WEIGHT CONCERNS AND WEIGHT LOSS PRACTICES OF BABY BOOMER MEN

By

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To my Grandma Neeley, who told me I was a star, just like Granddad

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WEIGHT CONCERNS AND WEIGHT LOSS PRACTICES OF BABY BOOMER MEN

By

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The Baby Boomer generation is the largest generation in the history of the United States (U.S.). Currently, this population is becoming obese earlier in life than in previous generations. This is concerning as the earliest members of this generation became eligible for social security in 2008 and will be eligible for Medicare by 2011. Prevention and treatment programs for obesity are needed to decrease the potential health risks that will lead to an increase in morbidity and mortality rates among this group. The purpose of this study was to determine how male Baby Boomers view their weight, what weight loss or weight management strategies they were using, and what barriers and motivators they had to losing weight, increasing physical activity, and eating healthy.

An 84-item survey was adapted from similar studies and modified to address the behaviors of men that were identified in the literature. Men born between 1946 and 1964 were recruited to participate in the study from various sites within the community using purposive and snowball sampling. Surveys were completed by a total of 211 participants. The mean BMI for participants was 29.35±5.07 and 82.3% of participants were overweight or obese. None of the participants were underweight. Weight was inaccurately described by 53% of obese men who had a significantly higher preferred

weight than normal and overweight men, F (2, 198) = 19.861, p = 0.000. Seventy-seven percent of overweight men preferred a weight in an overweight range. Obese men were significantly more likely to be trying to lose weight than overweight or normal weight men (19%) (χ^2 (6, N = 202) = 53.896, p = 0.000). Men most frequently listed needing information on portion control, recommended amounts of physical activity, and how to prepare healthy meals. The predominate weight loss strategies were eating less food, exercising more often, and cutting back on unhealthy foods such as fried food and desserts. BMI was significantly higher among those who were not physically active, F (3, 181) = 6.232, p = 0.000. The most frequently reported barriers to physical activity were time and getting home too late, while the motivators to physical activity were to lose weight, disease diagnosis, and being told by a doctor to be more active. To eat healthier men reported needing to eat more fruits and vegetables and consume less fried foods and “junk” foods. The barriers to eating healthy included being unable to give up certain foods, having a busy life, and healthy eating not being a priority and the motivators were to lose weight, disease diagnosis, and disease prevention.

The findings suggest that overweight men may not have the same concerns about their weight as obese men. In addition, the low rates of physical activity suggest that men are not physically active enough to lose or control their weight. The reported motivators of disease prevention and diagnosis that were present for all three behaviors suggest that men may take a more reactive stance towards weight loss. The findings may be used to help develop weight loss programs for Baby Boomer men that provide education as to what a healthy weight is, appropriate portion and serving sizes, and the amount of physical activity needed to lose weight.

CHAPTER 1
INTRODUCTION

A major concern facing our nation is the potential burden that an obese society will place on health care spending. In 2008 obese Americans cost the United States $147 billion in medical bills, paling in comparison to the $1.8 trillion spent in medical costs for treatment of chronic diseases associated with obesity (Hellmich, 2009). With medical expenses for obese individuals estimated to reach $344 billion by 2018, prevention is imperative. Obesity is an associated risk factor for hypertension, high blood cholesterol, type 2 diabetes, coronary heart disease, respiratory problems, stroke, gallbladder disease, osteoarthritis, sleep apnea, and some forms of cancer (Department of Health and Human Services [DHHS], 2010). As obesity prevalence continues to expand, deaths from heart disease are estimated to increase by 130% from 2000-2050 (American Heart Association, 2006).

In population studies, overweight and obesity in adults is generally calculated using body max index (BMI) (Flegal, 2005). Overweight is classified is having a BMI from 25 up to 29.9, and a BMI over 30 is defined as obese (U.S. Department of Health and Human Services [DHHS], 1998; World Health Organization [WHO], 1995). Results from the 2007-2008 National Health and Nutrition Examination Survey (NHANES) data indicated that 68.3% of U.S. adults aged 20 and older are overweight or obese (Flegal, Carroll, Ogden, & Curtin, 2010), an increase from 64.5% in 1999-2000 (Flegal, Carroll, Ogden, & Johnson, 2002). These findings are not surprising as overweight and obesity prevalence has increased over the past five decades (Parikh et al., 2007). While overweight and obesity prevalence is increasing among all age groups (Flegal et al., 2010), trend data indicates that the percentage of overweight and obesity is highest

among older individuals. Among three age groups (20-39 year olds, 40-59 year olds, and persons 60 and older) prevalence was highest among men and women in the two older cohorts (Flegal et al., 2010). Moreover, within these age groups, men have a higher prevalence at in both the 40-59 year old group (77.8%) and 60 and older age group (78.4%) compared to women in both age groups (66.3% and 68.6% respectively). These findings are further concerning for men as in the last decade men have seen significant increases in obesity prevalence, while women have remained relatively stable (Flegal et al., 2010). Currently, men in these age brackets are part of a generation most commonly known as the “Baby Boomer” generation. The Baby Boomer population is becoming obese at an earlier age than the previous generation (Leveille, Wee, & Iezzoni, 2005) and are already seeing an increase in coronary heart disease and stroke hospitalizations (Shoob, Croft, & Labarthe, 2007). An in-depth analysis of the characteristics of men within these particular cohorts may reveal insight as to why this is so.

The Baby Boomer, or “Boomers,” generation includes individuals born between 1946 and 1964 (Wasserstein, 2004). Baby Boomers were the first post-war children and were born into a recovering economy. Men returned home from the Second World War, marriage rates increased (Wister, 2005), and families increased dramatically in size (compared to previous generations) simply due to people being able to afford to raise more children (Bouvier & De Vita, 1991). As Baby Boomers became parents, they opted to have fewer children or prolonged having children until they were older (Blanchette & Valcour, 1998) and thus the succeeding generation did not exceed the Baby Boomers in number.

As of July 1, 2006, there were an estimated 77.9 million Baby Boomers, approximately one-fourth of the U.S. population (U.S. Census Bureau, 2006). In 2008 the oldest of the Baby Boomer generation turned 62 and were eligible for early retirement and social security. As of 2005, social security expenditure in the U.S. was $523 billion (Browning, 2008). In addition, by 2011 the oldest will be eligible for Medicare (the government health care plan for the elderly). Medicare, however, was not intended to be used to pay for chronic health conditions (Edlund, Lufkin, & Franklin, 2003) and thus Baby Boomers are expected to significantly impact insurance resources, such as Medicare, to pay for long-term health care (Shoob et al., 2007). Current estimations indicate by 2030 there will be 61 million Baby Boomers over the age of 66 (Knickman & Snell, 2002) of which six out of seven will have one or more chronic conditions, one in four will be living with diabetes, half will live with arthritis, and one in three will be obese (American Hospital Association, 2007). In addition, to the direct costs of health care prevention and treatment services, Baby Boomers may experience lost income from decreased productivity as well as the need to utilize multiple sick days (InsuranceNewsNet, Inc., 2007). If these obesity trends continue Baby Boomers may be forced to retire earlier due to poor health status, increasing social security payments for early retirees, and potential increase the amount of years of needing Medicare for long-term care and ADLs (activities of daily living). As Baby Boomers retire they could also likely face costs from uncovered prescription drugs, uncovered medical care, uncovered long-term care, and the costs of private insurance (Knickman & Snell, 2002).

Guidelines for the treatment of overweight and obesity include weight loss, which may also help to decrease the likelihood of developing diseases (DHHS, 1998). Data

from the Behavioral Risk Factor Surveillance System (BRFSS) indicated that in 2003, 36.0% of overweight men and 63.6% of obese men were trying to lose weight (Baradel et al., 2009). Reasons that men give for losing weight include: to feel stronger, to look better, to be happier with their appearance (Hankey, Leslie, & Lean, 2002; O'Brien et al., 2007; Wolfe & Smith, 2002; Yates, Edman, & Aruguete, 2004) and be healthier (Hankey et al., 2002; O'Brien et al., 2007; Roberts & Ashley, 1999; Sabinsky, Toft, Raben, & Holm, 2007) yet little is known about successful weight loss programs designed specifically for men. To date, research has shown that males typically do not participate in commercial weight loss programs (Wolfe & Smith, 2002) and are more likely than females to do nothing about losing weight (Kruger, Galuska, Serdula, & Jones, 2004).

According to Healthy People 2010 physical activity is a leading health indicator and helps decrease the risk of death from heart disease, lowers the risk for developing diabetes and colon cancer, and is a key component to weight loss (DHHS, 2000). Despite these known benefits, over 60% of American adults do not regularly participate in physical activity (Adams, Ananian, Kirtland, & Ainsworth, 2003; Lee, Sesso, & Paffenbarger, 2000; Sesso, Paffenbarger, & Lee, 2000; Towers, Flett, & Seebeck, 2005). Some of the barriers to increasing physical activity that have been previously reported include a lack of time (Brown, 2005; Brownson, Baker, Housemann, Brennan, & Bacak, 2001; Buman, Yasova, & Giacobbi, 2010; De Bourdeaudhuij & Sallis, 2002; Sherwood & Jeffery, 2000) and a lack of motivation (Brown, 2005; Brownson et al., 2001). However, research has shown that men may also achieve cardiorespiratory

benefits through participation in longer bouts of exercise fewer days per week. This may be a more realistic way to infuse physical activity into their busy weekly schedules.

