came from a randomized trial — meaning that the subjects were selected "randomly," or by chance, to receive either vitamin E or placebo (a dummy pill containing no medication) — the results are particularly credible. Additional research from Toronto has also shown that the growth of prostate cancer cells can be inhibited with vitamin E. Many studies are now underway using vitamin E in the context of prostate cancer prevention. Although we should probably wait for the results, patients who are not eligible to participate in these trials may consider taking 400-800 IU (international units) per day.



## Lycopene

**Men who eat tomatoes** have a lower risk of developing any kind of cancer, and are 33% less likely to develop prostate cancer in particular. Tomatoes are rich in lycopene, a powerful antioxidant — it's the pigment that turns the tomato red. Other red foods, such as watermelon and guava, also have lycopene, but yellow tomatoes don't.

Processed or cooked forms of tomatoes — sauces, soups, juice and paste — contain much more bioavailable lycopene than raw tomatoes. The cooking process disrupts the cell membranes, making the substance easier to absorb. Adding small amounts of oil in sauce and soup also facilitates digestion.

It's important to be aware that most supplements that claim to have lycopene actually contain only a very small dose — 2 to 5 mg. That's not even close to the 30 to 50 mg of lycopene you need per day from all sources, both dietary and supplements.

## Soy

**Unlike people in the Western world,** Asians are large soy consumers. Soy contains natural estrogens known as phytoestrogens or isoflavones. Since prostate cancer is an androgen-sensitive cancer, theoretically estrogen consumption could be beneficial. Isoflavones can also inhibit prostate cancer pathways involved in new blood vessel formation that a tumour needs to grow or in metastases (new sites in the body where prostate cancer spreads and tries to get a foothold).

Soy is now available in many forms, including supplement powders, in health food and grocery stores.



## Vitamin D

**Not actually a vitamin but a steroid,** vitamin D is important in calcium metabolism and bone health. Increasing evidence suggests that vitamin D may help prevent many types of cancers, including of the prostate. It can interfere with cancer cell proliferation and kill prostate cancer cells. Vitamin D is primarily obtained from sunlight exposure and supplemented milk products.

Many elderly Canadians are relatively vitamin D deficient, especially during the winter months. Further, foods that are high in calcium can decrease the body's own production of vitamin D. It follows that some sunlight exposure is probably healthy for you after all! And while calcium is beneficial, it's not a good idea to overdo it either. Vitamin D supplements are an option — the recommended daily dose is 400 to 1000 IU.

## The list goes on...

**Making changes** like replacing that high-fat hamburger with a soy tofu burger, loading up on tomatoes or reinforcing your daily diet with vitamin D or selenium supplements may help to prevent or slow down the growth of prostate cancer. While those mentioned have the strongest scientific evidence supporting their benefits, other nutrients that have been studied less but still deserve honourable mention include red wine (in moderation), green teas, garlic and cruciferous vegetables like cauliflower and broccoli.

reasonable doubt. Participation in clinical trials on nutrition can also be valuable for anyone who wants to increase their knowledge of diet and cancer. No one food or diet supplement alone will make up for a lifestyle that neglects general good health. It makes practical sense to adopt a healthy lifestyle that includes stopping smoking and getting exercise. Also, you should be careful about the dosage and quality of any

supplements you take. Stick to reputable brands, and don't overdose — too much of some kinds of vitamins and food substances can produce harmful effects. Finally, it's a good idea to tell your doctor about vitamin and mineral supplements you're taking, because some of them can interact badly with certain medications you might be on for cancer or other ailments.

## Appendix 2. UBC Research Ethics Board's Certificate of Approval



The University of British Columbia  
Office of Research Services  
**Behavioural Research Ethics Board**  
Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

### CERTIFICATE OF APPROVAL- MINIMAL RISK RENEWAL

<b>PRINCIPAL INVESTIGATOR:</b> Gwenneth E. Chapman	<b>DEPARTMENT:</b> UBC/Land and Food Systems/Human and Animal Nutrition	<b>UBC BREB NUMBER:</b> H04-80371
<b>INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:</b>		
<b>Institution</b>		<b>Site</b>
Vancouver Coastal Health (VCHRI/VCHA)		Vancouver General Hospital
UBC		Vancouver (excludes UBC Hospital)
BC Cancer Agency		Vancouver BCCA
<b>Other locations where the research will be conducted:</b> N/A		
<b>CO-INVESTIGATOR(S):</b> John L. Oliffe Joan L. Bottorff Cheri L. Van Patten Lawrence Mroz		
<b>SPONSORING AGENCIES:</b> Canadian Institutes of Health Research (CIHR) Donation Prostate Cancer Foundation of BC UBC Hampton Research Endowment Fund - "Dietary Beliefs and Practices of Men with Prostate Cancer"		
<b>PROJECT TITLE:</b> Dietary Beliefs and Practices of Men with Prostate Cancer		
<b>EXPIRY DATE OF THIS APPROVAL: August 13, 2010</b>		
<b>APPROVAL DATE: August 13, 2009</b>		
The Annual Renewal for Study have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		
<p>Approval is issued on behalf of the Behavioural Research Ethics Board</p> <hr/> <p>Dr. M. Judith Lynam, Chair Dr. Ken Craig, Chair Dr. Jim Rupert, Associate Chair Dr. Laurie Ford, Associate Chair Dr. Anita Ho, Associate Chair</p>		

### Appendix 3. Recruitment Advertisement

## **VOLUNTEER COUPLES NEEDED FOR: DIET & PROSTATE CANCER STUDY**

*THIS STUDY IS ABOUT THE "DIETARY BELIEFS AND  
PRACTICES OF MEN WITH PROSTATE CANCER".*

The couple must include a man who has been diagnosed with Prostate Cancer within the past 5 years and his wife or partner who lives with him.