In addition, the 2005 Dietary Guidelines for Americans recommended reducing caloric intake to lose weight (DHHS, 2005). Unfortunately, men have difficulty with making the dietary changes necessary to lose weight (Sabinsky et al., 2007). Previous research indicates that from 1971 to 1999 daily caloric intake has increased from 2,300 kcal to 2,590 kcal (Briefel & Johnson, 2004). Over the past 20 years the quality of foods consumed have also decreased as data from NHANES 2001-2006 indicates that the consumption of fruits and vegetables has gone down while alcohol has increased when compared to NHANES III (1984-1994) data (King, Maainous, Carnemolla, & Everrett, 2009). It is apparent that controlling caloric intake may have the potential to assist in weight loss.

A theoretical model that has been used as a framework for understanding health behavior is the Transtheoretical Model (TTM). The theory uses stages of change as a method for changing behavior over six stages: precontemplation, contemplation, preparation, action, maintenance, and termination (Prochaska & DiClemente, 1983). By using the TTM and stages of change, weight loss programs can be developed in accordance with the given stage of behavior change of an individual and thus can be personalized to help move them toward successful weight management.

Research has been limited in determining what knowledge and skills men have and/or need to achieve and maintain a healthy weight. Even less is known about what would motivate them to join a weight loss program. By applying the stages of change, it will be possible to determine male Baby Boomers' current stage of change for weight

loss, physical activity, and healthy eating. Understanding current stages of change will enable researchers to design interventions that best meet the behavior change needs of this aging population.

Research Aims

Aim 1: To assess the weight status of Baby Boomer men (as defined by BMI).

1. Identify demographic differences by age cohort, income, race/ethnicity, education, and marital status.

Aim 2: Identify weight loss strategies used by Baby Boomer men.

1. Identify knowledge and skills needed to lose weight.
2. Identify the current stage of change for weight loss.
3. Identify demographic differences by age cohort, income, race/ethnicity, education, and marital status.

Aim 3: Identify barriers and motivators to weight loss among Baby Boomer men.

1. Identify demographic differences by age cohort, income, race/ethnicity, education, and marital status.

Aim 4: Assess current physical activity levels of Baby Boomer men.

1. Assess the amount and type of physical activity among Baby Boomer men.
2. Identify the barriers and motivators to physical activity among Baby Boomer men.
3. Identify the current stage of change for physical activity.
4. Identify demographic differences by age cohort, income, race/ethnicity, education, and marital status.

Aim 5: Assess areas for improvement needed in the eating habits of Baby Boomer men.

1. Identify the barriers and motivators to healthy eating among Baby Boomer men.
2. Assess eating habits that need to be either increased or decreased.

3. Identify the current stage of change for healthy eating.

4. Identify demographic differences by age cohort, income, race/ethnicity, education, and marital status.

Aim 6: To make programmatic recommendations for developing weight maintenance programs for Baby Boomer men.

Limitations

The following limitations should be considered when interpreting the results from this study:

1. The use of self-report surveys may have lead participants to provide responses that they believed were socially desirable.

2. Findings from this study cannot be generalized to other populations of male Baby Boomers.

3. Volunteers who participated in the study may not have represented all male Baby Boomers in a typical community in north central Florida.

4. Data collected between spring of 2008 and summer of 2009 may differ from data collected during other time periods.

5. Demographic information obtained by the survey may not capture all pertinent information about participants.

Assumptions

For the purposes of this study, the following assumptions were made:

1. Volunteers who agreed to participate in the study were considered adequate to represent male Baby Boomers in a community in north central Florida.

2. Data collected during the calendar year of 2008 and 2009 was considered adequate for the purpose of the study.

3. The survey instrument was considered adequate to determine physical activity and weight loss practices among participants.

4. Demographic information obtained in the survey was considered adequate to describe study participants.

5. The research design was considered appropriate for the purpose of the study.

Definition of Terms

For the purposes of this study selected terms were defined as the following:

- ACTION STAGE: Individuals who are in the action stage have changed their behavior but have done so for less than six months (National Cancer Institute, 2005).

- ACTIVITIES OF DAILY LIVING (ADLS): Activities of daily living involve behaviors that we normally do daily for self-care and include: "dressing, toileting, transferring, caring for incontinence, and eating" (Edlund, Lufkin, & Franklin, 2003, p. 89).

- BABY BOOMER: The name given to the large group of children born between 1946 and 1964 (Wasserstein, 2004, p. 8).

- BARIATRIC SURGERY: Surgical means for restricting food intake to the stomach that include stapling, adjustable bands, stapling, bypass, or removal of part of the stomach (ADA, 2009). Patients qualify for bariatric surgery if they meet the following conditions: morbid obesity, BMI 35.0 – 39.9 plus at least one severe obesity-related medical complication, or a BMI ≥ 40 and a low probability of success with nonsurgical therapy (NIH Conference, 1991).

- BODY MASS INDEX (BMI): BMI is a measure of weight that is adjusted for height and is calculated as weight in kg divided by height in meters squared (kg/m2).

- CONTEMPLATION STAGE: Individuals who are in the contemplation stage intend to take action to change their behavior in the next six months (National Cancer Institute, 2005).

- DETERMINANT: an element that identifies or determines the nature of something or that fixes or conditions an outcome (Merriam-Webster).

- MAINTENANCE STAGE: Individuals who are in the maintenance stage have successfully changed their behavior for more than six months (National Cancer Institute, 2005).

- MODERATE PHYSICAL ACTIVITY (MPA): "Activities that use large muscle groups and are at least equivalent to brisk walking. In addition to walking, activities may include swimming, cycling, dancing, gardening, and yard work, and various domestic and occupational activities" (Healthy People 2010, 2000, p. 22-36).

- OVERWEIGHT: Having a BMI 25 to 29.9 kg/m2 (DHHS, 1998; WHO, 1995).
- OBESITY: Having a BMI ≥ 30 kg/m2 (DHHS, 1998; WHO, 1995).
- PHYSICAL ACTIVITY: "Bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure" (U.S. Department of Health and Human Services, 1996, p. 21).
- PRECONTEMPLATION: Individuals who are in the precontemplation stage have no intention of taking action to change their behavior within the next six months (National Cancer Institute, 2005).
- PREPARATION STAGE: Individuals who are in the preparation stage intend to take action within the next thirty days and/or have taken some behavioral steps toward change (National Cancer Institute, 2005).
- TERMINATION STAGE: Individuals who are in the termination stage no longer have the temptation to engage in the old behavior and have 100% self-efficacy in "all previously tempting situations" (Prochaska & Marcus, 1994, p. 162).
- VIGOROUS PHYSICAL ACTIVITY (VPA) : "Rhythmic, repetitive physical activities that use large muscle groups including jogging/running, lap swimming, cycling, aerobic dancing, skating, rowing, jumping rope, cross-country skiing, hiking/backpacking, racquet sports, and competitive group sports (for example, soccer and basketball)" (Healthy People 2010, 2000, p. 22-36).

Summary

Since 1950, the prevalence of obesity has increased in men by 29% each decade (Parikh et al., 2007). Moreover, each generation is becoming obese at earlier ages than the previous generation (Leveille et al., 2005). These findings are problematic in particular for the Baby Boomer generation, which currently makes up 26% of the U.S. population (U.S. Census Bureau, 2006). Baby Boomers are already reaching retirement age and will soon be eligible for Medicare treatment for chronic conditions associated with obesity such as type 2 diabetes, hypertension, arthritis, and cancer (DHHS, 2010). This will no doubt put a strain on available resources to treat these increasing conditions. Thus, there is a critical need to provide resources and training to help Baby

Boomers successfully age. Vaillant and Mukamal (2001) found that successful aging could be predicted by seven variables that individuals participate in prior to the age of 50, which included maintaining a healthy weight and engaging in some exercise. Effective weight management programs need to be developed to prevent these individuals from developing chronic conditions that may reduce both the quality and quantity of their remaining years of life. Understanding the barriers and motivators to weight management, physical activity, and healthy eating will assist health educators, practitioners, and clinicians gain a greater understanding of Baby Boomer men. Furthermore, differences that may exist due to age, race, income, education, and marital status can help individualize programs to better suit the given target group. Thus, the objectives of this study were to assist in the development of theory-based weight loss programs by indentifying how male Baby Boomers view their weight, what weight loss strategies they are using, and what their barriers and motivators are to losing weight.

CHAPTER 2
REVIEW OF THE LITERATURE

This chapter provides a review of literature related to topics including: 1) the health care costs associated with obesity, 2) the prevalence of overweight and obesity in the United States; 3) the prevalence of overweight and obesity among the Baby Boomer generation; 4) the Baby Boomer generation; 5) weight loss practices of men; 6) physical activity practices of men; 7) the eating behaviors; and 8) the stages of change of the Transtheoretical Model as related to healthy eating and physical activity.

The Economic Burden of Obesity

Yearly spending on weight loss products and programs, which include: books, videos, low-calorie foods and drinks, medical treatments, dietary supplements, and commercial weight loss programs (Cleland, Gross, Koss, Daynard, & Muoio, 2002) has increased on a yearly basis since 1997 (Marketdata Enterprises, 2009). In 2000, revenue for the U.S. weight loss market was $34.7 billion (Cleland, et al., 2002) and by 2004 revenue was up to $46.3 billion (Adams, 2005) with Americans spending nearly $42 billion on diet and health books alone (Burros & Severson, 2005). The most recent data from 2008 listed revenue for the U.S. weight loss market at $58.6 billion slightly up from $58.5 billion, spent in 2007 (Marketdata Enterprises, 2009). While spending has not increased significantly over the past year, these numbers may be in part due to the current recession (Marketdata Enterprises, 2009).

Weight loss spending, however, pale in comparison to the health care costs attributable to obesity. In 2008, obese Americans cost the country an estimated $147 billion in weight-related medical bills and accounted for about 9.1% of medical spending (Hellmich, 2009). If current obesity trends continue, by 2018 the U.S. spending is

estimated to increase to $344 billion and account for 21% of the nation's direct health care spending (Thorpe, 2009). However, if obesity rates are held at their current rates, the U.S. could save a total of $198 billion in health care costs by 2018 (Thorpe, 2009).

In 2008 $1.8 trillion was spent in medical costs for the treatment of chronic diseases associated with obesity (Hellmich, 2009). These diseases and conditions include: high blood pressure, high blood cholesterol, type 2 diabetes, coronary heart disease, respiratory problem, stroke, gallbladder disease, sleep apnea, some forms of cancer (DHHS, 2010), and increases the risk of cognitive disability (Houston, Nicklas, & Zizza, 2009).

U.S. Overweight and Obesity Prevalence

A measure to define overweight and obesity that is generally used in population studies is body mass index (BMI) (Flegal, 2005). BMI is a measure of weight that is adjusted for height and is calculated as weight in kg divided by height in meters squared (Flegal, 2005). The calculated BMI is then categorized into weight classifications based on the criteria established by the World Health Organization and the U.S. Department of Health and Human Services, National Institutes of Health, and National Heart, Lung and Blood Institute. For adults, overweight is defined as a BMI from 25 up to 29.9 and obesity is defined as a BMI over 30 (DHHS, 1998; WHO, 1995).

Data on the overweight and obesity prevalence in the United States come from a cross-sectional, nationally representative survey called the National Health and Nutrition Examination Survey (NHANES) a program of the National Center for Health Statistics (NCHS), which is part of the Centers for Disease Control and Prevention (CDC) (Centers for Disease Control and Prevention [CDC], 2007; Flegal, 2005). The NHANES provides an estimate of the health and nutritional status of adults and children in the

U.S. (CDC, 2007). The survey began in 1960 and as of 1999 became a continuous survey without breaks between exam cycles (Flegal, 2005). The NHANES provides a national estimate from a sample of 5,000 people each year from counties across the country (CDC, 2007). The interview includes health-related questions, medical tests, and laboratory tests and studies a number of health indicators including obesity (CDC, 2007).

Overweight and obesity prevalence has increased over the past five decades (Parikh et al., 2007). Results from the 2007-2008 NHANES indicate that 68.3% of U.S. adults aged 20 and older are overweight or obese (Flegal et al., 2010), an increase of nearly 4% from a decade ago (Flegal, 2002). However, obesity rates have only slightly increased during the same time span. According to the 1999-2000 NHANES, 33.4% of men and women were obese, and as of the 2007-2008 NHANES, obesity prevalence among U.S. adults was 33.9%. These rates have increased substantially from the same-age cohorts of men and women who were obese in 1960, 11% and 16% respectively (Flegal, Carroll, Ogden, & Johnson, 2002).

While increases in overweight and obesity have been seen among all age groups (Parikh et al., 2007) current trends indicate that the largest prevalence is among individuals between the ages of 40-59 and those who are 60 years of age or older (Flegal et al., 2010). The 2007-2008 NHANES data revealed that 72.1% of men and women aged 40-59 years old (at the time of the study) and 73.5% of persons aged 60 or older were either overweight or obese, compared to 61.5% of persons aged 20 to 39 years old. Obesity rates are also highest among the two older cohorts at 36.3% for the 40-59 year olds and 35.5% for the 60 and older age group compared to 30.8% for

persons 20-39 years old (Flegal et al., 2010). These figures are concerning, as adults who are obese at age 40 live an average of six to seven years less than their same age counterparts of normal weight (Villareal, Apopvian, Kushner, & Klein, 2005).

When comparing men and women in the 40-59 year old cohort, men had a greater prevalence of overweight or obesity in 2007-2008 then women of the same age (77.8% to 66.3%), but lower rates of obesity than women of the same age (34.3% to 38.2%). Men in the 60 and older age group also had a greater prevalence of overweight or obesity than women in the same age group (78.4% to 68.6%), but also had higher obesity rates than women (37.1% to 33.6%) (Flegal et al., 2010). Trends in overweight and obesity prevalence in the NHANES 1999-2000 and NHANES 2007-2008 studies show that overweight prevalence has increased in 40-59 year old men from 70.0% in 1999-2000 to 77.8% in 2007-2008, while 40-59 year old women remained relatively steady from 66.1% to 66.3% within the same time span. Men in the 60 and older age group have increased from in overweight and obesity prevalence in 1999-2000 of 74.1% to 78.4% in 2007-2008. While women in the 60 and older increased from 68.1% to 68.6% in the same span. Comparing obesity, 40-59 year old men have gone from an obesity prevalence of 28.8% in 1999-2000 to 34.3% in 2007-2008 compared to a minimal increase in 40-59 year old women of 37.8% to 38.2% between 1999-2000 and 2007-2008 respectively. Obesity prevalence in men aged 60 years and older increased from 31.8% to 37.1% while women decreased from 35.0% in 1999-2000 to 33.6% in 2007-2009 (Flegal et al., 2010). These increases are nothing new as obesity prevalence among men has grown by 29% every decade since 1950 (Parikh et al., 2007).

While these figures are no doubt concerning for both genders, over a ten-year time span men have seen a significant linear trend while there has been no significant trend among women (Flegal et al., 2010). The increases in obesity prevalence among men in the 40-59 and 60 years and older age groups are more troubling, given the fact that men overall already have higher death rates within 12 of the 15 leading causes of death (including heart disease and cancer) and a lower life expectancy (Hoyert, Heron, Murphy, Kung, 2006). At the time of the 2007-2008 NHANES study the 40-59 year old participants were born between 1949-1968 which most closely fits the age range of a cohort born between 1945 and 1964, more commonly known as the “Baby Boomer” generation.

The Baby Boomer Generation

There is much debate regarding the cause of the increase in birth rates after 1946. What can be best estimated is the effect of the post-war economy on job availability increasing the percentage of persons employed whereby people could afford to have more children (Bouvier & De Vita, 1991). The term “Baby Boomer” was given to this large group of children that were born between the years of 1946 and 1964 (Wasserstein, 2004). The Baby Boomer generation, to date, is currently the largest group of persons in the United States and presently the 76 million Baby Boomers make up approximately one-third of the United States population (Himes, 2001; U.S. Census Bureau, 2001) and 39% of the population over the age of 18 (Gillon, 2004).

In 2011 the oldest of Baby Boomers will turn 65 years old and be eligible for early retirement. Current estimations indicate that by 2030 there will be 61 million Baby Boomers (aged 66-84) in the U.S. (Knickman & Snell, 2002), nearly twice that of the 35 million individuals aged 65 and older as of the 2000 Census (Meyer, 2001). By the time

the last of the Baby Boomers reaches retirement age, almost 20% of the U.S. population will be 65 or older compared to less than 13% today (American Hospital Association, 2007). In addition, these individuals will be eligible for Medicare. While Medicare has been the traditional form of health care insurance that is used by the elderly it was not designed to pay for long term or chronic health conditions (Edlund, Lufkin, & Franklin, 2003) such as diabetes, hypertension, arthritis, and cancer (National Institutes of Health, National Heart, Lung, and Blood Institute, 1998). According to the US Department of Health and Human Services (HHS Fact Sheet, 2000) more than 39 million people receive health care coverage through Medicare and in 1999 total Medicare spending was $181.3 billion.

Nearly 80% of Americans today will live past the age of 65 with age expectancy for men extending another 15 years (Edlund, et al., 2003). With the increase in life expectancy, there will no doubt be a continued need for assisted living. “Currently, 6.4 million individuals aged 65 or older need long-term care or assistance with activities of daily living (ADLs) such as bathing, feeding, eating, dressing and toileting” (Edlund et al., 2003, p. 89). With Baby Boomers living longer due to advancements in medicine and technology there is an increased likelihood that they will develop chronic illnesses and need assistance with ADLs (Yeaworth, 2002).

The Baby Boomer generation has a higher prevalence of obesity and is becoming obese at a younger age than previous generations. Compared to the previous generation known as the “Silent Generation” (Strauss & Howe, 1991), the prevalence of obesity was almost twice as high among Baby Boomers in their 30s and 40s (28-32%) as it was for the same-age cohort in the Silent Generation (14%-18%) (Leveille et al,

2005). Thus, Baby Boomers have a higher percentage of individuals who are living more of their adult years (with obesity) than the previous generation. Despite being more educated than previous cohorts (Blanchette & Valcour, 1998) the Baby Boomer generation is developing chronic diseases at earlier ages. In a study by Shoob, Croft, and Labarthe (2007), Baby Boomers had greater numbers of coronary heart disease and stroke hospitalizations than 45-54 year olds in both 1980 and 1990. Men aged 45-54, as of 1999-2002, also had higher rates of hypertension compared to 45-54 year olds in 1988-1994. Oddly enough, even with the increasing prevalence of obesity, male Baby Boomers may not perceive that their weight is a health risk and thus are less likely to be ready to change the behaviors that are necessary to lose weight (Wee, Davis, & Philips, 2005).

Men and Weight

There are many benefits of having a healthy weight. Healthy body weight composition reduces the risk for high blood pressure, type 2 diabetes, coronary heart disease, congestive heart failure, stroke, gout, sleep apnea and other respiratory problems, some types of cancer including both prostate and colon cancers, and psychological disorders such as depression and body dissatisfaction (DHHS, 2010). Moreover, a healthy body weight increases overall quality of life and life expectancy (Hoeger & Hoeger, 2010, p. 150). Research indicates that middle aged men who are obese will lose six years of life and are 81% more likely than men of normal weight to die before the age of 70 (Peeters et al., 2003).