Men participating in the study will be asked to complete a food journal wherein he will record everything he eats and drinks for one week. This will be followed by private, separate interviews with each man and his wife or partner lasting about 1 - 1.5 hours each. During the interviews, we will talk about diet, health, and prostate cancer. Each participating couple will receive one \$30 gift certificate for a bookstore.

### **FOR MORE INFORMATION, PLEASE CONTACT:**

**LARRY MROZ, GRADUATE STUDENT RESEARCHER (UBC)\*  
(604) 822-5057, OR EMAIL [lwmroz@interchange.ubc.ca](mailto:lwmroz@interchange.ubc.ca)**

*\*This project is research for a graduate thesis.*

Principle Investigators: Dr. Dr. Gwen Chapman & Dr. Joan Bottorff  
Co-Investigator Dr. John Oliffe

THE UNIVERSITY OF BRITISH COLUMBIA



Food, Nutrition and Health Faculty of Land and Food Systems  
2205 East Mall Vancouver, BC, V6T 1Z4  
Phone: (604) 822-6874 Fax: (604) 822-5143

## Appendix 4. Recruitment Brochure



### Why Study Eating and Prostate Cancer?

The purpose of this study is to examine how men with prostate cancer make decisions about what they eat.

Many men with prostate cancer and their families show interest in the potential role of nutrition in prevention, treatment and recovery from prostate cancer.

However, little is known about their actual dietary beliefs and practices.

Further understanding of these issues is needed for development of effective educational and counselling resources.

**Project Title:**  
"Dietary Beliefs And Practises Of Men With Prostate Cancer"

**Investigators:**  
**Dr. Gwen Chapman,**  
Food, Nutrition & Health, UBC  
Phone: (604) 822-6874

**Dr. Joan Bottorff**  
Health & Human Development,  
UBC-O, Phone: (250) 807-9901

**Dr. John Oliffe,**  
School of Nursing, UBC,  
Phone: (604) 822-7638

**Graduate Student:**  
Lawrence Mróz,  
Food, Nutrition, and Health

*Parts of this research will be used for a PhD thesis in Human Nutrition at UBC, and is funded by a UBC Humanities and Social Sciences Grant, a Psychosocial Oncology Research Training Fellowship (CIHR Strategic Training in Health Research Initiative) and a scholarship from the BC Foundation for Prostate Disease*

**Contact Larry Mroz**  
**Tel: 604-822-5057**  
**Email:**  
**[lwmroz@interchange.ubc.ca](mailto:lwmroz@interchange.ubc.ca)**



**VOLUNTEER  
COUPLES  
NEEDED FOR:**

**Research Project  
on FOOD, EATING  
& PROSTATE  
CANCER**

University of British Columbia

**Food, Nutrition and Health**  
Faculty of Land and Food Systems  
2205 East Mall Vancouver, BC, V6T 1Z4  
Phone: (604) 822-5057  
Fax: (604) 822-5143  
Email: [lwmroz@interchange.ubc.ca](mailto:lwmroz@interchange.ubc.ca)



**We are looking for couples to volunteer for a study on food, eating & prostate cancer.**

You and your spouse could be eligible to participate if:

1. The man has been diagnosed with Prostate Cancer within the past 5 years
2. You live together.
3. You are willing to talk about what you eat and why.

**Participating in this study will involve the following:**

Men will be asked to complete a *food journal* in which you will record what you eat and drink for one week.

This will be followed by separate *interviews* with each of you, which will be:

- Private (food journal will be discussed in men's interviews only)
- Tape recorded
- Held at UBC, in your home or at another convenient location of your choice
- Lasting about 1 - 1.5 hours each
- During the interviews, we will talk about food, eating, health, and prostate cancer.
- Each participating couple will receive one \$30 gift certificate.

**Are you interested in talking about food & eating and prostate cancer?**

- ✓ Have you been diagnosed with prostate cancer within the past 4 years?
- ✓ Are you and your wife responsible for your own food?
- ✓ Are both of you willing to participate in this study?

To volunteer or for more information please fill out the following contact information or contact me directly:

Name:

Address:

Telephone:

Email:

Thanks!

**Larry Mróz**  
**University of British Columbia**  
**Food, Nutrition and Health**  
**2205 East Mall**  
**Vancouver BC V6T 1Z4**

Telephone: (604) 822-5057  
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Email: lwmroz@interchange.ubc.ca

## Appendix 5. Consent Form for Men with Prostate Cancer

### THE UNIVERSITY OF BRITISH COLUMBIA



#### **Food, Nutrition and Health**

Faculty of Land and Food Systems

2205 East Mall

Vancouver, BC, V6T 1Z4

Phone: (604) 822-6874

Fax: (604) 822-5143

#### **Consent Form (Men with prostate cancer)**

#### **Project Title:**

DIETARY BELIEFS AND PRACTICES OF MEN WITH PROSTATE CANCER

#### **Investigators:**

**Dr. Gwen Chapman**, Food, Nutrition and Health, UBC, Phone: (604) 822-6874

**Dr. Joan Bottorff**, Health & Human Development, UBC-O, Phone: (250) 807-9901

**Dr John Oliffe**, School of Nursing, UBC, Phone: (604) 822-7638

#### **Graduate Student:**

**Lawrence (Larry) Mróz**, Food, Nutrition, and Health, Phone: (604) 822-5057

(Parts of this research will be used for a PhD thesis in Human Nutrition at the University of British Columbia)

**Introduction:** Many men with prostate cancer and their families show interest in the potential role of diet in prevention, treatment and recovery from prostate cancer. However, little is known about their actual dietary beliefs and practices. Further understanding of these issues is needed for development of effective educational and counselling resources.

(Note that although this study is about diet, it is important to consider that diet is only one aspect of prostate cancer prevention and treatment research and that many other factors are involved in the occurrence of prostate cancer.)