A health survey that is used to collect data on health-related behavior such as weight loss is the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a state-based telephone survey that was established in 1984 by the CDC and interviews

more than 350,000 adults each year in all 50 states, the District of Columbia, Puerto Rico, U.S. Virgin Islands, and Guam (CDC, 2008). An analysis of weight loss trends from BRFSS data revealed that the prevalence of obese persons who were trying to lose weight increased significantly from 1996 to 2003 while the percentage of overweight persons trying to lose weight remained stable (Baradel et al., 2009). These results indicate that while overweight and obesity prevalence increased during the same time span (Ogden, Carroll, Curtin, McDowell, Tabak, & Flegal, 2006), weight loss among overweight persons did not (Baradel et al., 2009). Rates of weight loss among overweight and obese adults were also lower in men than women. In 2003, 60.2% of overweight women were trying to lose weight yet only 36.0% of overweight men reported that they were trying to lose weight. That same year, 72.9% of obese women were trying to lose weight compared to 63.5% of obese men (Baradel et al., 2009). Gregory, Blanck, Gillespie, Maynard, and Serdula (2008) found that overweight and obese men were less likely to be trying to lose weight than women.

While not all overweight and obese individuals are attempting to lose weight, a large percentage of them appear to be discontent about their present condition. In an analysis of the 2003 BRFSS data by Muenning, Haomiao, Lee, and Lubetkin (2008), only 20% of overweight people and 5% of obese people expressed that they were happy with their weight. A study of weight satisfaction by Kuk, Ardern, Church, Hebert, Sui, and Blair (2009) found similar results, with only 2% of men and 1% of obese women reporting satisfaction with their weight. Men typically report having more body satisfaction than women (Frederick, Forbes, Grigorian, & Jarcho, 2007; Muenning, Haomiao, Lee, & Lubetkin, 2008; Ogden & Taylor, 2000; Reboussin et al., 2000, Yates,

Edman, & Aruguete, 2004), even obese men (James, 2003), but still report that they are unhappy with their weight. Body satisfaction in the form of general appearance has also been associated with wanting to lose weight (Obrien et al., 2007; Yates et al., 2004). In addition, a study by Wolfe and Smith (2002) found that among 72 male participants, 69% reported wanting to lose weight for appearance reasons, 72% wanted to look better, and 75% wanted to feel stronger or fitter.

Body dissatisfaction in men has also previously shown to depend on weight status, with men who are underweight or of a normal weight wanting to gain weight and men who are overweight or obese wanting to lose (De Souza & Ciclitira, 2005; Frederick et al., 2007; Grieve, Wann, Henson, & Ford, 2006). These studies, however, were conducted with collegiate men. A study of middle-age Scottish men by McPherson and Turnbull (2005) found that overweight men were more likely to be happier with their weight than underweight men who wanted to gain, and obese men who wished to lose. Research has also indicated that married men may be satisfied with their body if their partner is also satisfied with their body (Ogden & Taylor, 2000). These findings may suggest that a man whose partner is not satisfied may report greater levels of body dissatisfaction.

For men who do wish to lose, health reasons have been shown to be a motivating factor for weight loss (Hankey, Leslie, & Lean, 2002; O'Brien et al., 2007; Wolfe & Smith, 2002). 1999 study by Roberts and Ashley, half of the participants who had successfully lost weight, over a three month period, listed receiving a warning from a doctor or nurse and discovering a risk factor after a health screening as the key initiators to weight loss. Sabinsky, Toft, Raben, and Holm (2007) found similar results

with men identifying “observing an illness of a colleague or friend” as a motivator to lose weight. Being diagnosed with a health risk such as high cholesterol was also a motivator for weight loss, however, once cholesterol levels decreased so did motivation to continue with the weight loss program. This would seem to indicate that the presence of disease appears to be a greater motivator than prevention in general. Improving productivity in the workplace was also found to be a motivator to lose weight. In a study of males in Denmark, subjects identified wanting to be more effective in the work place (decreased sick-leave) as the biggest reason for losing weight (Sabinsky, Toft, Raben, & Holm, 2007). Hence, it would seem that potential lost days of work, relating to the health plight of a friend or colleague and/or death are stronger motivating factors for men who possess previous knowledge as to the risks of being overweight or obese.

Weight Loss Recommendations

Recommendations for the prevention and treatment of overweight and obesity include a reduction of 500 to 1,000 kcal/day in order to achieve a 1-2lb weight loss per week (American Diabetic Association [ADA], 2009; DHHS, 1998, 2005). Furthermore, the recommendations include a combination of reducing caloric intake, and 30 minutes or more of moderately intense physical activity on most, if not all days of the week, with up to 60 minutes of moderate to vigorous physical activity per week to prevent unhealthy weight gain (DHHS, 2005). Adults wishing to prevent weight regain should increase to 60-90 minutes of daily moderate physical activity or lesser amounts of vigorous activity (DHHS, 2005). In studies examining the prevention of weight regain after weight loss, participants that included moderate physical activity with diet control were more likely to maintain weight loss than those who used diet control alone (McGuire, Wing, Klem, & Hill, 1999; Schoeller, Shay, & Kushner, 1997; Weinsier, et al.,

2002). While trends indicate that there has been a significant increase among those using recommended strategies to lose weight there has been little change in the percentage of obese and overweight individuals who are actually trying to lose weight (Baradel et al., 2009).

Strategies Men Use to Lose Weight

Men typically do not use unhealthy strategies to lose weight, such as fasting, using laxatives, diet pills, or skipping meals (James, 2003; Kruger et al., 2004; Weiss et al., 2006) but instead may choose to not do anything at all to lose weight (Kruger et al., 2004). For men that do participate in healthy weight loss practices, eating less food or increasing exercise are most frequently listed. In analysis of data from the 1998 National Health Interview Survey, a large-scale household interview survey (CDC, 2009), Kruger, Galuska, Serdula, and Jones (2004) found that men most frequently reported eating fewer calories, eating less fat, and exercising more as weight loss. However, only 32.3% of men were using the recommended strategies of eating fewer calories with exercising more (Kruger et al., 2004). In a similar study, Baradel et al. (2009) examined weight loss strategies used by men in women as reported in the BRFSS between 1996 and 2003. As of 2003, 57.1% of overweight men and 59.0% of obese men were eating fewer calories while 80.1% of overweight men and 72.4% of obese men were increasing physical activity. Looking at recommended weight loss strategies, 46.3% and 43.2% of overweight and obese men respectively were using this strategy (Baradel et al., 2009). These rates were higher, however, than what was reported in 1996, at 34.3% among overweight men and 34.1% among obese men (Baradel et al., 2009). In addition, these rates were also higher than the data from the 2001-2002 NHANES that found 28.1% of men were successfully using the

recommended strategy (Weiss et al., 2006). However, this study used the 2005 Dietary Guidelines for American's recommendations of 300 minutes of physical activity (Weiss et al., 2006) and thus may more accurately depict the prevalence of U.S. men using this strategy. Other weight loss strategies from the 2001-2002 data that men reported were eating less fat (44.0%), switching to lower calorie foods (34.9%), and drinking water (24.2%).

Barriers to Weight Loss

Research that is available on barriers to weight loss most frequently includes barriers to making dietary changes and increasing physical activity (Burke, Steenkiste, Music, & Styn, 2008; Chang, Chang, & Cheah, 2009; Sabinsky et al., 2007). In a study of males in Denmark, men reported not having an "easy" way to lose weight, expressed concerns regarding the changes they would have to make to their diet to lose weight, and having to avoid beer and wine as the most common barriers to losing weight. In addition, participants reported that they perceived diet food as eating more vegetables and having little to no meat and alcohol. A common barrier for weight loss was abstaining from beer consumption (for both younger and older men), and having to avoid red wine among middle-aged men. Men also had concerns about not having time to exercise or prepare healthy meals, having to sacrifice time spent with family, and concerns about the expenses associated with joining a fitness center (Sabinsky, et al., 2007). In a study of adult Malaysian men, participants reported that they didn't know how to lose weight, had previously tried to lose weight and failed, and had difficulty resisting eating as barriers to losing weight (Chang, Chang, & Cheah, 2009). A study by Burke, Steenkiste, Music, and Styn (2008) looked at past experiences with weight-loss of U.S. adults. The most frequently listed barriers to successfully losing weight that

were indentified were having difficulty making changes, not having time, a lack of social support, and because of food being readily available. However, only 16% of participants in the study were men and comparisons between men and women were not made in the study.

In examining strategies for losing weight among men and women, a study by Nothwehr, Snetslaar, and Wu (2006) found that men reported social support as an "enabler" to improving diet while women reported social support as an enabler to increasing physical activity. Men had less self-efficacy than women in using diet-related skills nevertheless there were no differences between men and women in their self-efficacy to stick with the diet or with physical activity. These findings may suggest that weight loss programs can best meet the needs of men by providing more social support in the dietary components of the program than in the physical activity portions.

Eating Habits of Men

Contributing to the ongoing struggle for weight loss is the increasing amount of calories that men are consuming. In a study of the dietary intake of men aged 40-59, the daily caloric intake increased from 2,303 to 2,590 from 1971 to 1999 (Briefel & Johnson, 2004). In addition, what they are eating and drinking has also not been the healthiest. In a comparison of data from the NHANES III (1988-1994) and data from NHANES 2001-2006, King, Maainous, Carnemolla, and Everrett (2009) reported that over the past 20 years, consumption of eating five or more fruits and vegetables a day decreased from 42% to 26% among 40 to 74 year olds while alcohol consumption increased from 40% to 51%.

In a study investigating the motivators to healthy eating among senior military officers, participants indicated that appearance and health were the leading motivators

to eating healthy. Meeting specific body fat standards and being motivated by family members were also listed (Sigrist, Anderson, & Auld, 2005). Artinian (2001) assessed perceived benefits of a low-fat, high-fiber diet among 60 to 86 year olds. Subjects most frequently identified that reducing fat in the diet would help prevent heart attacks and lower cholesterol levels, while consuming more fiber would prevent constipation.