You have been invited to participate in this study because you were diagnosed with localised prostate cancer and have completed definitive treatment within the past 5 years, or are on a 'watchful waiting' protocol.

**Purpose:** The purpose of this study is to examine how men with prostate cancer make decisions about what they eat.

**Study Procedures:** Your involvement in this study will include several components, involving a total of 2 to 4 hours of your time:

1. Food Journal. You will be given a booklet to use as a Food Journal. You will be asked to keep a record of everything that you eat and drink for one week. This booklet will be used by the interviewer to ask you questions about what you ate and the reasons for doing so.
2. Interview. In a private, tape-recorded interview, a researcher will ask you to talk about what you eat and drink on a daily basis, and how those eating habits relate to your health concerns and personal preferences. You will also be asked to talk about how food-related decisions are made in your family, including who makes the decisions, how family members influence each other, and why you make the food choices that you do. We will ask who shops for and prepares the food and who makes these decisions. We will ask you what your definition of healthy eating is and your opinion of the role of diet in prostate cancer recovery. The interview will last approximately 1 to 1.5 hours.
3. Follow up interviews. You may be asked to participate in an additional interview, to follow up on issues raised during the initial interview and to review the findings of this study.

**Confidentiality:** Your identity will be kept strictly confidential throughout the study and whenever we report the findings of the study. Any tapes, notes and interview transcripts will be labelled with a code number and/or false name, and stored in a locked filing cabinet. Your name will be recorded only on this consent form and on one master list that links your name to your code number and/or false name. The consent form and master list will be stored in a separate locked filing cabinet, accessible only to members of the research team. Any computer files relating to this research will be stored on password protected computers that only members of the research team can access. When we report the findings of this study, we will not report details about you or your partner that would allow others to identify you.

**Remuneration/Compensation:** In order to compensate you and your partner for the time involved in participating in this project, each couple will receive a \$30 gift certificate for a bookstore.

**Risks:** There is a possibility that differences of opinion between you and your partner around food choice issues may become apparent through this research.

**Future use of data:** In addition to publications and presentations addressing the research questions identified above, data collected for this study might be used for:

- a) future comparative analyses in studies on similar topics but with a different group of participants
- b) teaching purposes in qualitative research methods courses.

Your identity will be kept strictly confidential in any of these situations.

**Contact for information about the study:** You are welcome to ask any questions, at any time, regarding any aspect of this study. You may ask questions of the researcher who is interviewing you, and/or you may contact Dr. Gwen Chapman (604) 822-6874.

**Contact for concerns about rights of research subjects:** If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without any consequences to your relationship with the University, health care, or community services.

Your signature below indicates that:

1. You have received a copy of this consent form for your own records
2. You consent to participate in this study.

---

Participant Signature

Date

---

Printed Name of the Participant signing above.

---

Witness Signature

Date

---

Printed Name of the Witness signing above.

## Appendix 6. Interview Guide for Men with Prostate Cancer

### Interview Guide for Men with Prostate Cancer

Notes: The goal of the interview is to uncover men's understandings regarding the role of diet and nutrition in health for men with prostate cancer. Consequently, questions will be directed towards the men's understandings of diet in the context of prostate cancer. Questions regarding dietary practises will include the men's partners to uncover how these family and social forces influence men's behaviour. Probing will be added as needed to ensure full answers to the questions.

1. **Preamble:** Explanations regarding the nature of the study, informed consent and confidentiality. Additionally, participants will be advised that there are no "right" answers to the questions, and that no one will judge them on their diet or lifestyle.
2. **Introductions:** Getting to know about the participant.
  - a. Let's begin by talking about your experiences with prostate cancer. (probe: when diagnosed, what it was like to be diagnosed, watchful waiting or treatment choice and history)
  - b. How would you describe your overall health now? (probe for health history, health concerns, medications, diet related illnesses or conditions such as heart disease or diabetes)

### Using the Food Journal:

*Prior to this interview, review the journal entries and make notes about the participant's food choices. Use the Food Journal as a discussion starting point.*

- c. What was it like to fill out this journal? (probes: difficulties, surprises)
- d. Is this a reasonably accurate account of your usual diet? (probes: any special occasions, unusual events in past week)

*Choose a few (2-3) specific contrasting events from the food journal to use as examples. Show participant the entries and ask him why he made those choices and in what context.*

- e. Let's talk about this (meal snack) How typical is it? (probe: if not typical, why not?)
- f. What influenced the things you ate here? How did having (person) with you make a difference? (probe for particular items and alcohol)

Use this a starting point to discuss his daily dietary habits including typical or everyday and special occasions. Ask him to choose a "typical" day from the journal.

- g. What makes this a typical day (weekend or weekday)? (probe: for vitamin and supplement usage, eating out, junk food, organics, refined or whole foods, alcohol and other beverages).

- h. I'm interested in learning about men's eating habits. How are decisions usually made about what you eat? When and where do you usually eat? With whom? Why? (probe: eat out or in? social reasons)

*If he can't choose a typical day then ask:*

- i. How would a typical day look in your journal?

*Ask him to choose an unusual day:*

- j. How is this an unusual day for you? (probe: special occasions)

*General questions:*

- k. What would you say are the biggest influences on what you eat? (probe: cost, taste, favourite meals/foods, convenience, partner, habits, prostate cancer or other illness)
- l. Are you currently on any special or restrictive diet? If so why? How does it change the way you eat? (probe: other health issues, losing weight, fad diets, "low-carb" diet)

**3. Prostate cancer and diet:** *The goal in this section is to explore how and why his diet has changed during his specific prostate cancer illness trajectory.*

- a. How is what you recorded in this journal different from what you might have recorded if you had completed this journal some time in the year before you were diagnosed with prostate cancer? (probe: why was your diet different then?)
- b. If you had completed this journal in the first month after your diagnosis, how would it have differed then? (probe: why was your diet different then?)

*Depending on the participant's prostate cancer history, probes will be made for other dietary changes made over time in relation to his specific illness progression.*

- c. Are there any other times since your diagnosis that your journal would have looked different? Why? (probe for dietary changes during treatment decision making; while watchful waiting; before, during and after treatment(s); while in recovery; after being 'cured' of cancer) (For men who had treatments probe for treatment side effects on hunger or appetite.)
- d. What do you think was the most important change you've made in your diet since having prostate cancer? What were the main reasons for making these changes?
- e. Have you ever changed what you eat because of treatment side effects?
- f. Is there anything about your diet that you haven't changed that you think you should? (probe why didn't you make those changes?)

*(For men who have NOT made dietary changes skip questions f and g)*

- g. Do you think you will be able to keep up the changes you have made in your diet since you've had prostate cancer? What would help you? What would hinder you? (probe: old versus new habits)
- h. Is there anything in your diet that you miss from before you had prostate cancer?

I've been asking you about your own diet, but I'd like to ask some general questions.

- i. What role do you think diet plays in prostate cancer recovery? (probe for how it can effect your own health)
- j. What if anything, can you do to prevent prostate cancer recurrence? How might diet affect your prostate cancer recurrence?
- k. How might diet affect a man's PSA level?
- l. Among PCa patients, there seems to be a controversy (difference in opinions) about the role of diet and lifestyle in PCa recovery – have you seen this? What do you think about it?
- m. Do you think the way men eat has influenced this controversy in any way – how?
- n. How do you make sense of the differences in opinion and all the nutritional advice that you hear? How about other men?
- o. Some men treat their diagnosis as a 'wake-up call' for diet and lifestyle changes – what do you think about that? Did that happen for you? Tell me about it.
- p. Some men want to be doing something themselves- did you feel this way? If so, what did you do?
- q. I've found that some men eat for prostate cancer, some eat for general health and some eat as they always have – what do you think about that? Where would you place yourself?

#### **4. Role of Man's Partner in diet:**

- a. What would your (partner/wife) say about your diet? (probe: how healthy would she think it is? What changes would she think you've made)
- b. What would she say about her role in your diet?
- c. Who shops for food in your household?
- d. In your home how does meal preparation occur? What role do you play?
- e. How are decisions made about which foods/meals are bought, prepared or served in your home? (probe: differences in taste, cooking skills)
- f. What things about food do you and your partner agree about? What things about food do you disagree about? (probe: differences in opinion between him and partner)
- g. Do you discuss healthy eating with your partner? If so, what do you talk about?
- h. Did you/your partner change what you/she cooked or served after you were diagnosed? What sort of plans do you have for making dietary changes? (probe for incorporating prostate healthy cooking information)
- i. What would she say about this?
- j. How does her diet influence yours? (probe: diet related illness, special diets, dieting)

**5. Healthy Eating:**

- a. What do you think a healthy diet would be like for you?
- b. What about for other men? What kind of diet is important for a man to follow? Is this different from a healthy diet for a woman? How does being a man influence what you eat and drink? (probe: alcohol, meat, fruits and vegetables)
- c. Do you eat a healthy diet? If so, what about your diet makes it healthy?
- d. How do you think your diet influences your health?
- e. Where do you get nutrition information? (probe, partner, friends, doctor)
- f. How do you incorporate new nutrition information into your diet? (probe: wife's role)
- g. Do you have enough information about healthy diets? If not, what sort of information do you need or want?
- h. Is there anything that keeps you from eating a healthy diet? If so, what?
- i. Is there anything that helps you eat a healthy diet? If so, what?

**6. Summary and closing:**

- a. These are all the questions that I have but before we finish is there anything else about diet and prostate cancer that you want to tell me?
- b. Is there anything else about healthy eating for men with prostate cancer? Are there any questions that I should have asked?

**Thanks for participating. Invitation to learn about study results and to participate in future research. Ask permission to contact for follow-up interview.**

**Appendix 7. Food Journal Booklet Templates (Cover, Instructions, Example of Completed Page, Blank Page)**

**FOOD JOURNAL**

**FOR UBC NUTRITION RESEARCH STUDY**

**When completed, please return to:**

**Larry Mroz  
Food Nutrition and Health  
2205 East Mall  
Vancouver BC  
V6T 1Z4**

**Telephone: (604) 822-5057**



## FOOD JOURNAL INSTRUCTIONS:

Dear Sir;

In this notebook I would like you to record a diary of **everything that you eat or drink** over a one-week period, including all beverages (such as coffee, tea or alcohol) and all meals and snacks. Please include a weekend in this time period. For every time you have something to eat or drink, please write it down in the appropriate spaces in the journal.

Please also include such details as who prepared the food, or where it was purchased (for example from a restaurant or coffee shop) who you had it with and where you had it. You don't need to worry about exact amounts.

You should also write down anything that you think is important about each meal or snack, such as your feelings about what you ate or drank and why you had that particular food or drink.

### **Please write down:**

- **What you ate or drank**
- **When you ate or drank it**
- **Who you ate or drank it with**
- **Where this occurred**
- **Preparation (or purchase) details**
- **Your thoughts and feelings about this food choice**

The purpose of this journal is not to analyse or judge your diet, but rather to record your general food and drink related choices over one week including meals, snacks, coffee breaks, beverages, alcohol drinks or anything else that you consume. We will use this journal in our interview where we will discuss your diet.

See the sample page for an example of how this should be done. When you have completed the journal please call me at 604-822-5057 or email me at [lwmroz@interchange.ubc.ca](mailto:lwmroz@interchange.ubc.ca) and I will come to pick it up from you and arrange for our interview.