Men have previously identified that they have difficulty eating healthy because they have a lack of time to prepare healthy meals (Burke et al., 2008). In addition, having trouble controlling what they eat, staying motivated to eat properly, difficulty resisting high calorie foods, difficulty with controlling their eating when they were with friends, and not being able to estimate appropriate portion sizes were also listed as barriers to eating healthy (Burke et al., 2008). Previous research by Lappalainen, Saba, Holm, Mykkanen, and Gibney (1997) found similar barriers to eating healthy with a lack of time, having to give up favorite foods, and a lack of willpower to eat healthy. In a study by Artinian (2001) adults over 60 listed having difficulty sticking to a low fat diet on special occasions, difficulty eating healthy when traveling, and needing extra time planning, shopping, and preparing meals as barriers to following healthy eating guidelines. Among an adult population in Missouri, the most common barriers reported were finding dietary recommendations confusing and difficult to follow, healthy foods being more expensive, needing more time and effort to prepare healthy foods, and having difficulty keeping track of what they should eat when dining out (Hagdrup, Simoes, & Brownson, 1998). In a one year follow-up study of overweight and obese adults who had used the Dietary Attempts to Stop Hypertension (DASH) diet, participants identified barriers to eating healthy once they were no longer on the

program. These individuals also reported difficulty estimating portion control and calculating caloric needs on their own (Jehn, Patt, Appel, & Miller, 2006).

In a study on the health-related beliefs of Australians several barriers to eating low-fat and high-fiber diets were provided. Being surrounded by friends and family eating restricted food, not having enough money to buy nutritious foods, limited availability of health foods in stores and in the work place, not having transportation to acquire food, lack of time, boredom with healthy foods, not being able to understand the food labels to purchase healthy foods, and not having adequate cooking skills to prepare healthy meals (Smith & Owen, 1992). Barriers listed in a 1995 study of adults in the United Kingdom found similar barriers such as poor taste and increased cost of healthy foods as well as lack of family support, inconvenience when shopping and not being able to properly judge fat content (Lloyd, Paisley, & Mela, 1995).

A study addressing barriers to healthy eating among men in the U.K. found that the top two barriers reported by men were cynicism toward the media's health promotion efforts and that healthy food was poor in taste and unsatisfying (Gough & Conner, 2006). These results are similar to those reported in the Sigrist, Anderson, and Auld study (2005) with senior military officers who indicated confusion from the media/research as a barrier to eating healthy in addition to being too busy, healthy eating not being a priority, and disliking cooking. Looking specifically at barriers to increasing fruit and vegetable intake among men and women in Missouri, Hagdrup et al., (1998) found that confusing dietary recommendations was the most commonly reported barrier. Healthy foods being expensive, eating out frequently, and not having

time to prepare healthy foods were also listed as barriers to eating fruits and vegetables.

Physical Activity Recommendations

To receive cardiorespiratory health benefits, the Centers for Disease Control and Prevention (CDC), the U.S. Department of Agriculture (USDA), and the American College of Sports Medicine (ACSM) recommend that adults receive a minimum of 30 minutes of moderate physical activity on five or more days of the week (Pate et al., 1995; U.S. Department of Agriculture [USDA], 1998; U.S. Department of Health and Human Services [DHHS], 1996) or a total of 150 minutes moderate activity per week or 75 minutes per week if vigorous (DHHS, 2008). The Institute of Medicine reports that these minimal recommendations should be based upon vigorous physical activity and further recommends that adults participating in moderate physical activities should receive 60 minutes per day (2002).

Recent research has also suggested that health benefits can be achieved through longer bouts of exercise on fewer days of the week. Data from the Harvard Alumni Health Study suggests that burning 1000 k/cal per week (approximately 30 minutes of physical activity per day) will help in lowering mortality rates in elderly men (average age 61 years in this study). However, men with no major risk factors can lower mortality rates by burning 1000 k/cal in one or two bouts per week (Lee, Sesso, Oguma, & Paffenbarger, 2004). Men that fell in this 1-2 bouts category were identified as “weekend warriors” as they exercised on fewer days, but did so at a greater duration with each bout of exercise. Participation in several sessions of physical activity per day (i.e., jogging a total of 30 minutes in a day split up into two sessions) will also decrease cardiovascular risks as compared to the longer sessions as long as the energy

expenditure is the same (Lee et al., 2000). For individuals stating they don't have time to be physical active, participating 1-2 times per week for longer periods of time or through multiple, shorter sessions may better fit their schedules.

Physical Activity and Men

Physical inactivity has also had a direct impact on the increasing prevalence of overweight and obesity (Surgeon General, 2001). Furthermore, low levels of physical activity and high consumption of calories together contributed to an estimated 400,000 deaths in 2000 (Mokdad, Marks, Stroup & Gerberding, 2004). As obesity prevalence continues to expand, deaths from heart disease are estimated to rise by 130% from 2000-2050 (American Heart Association, 2006). Participation in regular physical activity can help minimize the chances of developing the health risks that are common among men. Physical activity is associated with increasing both the quality and quantity of life by decreasing the risk for cardiovascular disease, hypertension, osteoporosis, colon cancer, diabetes mellitus while improving mood and increasing the ability to perform daily tasks (DHHS, 1996, 2000; Hoeger & Hoeger, 2010, p. 8; Pate et al., 1995).

Studies have indicated that regular physical activity may be a more important predictor of mortality than smoking, high blood pressure, high cholesterol, and obesity (Blair et al., 1989; Blair et al., 1996). The Harvard Alumni Study found that men who exercised at least one day a week had a 36% reduction in risk for diabetes. Men who exercised at least five days a week were 42% less likely to develop diabetes. Active men were also 26% less likely to develop hypertension. Men achieving at least 2000-calorie (k/cal) (60 minutes of daily physical activity depending on the intensity of the exercise) expenditure per week through exercise were 39% less likely to experience a heart attack (Simon, 2002). The importance of physical activity for decreasing the risk of

heart attacks is made further evident by the estimations that 12.2% of myocardial infarction in the world can be attributed to physical inactivity (Carnethon, Gulati, & Greenland, 2005). Exercise has also been associated with decreasing the risk of stroke. Men who burned 1000-1999 k/cal a week reduced their stroke risk by 24%, while men who burned 2000-3000 k/cal reduced the risk by 46%. Evidence was also provided that indicates a 50% reduction in developing Alzheimer's disease among participants who remain physically active compared to those who are not active (Carnethon et al., 2005).

Exercise benefits are also attainable when exercise behaviors are adopted later in life. Men who did not exercise until age 45 had 23% decreased risk of mortality compared to those who remained inactive (Simon, 2002). A study of men aged 45-75 years showed that men who were more active had a lower body mass index (BMI) and a lower prevalence for hypertension. Men who ran for one or more hours per week had a 42% reduction in risk for coronary heart disease compared to men who did not run one or more hours per week (Tanaseascu et al., 2002). In addition, men who burn roughly 1000 k/cal per week (approximately 30 minutes of daily physical activity) have a 20% reduction in coronary heart disease. Even when coronary risk factors are present men who burn 1000 k/cal per week may have smaller increases in CHD risk than those who do not meet recommended levels (Sesso, Paffenbarger, & Lee, 2000).

Despite numerous health benefits and the well-documented reduction in the risks associated with physical inactivity, the majority of American adults are not physically active. Recent studies show that over 60% of American adults do not participate in physical activity regularly or are not active enough to receive cardiorespiratory benefits, (Adams et al., 2003; Lee et al., 2000; Sesso et al., 2000; Towers et al., 2005). Leisure

activity levels are also on the decline. In a comparison of physical activity among adults in 2000 and 2005 the percentage of adults who participated in no leisure-time physical activity increased from 38.5% to 40.0% while the percentage of adults participating in regular leisure-time physical activity decreased from 31.2% to 29.7% (Barnes, 2007). These figures are more alarming in the male population. Looking specifically at persons in the Baby Boomer generation, men aged 40 to 74 years have had greater decreases than women in monthly physical activity since 1998 (King,et al., 2009).

Regardless of previous engagement in physical activity, as people age daily participation in physical activity decreases (DHHS, 2000). This is of greater concern for overweight individuals who may already have limited activity. In a study of obese adults in South Carolina, overweight males were less likely to be active than their non-overweight counterparts (Adams et al., 2003). Carnethon, Gulati, and Greenland (2005) also found that adults with low fitness levels were two to four times more likely to be overweight or obese than individuals in moderate and high fitness categories.

Determinates of Physical Activity in Men

Among adults, chronic disease management, weight control, and personal enjoyment are key benefits to being physically active (Brown, 2005). In a study of physical activity among three different age groups in Belgium, males in the 35-45 age group identified body image and health as perceived benefits to physical activity. In the 50-65 year old age group, males listed having someone to workout with as a motivator while having health problems was a determinate of physical inactivity. Among all age groups receiving social support from friends and family, in the form of those individuals either exhibiting an active lifestyle themselves and/or holding the belief that physical activity is important, was a motivator to being physically active (De Bourdeaudhuij &

Sallis, 2002). Consistent with these findings, Janzen and Cousins (1995), previously reported that individuals who have spouses who are active are 20% more likely to be physically active than those whose partners are not active and are 41% more likely to be regularly active if their friends are active. Lack of encouragement or support from a physician to be physically active was associated with decreased levels of physical activity (Fink & Wild, 1995).

Reasons that men state they are not physically active are again attributable to barriers related to time. In a review of behavioral determinants to exercise, Sherwood and Jeffery (2000) reported that both active and sedentary adults frequently list time constraints as a barrier to participating in physical activity. Pertaining to men specifically, lack of time (Booth, Bauman, Owen, & Gore, 1997; Brown, 2005; Brownson, Baker, Housemann, Brennan, & Bacak, 2001; Buman et al., 2010; De Bourdeaudhuij & Sallis, 2002; Sherwood & Jeffery, 2000), limited motivation to be physically active (Brown, 2005; Brownson et al., 2001), getting enough physical activity while working (Brownson et al., 2001), lack of interest, limited health (Booth et al., 1997) and fear of injury (Buman et al., 2010) are listed as barriers to physical activity. Regarding men reporting poor health conditions as a barrier, a more recent study of 72 middle-aged men in New Zealand found that individuals who self-rated their health as "low" were less likely to exercise regardless of their strength, age, body composition, and functional status (Towers, Flett, & Seebeck, 2005). These findings are consistent with previous studies (Booth et al., 1997) that indicated older men were more likely than younger cohorts to list limited health as a barrier.

In a study looking specifically at determinants of vigorous physical activity, Sallis et al. (1989) found that lack of interest in exercising and not getting enjoyment from exercise were the most frequent barriers among individuals not interested in exercise. Lack of social support, self-discipline, and not having the skills or knowledge to exercise were also listed. Unlike other studies, lack of time was not mentioned among this group of non-exercisers and instead the others suggested that they were simply not interested in exercising to begin with.

Environmental barriers such as unsafe neighborhoods, lack of sidewalks, and not having access to parks or exercise facilities also decrease the likelihood for participation in physical activity. In a study of people in five selected states, individuals who felt their neighborhoods were safe had physical activity rates that were twice as high as those who deemed their neighborhood unsafe (Centers for Disease Control and Prevention [CDC], 1999). Research, however, indicates that men report having little difficulty with finding places to exercise (Brownson, et al., 2001) suggesting that environment may not be as much as of a concern for men.

Simply put male Baby Boomers are overweight, unsatisfied with their weight, and lack the time, motivation, and skills to change their weight. While each of these barriers is concerning on its' own, taken in combination, they present a difficult question: What will enable male Baby Boomers to lose weight before they develop conditions that will impair their health and overall quality of life? Determining how to provide proper assistance to weight loss remains a constant issue as evidenced by the amount of money in U.S. spending on the treatment of overweight and obesity.

Health Behavior Theory

Theory is used to systematically understand events and explain occurrences by identifying concepts and constructs to determine relationships and make predictions (Glanz & Rimer, 1995; Morse & Field, 1995). Health behavior theories are testable and can be generalized to various health behaviors making them effective guidelines in program development (van Ryn & Heaney, 1992). The application of a health behavior theory to any research design ensures that research will be based upon previously tested and well-defined theories that will improve the coherence, effectiveness, and evaluation of interventions (van Ryn & Heaney, 1992). Theory helps explain what factors influence the behavior of interest, the relationship of those factors, the conditions for the relationships to occur, and ways to modify the factors for different populations (van Ryn & Heaney, 1992). Having knowledge of a particular health behavior theory improves the design of the intervention as well as provides assistance to the researcher to appropriately implement and tailor the theory to best meet the health needs of the given population (Glanz, Rimer, & Lewis, 2002).

Theory assists in the various stages of planning, implementing, and evaluating behavioral interventions and serves as a guide to determine: the data to be collected on the current health behavior, what should be measured or compared, and how interventions can reach people and make an impact on them (Glanz et al., 2002). Theories help to explain the elements of a health behavior as well as the processes for changing behavior (Glanz & Rimer, 1995; Glanz, et al., 2002). Finally, theory helps to identify the population that would most benefit from the intervention and what outcomes should be evaluated (Glanz & Rimer, 1995).

Transtheoretical Model and Stages of Change

The stages of change of the Transtheoretical Model were chosen based on previous research with exercise behaviors which suggest that theoretical models like stages of change categorize individuals into a stage of exercise adoption and follow them to determine how a person becomes exercise adherent (Sonstroem, 1988). The model will help identify what stages male Baby Boomers are currently in with regard to weight management, healthy eating, and physical activity. This information will assist in designing interventions that will best recruit individuals who are currently in the precontemplation stage and help them to progress toward maintenance of a weight management program. Subsequently, exercise researchers have suggested using the Transtheoretical Model, because behaviors like exercise are not an “all-or-nothing” phenomenon. Instead the cyclical nature of the stages explains that individuals who drop out during any stage may start up again (Prochaska & Marcus, 1994; Sonstroem, 1988). Moreover, many exercise programs are designed for those who are already active or wanting to be active (Prochaska & Marcus, 1994), through the use of the stages of change weight loss interventions and can be designed for individuals in each stage of change.

When attempting behavior change, a possibility exists that individuals will be unsuccessful and can actually regress to previous stages. Thus, the stages should be viewed as cyclical rather than as a linear sequence (Prochaska & DiClemente, 1982). In other words persons may relapse during the action stage of changing behavior and decide that they are unable to change, thus returning to the precontemplation stage. Even persons in the maintenance stage are still at risk for relapse unless they are able to terminate the problem completely (1982). Each individual will progress at various

rates through the stages and may regress and re-enter at various stages of the continuum (Marcus & Simkin, 1993) (See Table 2-1).

Precontemplation

The precontemplation stage exists prior to any conceived thoughts about changing behavior in the next six months. People in this stage may be uninformed about the potential negative outcomes of their current behavior, and may have already been unsuccessful at changing their behavior (Prochaska et al., 2002), and/or may resist being informed about their behavior (Prochaska & DiClemente, 1982). These persons avoid thinking, talking, or reading about their behaviors (Prochaska et al., 2002) and may even be defensive about their behavior (Prochaska & DiClemente, 1983).

Contemplation

The contemplation stage is defined as persons wanting to actively change their behavior within the next six months. These individuals begin to assess the pros and cons associated with behavior change. Evaluation of pros and cons can result in long-term evaluation of the given behavior and result in “chronic contemplation” or “behavioral procrastination” (Prochaska el al., 2002, p. 100).

Preparation

Individuals in the preparation stage intend to change their behavior within the next 30 days. These individuals have taken some significant action in the past year such as gathering information on their behavior, joining a gym, taking a health education class, or consulting a counselor or physician (Prochaska & Velicer, 1997). They may have taken some steps toward behavior change such as increasing their physical activity or reducing the amount of cigarettes they smoke (Prochaska & Marcus, 1994) but have not yet achieved abstinence (Prochaska, DiClemente, & Norcross, 1992).

Action

In this stage behavioral changes have occurred within the past six months. In the action stage the former behavior is no longer present (e.g., abstinence from smoking), instead of a mere reduction in cigarettes smoked (Prochaska & Marcus, 1994). This is not to suggest they are not at risk for relapse, but merely have met the criterion of the particular behavior being changed.

Maintenance

Individuals in the maintenance stage are trying to prevent relapse, but are less tempted than persons in action stages and involves the period from six months after the given criterion has been met to a point where there is no risk for relapse (Prochaska & Marcus, 1994). The maintenance stage lasts between six months and five years (Prochaska & Velicer, 1997) supported by evidence from the 1990 Surgeon General report that found among persons with five continuous years of smoking abstinence the risk of relapse was 7% compared to 43% risk after one year of abstinence (DHHS, 1990). For some behaviors, such as those that are addictive in nature, relapse may always be possible and thus maintenance can last a lifetime (Prochaska et al., 1992).

Termination

In this final stage there is no longer any temptation to return to the former behavior (Prochaska & Marcus, 1994), no matter their emotional state (Prochaska & Velicer, 1997), and maintenance had been achieved for five continuous years (Prochaska & Velicer, 1997). However, for some behaviors like weight control Prochaska and Velicer (1997) argue that termination may be unrealistic and individuals should more practically aim for a lifetime of maintenance instead of adopting an all-or-none mentality. The review of literature provided very few studies that included the termination stage. This

may be due to the feasibility of conducting lengthy follow-up studies and because termination is not given much emphasis in TTM research (Prochaska et al., 2002). Therefore, this literature review will not include this stage.

Stages of Change and Healthy Eating

In a study examining stage of change and calcium-rich food intake among elderly men and women (mean age 74.6 years) 59% of participants self-reported they were in the maintenance stage (six months or more of eating 2-3 servings of calcium rich foods daily) prior to the intervention. Following an education program 73% of the remaining 41% that had previously indicated they were in stages other than maintenance had advanced one or more stages toward maintenance (Wellman, Kamp, Kirk-Sanchez, & Johnson, 2007). In another study looking at stages of change for five servings of fruits and vegetables per day among men and women over 60 (mean age 75 years), 15% were in the precontemplation stage, 64% perceived they were in the maintenance stage, 18% in the preparation stage and less than 2% were in the contemplation or action stage. Participants who were married were more likely to be in the action and maintenance stage. Individuals in the action and maintenance stages had higher intakes of fruits and vegetables than those in other stages. With regard to fat consumption participants in the action and maintenance stages had lower fat intake than those in other stages and individuals in the contemplation and preparation stages had lower intakes than those in precontemplation (Greene et al., 2004).

In a cohort study looking at baseline fat and fruit and vegetable intake, Kristal, Hedderson, Patterson, and Neuhauser (2001), found that male and female participants in the latter stages of change for eating a low fat diet and reading food labels made the largest reductions in fat intake in the two-year follow-up. These results may indicate that

current stage of change for dietary behaviors may predict future dietary change. Participants who indicated that they were in the maintenance stage at baseline had maintained a low-fat or high fruit and vegetable diet for at least six months at follow-up.