Thanks!  
Larry Mróz

Sample of completed page:

<b>When? Date/Time:</b> <i>March 2/06 morning</i>	<b>Was it a Meal, Snack or Drink? (including alcohol)</b> <i>Snack – coffee break</i>
<b>Where? Location of Meal, Snack, or Drink:</b> <i>At home</i>	<b>With Whom?</b> <i>With my wife and son</i>
<b>What was Consumed? (Describe)</b>  <i>Coffee (medium size mocha) and 1 small piece of chocolate cake</i>	
<b>Preparation or purchase details: (made at home? who made it or where was it bought?)</b>  <i>My wife made the cake- it was chocolate with chocolate icing- from a mix, the coffee which was a double café mocha for me and a soy latte for my wife came from starbucks that my son picked up on his way over to visit.</i>	
<b>Other Comments (reasons for choices, reflections/feelings, concerns...):</b>  <i>Son drops by every week for coffee and a visit. We usually have a treat of some kind and a nice visit.</i>	

<b>When? Date/Time:</b>	<b>Was it a Meal, Snack or Drink (including alcohol)?</b>
<b>Where? Location of Meal, Snack, or Drink:</b>	<b>With Whom?</b>
<b>What was Consumed? (Describe)</b>	
<b>Preparation or purchase details: (made at home? who made it or where was it bought?)</b>	

(Blank Journal Page)

## Appendix 8. Demographics Form for Men with Prostate Cancer

### Dietary beliefs and practices of Men with Prostate Cancer Demographic data form for men (to be completed by interviewer)

Participant Code: \_\_\_\_\_ Interview Date: \_\_\_\_\_

Age: \_\_\_\_\_ Ethnicity: \_\_\_\_\_

Marital Status: \_\_\_\_\_ Education Level: \_\_\_\_\_

What is/was your usual occupation? \_\_\_\_\_

Are you:

Employed	Full time _____	Part time _____
Retired	_____	
On Disability	_____	
Unemployed	_____	

What was your approximate family income for the past year? \_\_\_\_\_

Who currently lives with you (eg. Children)? *Please list* \_\_\_\_\_

\_\_\_\_\_

When was your prostate cancer diagnosis? \_\_\_\_\_

What was the site of your cancer (eg. Local)? \_\_\_\_\_

What was the stage of illness at diagnosis? \_\_\_\_\_

What prostate cancer treatment did you have?

No treatment	_____		
Watchful waiting	No	Yes	Date: _____
Surgery	No	Yes	Date: _____
Radiation (EBRT)	No	Yes	Date: _____
Hormone	No	Yes	Date: _____
Brachytherapy	No	Yes	Date: _____
Other treatment	No	Yes	Date: _____ Type: _____

Have you been diagnosed with, or had the following?

Food Allergies No Yes List: \_\_\_\_\_

High Cholesterol No Yes Date: \_\_\_\_\_

Heart Disease      No      Yes Date: \_\_\_\_\_  
Heart attack      No      Yes Date: \_\_\_\_\_  
Stroke              No      Yes Date: \_\_\_\_\_  
Diabetes            No      Yes Date: \_\_\_\_\_  
Other Cancer      No      Yes Date: \_\_\_\_\_ Type: \_\_\_\_\_

Others *please list*: \_\_\_\_\_

---

Are you currently taking any treatments or medications?

No      Yes *please list* \_\_\_\_\_

---

Are you currently on a restricted or special diet for a particular health concern?

No      Yes *please describe*: \_\_\_\_\_

---

Are you currently trying to lose weight?

No      Yes

What is your biggest health concern (if any)? \_\_\_\_\_

---

What is your biggest dietary concern (if any)? \_\_\_\_\_

---

*Thank you! Please use the following space for any other relevant information.*

---

---

---

---

---

---

---

## **Appendix 9. Field Notes Form**

**Field notes, PC**

**Date:**

**Location:**

**Contact notes:**

**Notes on Man:**

**Non-verbal:**

**Content of Man's Interview:**

**Analysis of man's interview:**

**Notes on Partner:**

**Non-verbal:**

**Content of Partner's interview:**

**Analysis of Partner's interview:**

**Dyad notes:**

## **Appendix 10. Coding Schedule**

### **Coding schedule for diet changes after prostate cancer diagnosis [39]**

**Lawrence Mróz January 4, 2008**

#### **Category: Types of diet changes [6]**

- Adding foods [also experimenting with new foods and cooking styles]
- Eating as usual [no change]
- Eating less/more of
- Overhauling diet [descriptions of major changes]
- Revisiting healthy eating [general descriptions of improved eating, paying more attention, being more careful, eating better]
- Taking supplements

#### **Category: Reasons for diet changes [5]**

- Changing for general health
- Changing for other reasons
- Changing for other specific health concerns
- Changing for prostate cancer
- Changing for treatments

#### **Category: Reasons for no changes [3]**

- Already have a healthy diet
- Eating for other reasons [specific influences used as reasons for not changing]
- Other reasons for not changing

#### **Category: Dietary beliefs [6]**

- Could eat better
- Definitions of healthy eating [general diet beliefs and practises]
- Diet affects health
- Diet affects prostate cancer
- Diet doesn't affect prostate cancer
- Unsure about role of diet in prostate cancer

**Category: Influences on diet [8]**

- Barriers to change
- Eating for Health [general reasons for healthy eating, living longer]
- Facilitators to change
- Life history
- Nutrition confusion
- Other influences
- Partner
- Work/retirement

**Category: Diet information or advice [7]**

- Expert advice
- F to M advice
- M to F advice
- Other advice sources
- Peer advice
- Seeking advice
- Written information

**Category: Roles – doing food work [2]**

- Engaging in food [becoming involved with food work]
- Food provision

**Category: Commentary on men's diets [2]**

- Men's commentary
- Women's commentary

## Appendix 11. Consent Form for Women

### THE UNIVERSITY OF BRITISH COLUMBIA



**Food, Nutrition and Health**  
Faculty of Land and Food Systems  
2205 East Mall  
Vancouver, BC, V6T 1Z4  
Phone: (604) 822-6874  
Fax: (604) 822-5143