A 1994 survey of dietary practices found that 38% of male and female respondents were in the precontemplation stage for eating fewer than five servings of fruits and vegetables. Twenty-eight percent usually ate fewer than five servings and were in the contemplation stage, 18.5% were in the preparation stage and were currently eating three to four servings daily, 13% were in the maintenance stage of five servings a day and two percent were in the action stage. Men were significantly more likely than women to eat two or fewer servings of fruits and vegetables a day and be in the precontemplation stage. In addition, individuals with less education were significantly more likely to be in the precontemplation stage (Laforge, Green, and Prochaska).

Robinson et al. (2008) also looked at dietary changes across stages in their weight loss intervention study. With regard to fruit and vegetable consumption 92% of the women were in either the precontemplation/contemplation or preparation stages with 50% in the preparation stage alone. Women in these stages consumed about one serving of fruits and vegetables daily compared to three to four servings consumed in the action/maintenance stage. Dietary fiber consumption had similar patterns with 89% of women in either the precontemplation/contemplation or preparation stages and 48% in the preparation stage. Women in these stages consumed less dietary fiber than women in the action/maintenance stage. Dietary fat consumption was lower in the action and maintenance stages than the precontemplation/contemplation, and

preparation stages. Fifty-six percent of women were classified in the action/maintenance stage for dietary fat.

Wee, Davis, and Philips (2005) looked specifically at stages of change and overall weight loss, combining the components of losing weight, improving diet, and increasing exercise. Of the respondents in the preparation, action, or maintenance stage for losing weight, 61% were also at a similar stage for improving diet and exercise. Individuals who perceived their weight to be a health risk were also more likely to be in the latter stages for all three areas. Therefore, individuals who are ready to lose weight are seemingly ready to change the behaviors associated with weight gain. In the same study, 35% of the participants were in the latter stages of improving their diet and 26% in the latter stages to improve exercise yet were at the precontemplation and contemplation stages for losing weight (Wee, Davis, & Philips, 2005). With the disconnection between behavior change and weight loss, these results may represent a population who is improving diet or exercise for health benefits outside of weight loss. Thus, motivating individuals to want to lose weight may be a more successful strategy than promoting benefits of healthy eating and physical activity.

Stages of Change and Physical Activity

Previous studies on exercise behavior and the stages of change have shown differences in physical activity levels among the different stages. In a study looking at the physical activity participation of employees from two similar worksites, Marcus and Simkin (1993) found that individuals in the action/maintenance group self-reported significantly more vigorous and moderate physical activity than those subjects in the precontemplation/contemplation stages. The five stages were collapsed in this study to three stages that would include the same amount of physical activity: no exercise, some

exercise, and regular exercise. A 2001 study by Sarkin, Johnson, Prochaska, and Prochaska yielded similar results with participants in the action and maintenance stages reporting significantly more bouts of strenuous exercise than individuals in the other stages. With regard to confidence in exercise, individuals in the action stage were more confident than those in the precontemplation and contemplation stages. Individuals in precontemplation stages had significantly less confidence than all other stages.

These findings are similar to those found in a study by Robinson et al. (2008) who conducted a 12-month weight loss intervention study of overweight women. The stages were again collapsed in this study with precontemplation and contemplation being combined as well as the action and maintenance stages. Eighty-eight percent of women were in either the precontemplation/contemplation or preparation stage of change for physical activity. Level of activity also differed among women who were in the combined action/maintenance stage. Women in these stages participated in more moderate and vigorous physical activity than participants in all other stages. Pros and cons to change as well as self-efficacy across stages were also measured in this study. Pros to change generally increased and cons decreased from precontemplation/contemplation stage to the action/maintenance stage. Self-efficacy also increased with greater self-efficacy in the action/maintenance stage.

A 2005 study of men and women 65 years and older found that a majority of individuals were in the precontemplation (21%) or maintenance (50.4%) stages for physical activity, with more men being in the maintenance stage than women. Individuals in the action and maintenance stages self-reported more physical activity than participants in the other stages of change, with those in the maintenance stage

reporting more activity than those in the action stage (Riebe et al., 2005). These findings are consistent with the expectation that those who intend to exercise are more likely to exercise than those who do not.

Wellman, Kamp, Kirk-Sanchez, and Johnson (2007) conducted an intervention to improve physical activity among elderly men and women. Fifty-eight percent of participants indicated that they were in the maintenance stage of regular physical activity pre-intervention. Following the intervention of a walking and education program 75% of the remaining 42% who were not in the maintenance stage advanced one or more stages toward maintenance, with 38% advancing two or more stages. While physical activity was measured by steps walked, the amount of steps necessary to equate with daily physical activity was not provided.

Barriers to physical activity have also been shown to differ depending upon an individual's current stage of change toward increasing physical activity. In a study by Tai-Seale (2003) individuals in the precontemplation stage listed not having the ability or not being able to maintain activity as the number one barrier. This was followed by lack of time and not having a need for more physical activity. With regard to the influence of age on stage of change Booth et al. (1993) conducted a study on Australian adults. Twenty-two percent of participants were physically inactive, 40% exercised occasionally, and 38% exercised regularly and intended to continue. Older individuals were less likely to intend to increase exercise level than the younger participants. These findings suggest that as individuals age it becomes increasingly difficult to change behavior patterns with regard to physical activity.

Summary

With Baby Boomers nearing the age of retirement they will soon be eligible for government assisted health care. Medicare by design was not intended to provide long term care for chronic conditions such as those associated with obesity. As the literature attests, obesity numbers are increasing from one generation to the next (Leveille et al., 2005) and as obesity rates go up the health risks associated with obesity such as hypertension, high blood cholesterol, type 2 diabetes, coronary heart disease, and stroke will also increase (DHHS, 2010). The American Heart Association estimates that death from heart disease alone will also increase 130% from 2000-2050 (2006). As of 2003, 63.5% of obese men and 36.0% of overweight men were trying to lose weight (Baradel et al., 2009) yet only 20% of overweight and 5% of obese individuals report being happy with their weight (Kuk, Ardern, Church, Hebert, Sui, & Blair, 2009). While men are motivated to attempt to lose weight when a doctor or nurse instructs them to do so, this unfortunately only occurs (most often) after the discovery of a health risk factor (Roberts & Ashley, 1999). The reasons men have difficulty losing weight are well documented: lack of motivation, lack of time, and a lack of the skills necessary to make dietary changes (Sabinsky et al., 2007). Lack of time and motivation are also listed as barriers to eating healthy and physical activity (Booth et al., 1997; Brown, 2005; Brownson et al., 2001; Lappalainen et al., 1997) which are two behaviors closely associated with weight management (Surgeon General, 2001). Determining the specific needs of Baby Boomer men for overcoming the barriers of initiating and adhering to weight loss/weight management could decrease the cost in treatment of the health risks associated with overweight and obesity.

Table 2-1. Description of Stages of Change

Stage of Change	Description
Precontemplation	Has no intention to take action in the next 6 months
Contemplation	Intends to take action in the next six months
Preparation	Intends to take action within the next thirty days and has taken some behavioral steps in this direction
Action	Has changed behavior for less than six months
Maintenance	Has changed behavior for more than six months
Termination	No temptation to engage in the old behavior and 100% self-efficacy in all previously tempting situations

CHAPTER 3
METHODOLOGY

The goals of this study were to: 1) assess body satisfaction and obesity status among male Baby Boomers, 2) identify weight loss strategies used by male Baby Boomers, 3) identify barriers and motivators to weight loss among male Baby Boomers, 4) assess physical activity levels among male Baby Boomers, 5) assess areas of improvement that are needed in the diets of male Baby Boomers, and 6) make programmatic recommendations for developing weight maintenance programs for male Baby Boomers. The methods that were used for this research project are described below. The research design, population, instruments, data collection, and data analysis are included in this section. The study was reviewed and approved by the Institutional Review Board of the University of Florida.

Research Design

According to Bryman (2001), research designs "provide a framework for the collection and analysis of data" (p. 29). This study used a cross-sectional research design to examine the weight management, physical activity, and healthy eating behaviors of male Baby Boomers. "A cross-sectional design entails the collection of data on more than one case and at a single point in time (Bryman, 2001, p. 41). In addition, this research design allows for several subjects to be tested at the same time and is not threatened by testing or history effects since subjects are only tested one time (Portney & Watkins, 2000). This descriptive, exploratory study used self-administered surveys to collect data. Survey research is a common research method for collecting descriptive data (Portney & Watkins, 2000) based on real-world observations that can be sued for statistical analysis (Denscome, 2003). A survey is "composed of a

series of questions that are posed to a group of subjects and may be conducted as an oral interview or a written questionnaire" (Portney and Watkins, 2000, p. 285). Surveys are composed of questions that may be conducted in oral or written form (Portney and Watkins, 2000) and are used to "attempt to provide a snapshot of how things are at the specific time at which the data are collected" (Denscome, 2003, p. 6). Despite the usefulness of this type of research, some common problems with social survey research are poorly worded questions (Bryman, 2001) and low response rate (Denscome, 2003). Due to these concerns, surveys were only administered to subjects who agreed to participate and the principal investigator provided clarification as needed.

Sample Population

A sample is used in research to serve as a reference group for drawing conclusions about the population it represents (Portney & Watkins, 2000). The size of the sample has an important affect on statistical power and the larger the sample, the greater the statistical power (Portney & Watkins, 2000). A priori sample sizes were calculated for the present study using G*Power 3.1.2, a free, online program commonly used in social and behavioral research to conduct power analyses (Faul, Erdfelder, Lang, & Buchner, 2007). Table 3-1 provides the results of three a priori power analyses for *t* test, ANOVA, and Chi-Square statistical tests. Power was set at $1 - \beta = 80\%$, which has previously been suggested to provide reasonable protection against Type II error (Portney & Watkins, 2000). The sample sizes needed for the statistical tests used in the study were as follows: 128 for t tests, 195 for One-way Analysis of Variance, and 143 for Chi-Square analysis.