#### Consent Form (Spouse/partners of men with prostate cancer)

##### **Project Title:**

DIETARY BELIEFS AND PRACTICES OF MEN WITH PROSTATE CANCER

##### **Investigators:**

**Dr. Gwen Chapman**, Food, Nutrition and Health, UBC, Phone: (604) 822-6874

**Dr. Joan Bottorff** Health & Human Development, UBC-O, Phone: (250) 807-9901

**Dr. John Oliffe**, School of Nursing, UBC, Phone: (604) 822-7638

##### **Graduate Student:**

**Lawrence (Larry) Mróz**, Food, Nutrition, and Health, Phone: (604) 822-5057

(Parts of this research will be used for a PhD thesis in Human Nutrition at the University of British Columbia)

**Introduction:** Many men with prostate cancer and their families show interest in the potential role of diet in prevention, treatment and recovery from prostate cancer. However, little is known about their actual dietary beliefs and practices. Further understanding of these issues is needed for development of effective educational and counselling resources.

(Note that although this study is about diet, it is important to consider that diet is only one aspect of prostate cancer prevention and treatment research and that many other factors are involved in the occurrence of prostate cancer.)

You have been invited to participate in this study because your husband/partner was diagnosed with localised prostate cancer and completed definitive treatment within the past 5 years or is on a 'watchful waiting' protocol.

**Purpose:** The purpose of this study is to examine how men with prostate cancer make decisions about what they eat.

**Study Procedures:** Your involvement will occupy about an hour and a half of your time.

4. Interview. In a private tape-recorded interview, a researcher will ask you to talk about what your husband/partner eats and drinks on a daily basis, and how those eating habits relate to his health concerns and personal preferences as well as to your eating habits. You will also be asked to talk about how food-related decisions are made in your family, including who makes the decisions, how family members influence each other, and why you and your partner make the food choices that you do. We will ask who shops for and prepares the food and who makes these decisions. We will ask you what your definition of healthy eating is and your opinion of the role of diet in prostate cancer recovery. The interview will last approximately 1 to 1.5 hours.
5. Follow up interviews. You may be asked to participate in an additional interview, to follow up on issues raised during the initial interview and to review the findings of this study.

**Confidentiality:** Your identity will be kept strictly confidential throughout the study and whenever we report the findings of the study. Any tapes, notes and interview transcripts will be labelled with a code number and/or false name, and stored in a locked filing cabinet. Your name will be recorded only on this consent form and on one master list that links your name to your code number and/or false name. The consent form and master list will be stored in a separate locked filing cabinet, accessible only to members of the research team. Any computer files relating to this research will be stored on password protected computers that only members of the research team can access. When we report the findings of this study, we will not report details about you or your partner that would allow others to identify you.

**Remuneration/Compensation:** In order to compensate you and your partner for the time involved in participating in this project, each couple will receive a \$30 gift certificate for a bookstore.

**Risks:** There is a possibility that differences of opinion between you and your partner around food choice issues may become apparent through this research.

**Future use of data:** In addition to publications and presentations addressing the research questions identified above, data collected for this study might be used for:

- a) future comparative analyses in studies on similar topics but with a different group of participants
- b) teaching purposes in qualitative research methods courses.

Your identity will be kept strictly confidential in any of these situations.

**Contact for information about the study:** You are welcome to ask any questions, at any time, regarding any aspect of this study. You may ask questions of the researcher who is interviewing you, and/or you may contact Dr. Gwen Chapman (604) 822-6874.

**Contact for concerns about rights of research subjects:** If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without any consequences to your relationship with the University, health care, or community services.

Your signature below indicates that:

3. You have received a copy of this consent form for your own records
4. You consent to participate in this study.

---

Participant Signature Date

---

Printed Name of the Participant signing above.

---

Witness Signature Date

---

Printed Name of the Witness signing above.

## Appendix 12. Interview Guide for Women

### Interview Guide for Partners of Men with Prostate Cancer

Notes: The goal of the interview is to uncover men's understandings regarding the role of diet and nutrition in health for men with prostate cancer. Consequently, questions will be directed towards the woman's understandings of her partner's diet in the context of prostate cancer. Questions regarding dietary practises are included to uncover how these family and social forces influence men's behaviour. Probing will be added as needed to ensure full answers to the questions. The following topics will be covered:

#### 1. Preamble:

*Explanations regarding the nature of the study, informed consent and confidentiality. Additionally, participants will be advised that there are no "right" answers to the questions, and that no one will judge them on their diet or lifestyle.*

#### 2. Introductions: Getting to know about the participant.

- a. Let's begin by talking about your partner's experiences with prostate cancer and what that's been like for your family. (probe: when diagnosed, what it was like for your family with his diagnosis, watchful waiting or treatment choice and history)
- b. How would you describe his overall health now? (probe for health history, health concerns, medications, diet related illnesses or conditions such as heart disease or diabetes) What is the impact of his health in your family now?
- c. How would you describe your own health? (probe for diet related conditions)

#### Man's diet:

- d. Now let's talk about (partner's) diet. Please describe his eating and drinking habits to me.
- e. What does he eat during a typical day (weekend or weekday)?
- f. What about on special occasions? (probe: social events, junk food, alcohol and other beverages)
- g. When and where does he eat? With whom? (probe: eat out or in?)
- h. What is his favourite meal, least favourite? (probe: who cooks it?)
- i. What are the biggest influences on what he eats? (probe: cost, taste, favourite meals/foods, convenience, her, habits, prostate cancer or other illness)
- j. Is he currently on any special or restrictive diet? If so why? How about you? (probe: other health issues, losing weight, fad diets, low-carb diet, vitamin and supplement usage, organics, refined or whole foods).

3. **Prostate cancer and diet:** *The goal in this section is to explore how and why his diet has changed during the prostate cancer illness trajectory.*

- a. In what ways, if any, has his diet changed since he was first diagnosed? (probe why did he make those changes?)

Depending on the participant's prostate cancer history, probes will be made for other dietary changes made over time in relation to their specific illness progression.(probe for dietary changes during treatment decision making; while watchful waiting; before, during and after treatment(s); while in recovery; after being 'cured' of cancer)

For men who have completed treatments probe for treatment side effects on hunger or appetite.

(If they made no dietary changes, skip b and c.)

- b. Is there anything that he used to eat or drink from before he had prostate cancer that he misses now?
- c. Do you think he will be able to keep up the changes he has made in his diet since he's had prostate cancer? What would help him? What would hinder him? (probe: old versus new habits)
- d. Is there anything about his diet that he hasn't changed that you think he should? (probe: why didn't he make those changes?)
- e. What role do you think diet plays in prostate cancer recovery? (probe: for how it can effect his health)
- f. Has he ever changed what he eats because of treatment side effects?
- g. What if anything, can he do to prevent prostate cancer recurrence? Do you think that diet can affect his prostate cancer recurrence? If so, how?
- h. How might diet affect a man's PSA level?
- i. Among PCa patients, there seems to be a controversy (difference in opinions) about the role of diet and lifestyle in PCa recovery – have you seen this? What do you think about it?
- j. Do you think the way men eat has influenced this controversy in any way – how?
- k. How do you make sense of the differences in opinion and all the nutritional advice that you hear? How about your partner? Other men?
- l. Some men treat their diagnosis as a 'wake-up call' for diet and lifestyle changes – what do you think about that? Did that happen for you? Tell me about it.
- m. Some men want to be doing something themselves- did your partner feel this way? If so, what did he do? What do you think about that?
- n. I've found that some men eat for prostate cancer, some eat for general health and some eat as they always have – what do you think about that? Where would you place your partner?
- o. Do you think altering diet is important for other health reasons? How?

#### **4. Role of Man's Partner in diet:**

- a. How do you think your partner would describe his diet? (probe: how healthy would he think it is? What changes would he say he's made?)
- b. What would he say about your role in his diet?
- c. How would you describe your role in his diet?
- d. Who shops for food in your household?
- e. Who prepares the food that you eat? How is he involved in meal preparation?
- f. How are decisions made on what foods/meals are bought, prepared or served in your home? (probe: personal taste, cooking skills)
- g. What things about food do you and he agree about? What things about food do you disagree about? (probe: differences in opinion between her and her partner)
- h. Do you discuss healthy eating with your partner? If so, what do you talk about?
- i. Did you/he change what you/he bought, cooked or served after he was diagnosed? (probe for incorporating prostate healthy cooking information)
- j. What goals or concerns do you have for your own diet? How does this influence his diet?

#### **5. Healthy Eating:**

- a. What do you think a healthy diet would be like for you?
- b. What do you think a healthy diet would be like for a man like (partner) to follow?
- c. How is this different from a healthy diet for a woman?
- d. How does being a man influence the things (partner) eats and drinks? (probe: alcohol, meat, fruit and vegetables)
- e. Do you think your partner eats a healthy diet? If so, what about his diet makes it healthy?
- f. How do you think that diet influences your partner's health? What about now that he had prostate cancer?
- g. Where do you get nutrition information? (probe, partner, friends, doctor)
- h. How do you incorporate new nutrition information into your diet? (probe for partner's role) How does he?
- i. Do you have enough information about healthy diets? If not, what sort of information do you need or want? What sort of information does he need or want?
- j. Is there anything that keeps you from eating a healthy diet? If so, what? How about him?
- k. Is there anything that helps you eat a healthy diet? If so, what? How about him?

**6. Summary and closing:**

- a. These are all the questions that I have but before we finish is there anything else about diet and prostate cancer that you want to tell me?
- b. Is there anything else about healthy eating for men with prostate cancer? Are there any questions that I should have asked?

**Thanks for participating. Invitation to learn about study results and to participate in future research. Ask permission to contact for follow-up interview.**

**Appendix 13. Demographics Form for Women**

**Dietary beliefs and practices of Men with Prostate Cancer  
Demographic data for partners (to be completed by interviewer)**

Participant Code: \_\_\_\_\_ Interview Date: \_\_\_\_\_

Age: \_\_\_\_\_ Ethnicity: \_\_\_\_\_

Marital Status: \_\_\_\_\_ Education Level: \_\_\_\_\_

Who currently lives with you (eg child)? *please list* \_\_\_\_\_  
\_\_\_\_\_

What is/was your usual occupation? \_\_\_\_\_

Are you: (tick all that apply)

- Full-time homemaker \_\_\_\_\_
- Employed full-time \_\_\_\_\_
- Employed part-time \_\_\_\_\_
- Retired \_\_\_\_\_
- On Disability \_\_\_\_\_
- Unemployed \_\_\_\_\_

What was your approximate family income for the past year? \_\_\_\_\_

Have you been diagnosed with, or had the following?

- Food Allergies      No      Yes List: \_\_\_\_\_
- High Cholesterol      No      Yes Date: \_\_\_\_\_
- Heart Disease      No      Yes Date: \_\_\_\_\_
- Heart attack      No      Yes Date: \_\_\_\_\_
- Stroke      No      Yes Date: \_\_\_\_\_
- Diabetes      No      Yes Date: \_\_\_\_\_
- Other Cancer      No      Yes Date: \_\_\_\_\_ Type: \_\_\_\_\_

Other illnesses or conditions *please list*: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Are you currently taking any treatments or medications?**

**No**    **Yes** *please list* \_\_\_\_\_

\_\_\_\_\_

**Are you currently on a restricted or special diet for a particular health concern?**

**No**    **Yes** *please describe:* \_\_\_\_\_

\_\_\_\_\_

**Are you currently trying to lose weight?**

**No**    **Yes**

**What is your biggest health concern (if any)?** \_\_\_\_\_

\_\_\_\_\_

**What is your biggest dietary concern (if any)?** \_\_\_\_\_

\_\_\_\_\_

*Thank you! Please record any other relevant information below.*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## **Appendix 14. Gender Relations Dyad Summary Template**

**Who controls food in the house - Who calls the shots?**

**What shots does she call?**

**How does he influence the shots she calls?**

**What shots does he call?**

**How does she influence the shots he calls?**

**What descriptive words or phrases used to describe roles?**

**1. What priorities, goals, values, ideals shape what is eaten in the household?**

(e.g. weight, body image, illness, athletics, taste, convenience, money)

**He says he does:**

**He says she does:**

**She says he does:**

**She says she does:**

**2. What food roles are taken on by whom, what does she say he does, what does he say she does?** (e.g. planning, information seeking, monitoring supplies, making shopping lists, cooking meals, cleaning up)

**He says he does:**

**He says she does:**

**She says he does:**

**She says she does:**

**3. How does prostate cancer fit it? What difference has it made or not? When, where and how is it considered or ignored?**

**He says he does:**

**He says she does:**

**She says he does:**

**She says she does:**

**4. What masculinity or femininity scripts are being enacted?**

**He says he does:**

**He says she does:**

**She says he does:**

**She says she does:**

**5. How are gender relations within each dyad being played out? How is her engagement with performance of femininity through food supporting/ resisting/ transforming his performance of masculinity through food?**

## Appendix 15. Participant Characteristics

Code*	Age	Income	Education	Work status	Profession	Co-morbidity
C1M	75	80,000	Dentistry	Retired	Dentist	None
C1W	74		MA Psychology	Part-time	Counsellor	Spinal chord injury
C2M	78	Declined	PhD	Retired	Professor	Diverticulosis
C2W	71		BA	Retired	Public relations	Skin cancer, arthritis
C3M	48	100,000	Commerce	Full-time	Analyst	None/ mild hypertension
C3W	45		Tourism diploma	None	Homemaker	None
C4M	68	45,000	College	Retired	IBM technician	High cholesterol/ hypertension
C4W	67		College	Retired	Clerk	None
C5M	65	70,000	Law school	Retired	RCMP officer	None
C5W	64		High school	Retired	Customer service	Diabetes, high cholesterol
C6M	60	Declined	PhD	Full-time	Professor	Melanoma, stress
C6W	57		High school	Retired	Project coordinator	Arthritis, hypertension
C7M	56	180,000	Diploma	Retired	Engineer	Mild hypertension
C7W	47		Diploma	Full-time	Radiology director	Diabetes, high cholesterol
C8M	73	50,000	Diploma	Part-time	Travel agent	High cholesterol
C8W	73		Diploma	Retired	Secretary	None
C9M	68	100,000	Accountant	Semi-retired	Business consultant	BPH, melanoma
C9W	64		College diploma	Full-time	Interior designer	None
C10M	55	160,000	High school	Full-time	RCMP sergeant	Hypertension, high cholesterol
C10W	53		College	Full-time	Laboratory supervisor	None
C11M	72	100,000	High school	Semi-retired	Machine marketing	None
C11W	70		High school	Retired	Office assistant	None
C12M	74	60,000	Grade 11	Retired	Bank clerk	None
C12W	66		Diploma	Retired	Secretary	None
C13M	64	60,000	Grade 10	Retired	Mill worker	None
C13W	61		Nursing diploma	Retired	Clerk	None
C14M	63	120,000	BSc	Retired	College instructor	None
C14W	56		Diploma	Full-time	Medical transcriptionist	None

Participant Characteristics continued

<b>Code*</b>	<b>Diagnosis Date</b>	<b>Self-Reported Diagnosis Details (when available)**</b>	<b>Treatment(s)***</b>	<b>Treatment dates</b>
<b>C1M</b>	April 2005	T3a	ADT & EBR	May 2005 to January 2006
<b>C2M</b>	January 2002	Early stage/Local	ADT & EBR	2003
<b>C3M</b>	November 2005	T1b	AS	Not applicable
<b>C4M</b>	December 2003	Early stage; Low grade	ADT & EBR	2003/2004
<b>C5M</b>	October 2006	Early stage; Gleason 3+3	AS	Not applicable
<b>C6M</b>	February 2003	T3a; Gleason 7	ADT & RP	April-October 2003
<b>C7M</b>	August 2006	Early stage; High grade	ADT & RP	September 2006, January 2007
<b>C8M</b>	May 2006	T1c; Gleason 6	AS (BT)	Pending
<b>C9M</b>	June 2005	Early stage; Low grade	AS	Not applicable
<b>C10M</b>	January 2007	Late stage (escaped capsule); Gleason 9	ADT & RP & EBR	RP May 2007
<b>C11M</b>	October 2006	T3a; Gleason 7	HIFU	January 2007
<b>C12M</b>	September 2006	Early stage; Gleason 6	RP	December 2006
<b>C13M</b>	June 2006	Late stage (escaped capsule); Gleason 7	ADT & RP (EBR pending)	RP December 2006, ADT July 2007
<b>C14M</b>	March 2003	Early stage; low grade	RP	July 2003

\*C = couple, M = Man, W = Woman

\*\*T1b & T1c = Early stages where tumour is contained (local) in prostate; T3a Later stage where tumour has escaped the gland (capsule); Gleason = grade where 1 to 6 is low, 7 is moderate and 8-10 is high grade cancer.

\*\*\*RP = radical prostatectomy; EBT = external beam radiation; AS = active surveillance  
ADT = androgen deprivation therapy; BT = brachytherapy; HIFU = high intensity focused ultrasound;