Data were collected from 211 participants living in North Central Florida. The target population for this study was a convenience sample of men born between the

years of 1946 and 1964. Participants were recruited from the local university, sporting events, male church groups, fraternal organizations (such as the Freemasons), and other community agencies, businesses, and functions. The inclusion criteria for the study were: 1) ambulatory males born between 1946 and 1964, 2) residing within 50 mile radius of Gainesville, and 3) able to give verbal consent to complete the survey.

Instruments

The current survey instrument was adapted from an instrument previously developed by James (2003, 2004, 2006). The development of this original instrument used qualitative and quantitative measures and has been adapted for use with several populations including adult males and females, and college students. The development, use, and validation of the original instrument are discussed elsewhere (James 2003, 2004, 2006). To adapt the survey for male Baby Boomers, an extensive review of the literature was conducted in the areas of men's health and Baby Boomer health issues.

Content validity of the survey instrument was tested during the construction of the instrument. "Content validity refers to the adequacy with which this universe is sampled by a test" (Portney & Watkins, 2000, p. 83) and is used to determine if any of the items are irrelevant to the purpose of the measurement (Portney & Watkins, 2000). Content validity was determined through multiple revisions of the instruments by two researchers who had expertise in the field as well as by two members of the target population. After agreement that the instruments included items that adequately sampled the content domain they were said to have content validity.

Face validity is used to determine "that an instrument appears to test what it is intended to test and that is a plausible method for doing so" (Portney & Watkins, 2000, p. 82). While face validity is subjective and considered scientifically weak, it does serve

an important purpose for increasing the likelihood that those who are tested by it find the questions relevant and thus answer the questions more honestly (Portney & Watkins, 2000). Face validity of the survey instrument was determined by asking three untrained observers if the questions appeared valid to them. Any items that were identified as confusing were edited based on the observers' comments. Minor revisions were then made in the wording and ordering of some of the questions and again measured for face validity. The final survey instrument consisted of 84-items (See Appendix A) and took approximately 30 minutes to complete. The self-administered survey included 14 demographic items: year of birth, marital status, sexual orientation, number of children, number of children living at home, employment status, home ownership, type of home, location, U.S. citizenship, years of U.S. residency, race/ethnicity, educational attainment, and yearly income.

There were 22-items on the survey that were focused on topics related to healthy eating practices. Eight dichotomous items asking about eating breakfast, super sizing meals, grocery shopping, packing lunches, using diet sodas, using sugar substitutes, reading food labels, and understanding food labels. One five-point Likert item (1 = excellent; 5 = poor) asked participants to describe their diet and five five-point Likert items (1 = everyday; 5 = rarely or never) were used to gather frequency data about eating at fast food restaurants, eating at buffet style restaurants, preparing meals at home, drinking sodas, and drinking sweetened beverages. Five multiple-selection items pertained to the predominate focus on food labels, barriers to eating healthy, motivators to eating healthy, foods needing to be consumed to improve diet, and foods needing to be reduced to improve diet. One contingency question concerning overeating was

included that led to a multiple-selection item with choices for cause of overeating. Finally, one single selection item pertained to the stage of change for eating healthier.

The weight status portion of the survey included 21-items. Four fill-in-the-blank questions asked participants to self-report current weight, height, ideal weight, and waist size. The self-reported height and weight was used to determine Body Mass Index (BMI) was calculated by dividing weight in kilograms by height in meters squared (kg/m^2). Self-reports are commonly used measurements for collecting data on height and weight and are good methods for quickly collecting data on large samples of individuals (Gorber, Tremblay, Moher, & Gorber, 2007). These measurements were used to determine what percentage of male Baby Boomers surveyed were overweight and/ or obese and will later be analyzed with other survey items to determine significance between, weight loss practices, healthy eating, and physical activity levels with self-reported weight.

One five-point Likert item (1 = very satisfied; 5 = very unsatisfied) was used to determine weight satisfaction and one five-point Likert item (1 = few times a day; 5 = never) to assess frequency of thoughts about weight. Two single-selection items were used to gather information about weight description and weight management. One dichotomous question asked participants if they had ever been told by a doctor to lose weight. One contingency question was included to assess weight loss in the previous 12 months which was followed by three single selection questions about weight loss, duration in the weight loss program, and length of time the weight was kept off; with one additional five-point Likert item (1 = very satisfied; 5 = very unsatisfied) assessing satisfaction with previous weight lost. Five multiple-selection items pertained to sources

of dieting information, previously used weight loss strategies, barriers to losing weight, motivators to losing weight, and information needed to lose weight. One single-selection answer was also included to assess the possibility of having surgery to lose weight. Finally, one single-selection item pertained to the present stage of change for losing weight.

There were 20-survey items that addressed physical activity. One contingency question was used to assess disability or injury and led to one single-selection question about current physical activity level. One final contingency question was used to determine transportation to work which led to a fill-in-the-blank question about travel minutes. Two dichotomous items pertained to the physical demands of the participants' occupations and the presence of sidewalks in the neighborhood for physical activity. Eight single-selection items were used to assess frequency cardiovascular activity, duration of cardiovascular activity, frequency of muscular activity, frequency of flexibility activity, involvement in single weekend bouts of exercise, frequency of watching television, frequency of surfing the Internet, and frequency of online gaming. Five multiple-selection questions addressed type of cardiovascular activity, locations used for exercise, types of competitive activities used for exercise, barriers to increasing physical activity, and motivators to increasing physical activity. Finally, one single-selection item pertained to the present stage of change for exercise.

The last section of the survey included seven items about lifestyle and medical history. Two dichotomous items pertained to having health insurance and smoking. One five-point Likert item (1 = excellent; 5 = poor) asked participants to describe their health. One contingency question assessed alcohol use and was followed by one dichotomous

question about binge drinking. Finally, two multiple-selection items gathered data about supplements and history of disease.

Data Collection Procedures

Prior to beginning any portion of this study an application was submitted to and approved by the University of Florida Institutional Review Board (UFIRB), protocol number 2008-U-0061 (See Appendix B). The survey approved for this study did not require written consent and the participants verbally consented to participate in the study.

Data were collected over a one year period. All potential participants were asked if they were willing to participate in the study and to complete a self-administered survey onsite. Those who agreed by verbal consent were given the survey, pencil, and a clipboard to complete the survey. The survey was completed in person and was collected for each participant on a single occasion. The instrument took 20 to 30 minutes to complete.

Purposive sampling was used by the principle investigator and volunteer recruiters in selecting men born between 1946 and 1964. Purposive sampling is a non-probability sample in which the researcher selects subjects based on some form of specific criteria (Denscombe, 2003; Portney & Watkins, 2000). In addition, snowball sampling, was used whereby initial participants could identify other individuals who meet the selection criteria. Snowball sampling, or chain sampling, has previously been identified as a useful technique when recruiting subjects whose inclusion characteristics are difficult to locate (Portney & Watkins, 2000). Through the use of snowball sampling the researcher can accumulate subjects quickly from participant nomination of others who are relevant

for the study. The nominator can then be used in reference when contacting each new identified subject rather than approaching them cold (Denscombe, 2003).

Data were collected at various sites in the North Central Florida region that were identified by the principle investigator as locations men were likely to attend. Data collectors were recruited from undergraduate classes at a local university and were trained on how to administer the survey instrument. Training was provided by the researcher.

Survey participants were approached at recruiting sites by the data collectors and asked if they were born between the years of 1946-1964 and if they lived in the community. If the participants met the inclusion criteria they were invited to take part in the study. The data collectors informed the participants that the survey instrument would take approximately 30 minutes and answered any of the participant's questions. After the participant agreed to complete the survey the data collector provided them with a clipboard, pen, and the survey instrument. Upon completion of the survey instrument, the data collectors placed the completed survey in a manila envelope and thanked the participant for their time. To ensure confidentiality and anonymity, no indentifying information was collected from participants. The surveys were numbered, but were distributed in random order so that participants could not be associated with a number based on the date they had completed the survey. There were no incentives for participation.

Data Analysis

Survey data was analyzed using SPSS© v. 17.0 software package. The level of significance was set at a 95% confidence level, with a *p*-value of .05. Each survey response was given a numeric code to simplify data entry and analysis (Portney &

Watkins, 2000). Data analyses included univariate analysis, the Student's *t*-test, ANOVA, and Chi-square (X^2). Multiple post-hoc comparisons were done with Tukey-Kramer HSD test. Table 3-1 provides the variables and statistic analysis used to address five of the research aims. Aim 6: To make programmatic recommendations for developing weight maintenance programs for Baby Boomer men, will be addressed in Chapter 5.

Summary

Chapter 3 describes the methods used to examine the research aims of the study. The chapter includes a description of the research design, the sample population, the instruments used in the study, data collection procedures, and data analysis procedures. Data was collected during the spring of 2008 and summer of 2009. A total of 200 participants were desirable.

Ethical Issues

Prior to beginning the study, the survey questions were sent to the Institutional Review Board (IRB). Participants completing the surveys were asked to give verbal consent prior to answering any questions. They were not asked to give their names so their information could be kept anonymous.

Table 3-1. Sample sizes computed from a priori power analyses

Statistical test	Effect size	α	(1 – β)	Sample size	Actual power
t test	0.50	0.05	0.80	128	0.8015
ANOVA	0.25	0.05	0.80	195	0.8098
χ^2	0.30	0.05	0.80	143	0.8015

Table 3-2. Statistical analysis for variables within in each research aim

Aim	Variables	Analysis	Post hoc
1	BMI; BMI classification; Weight description	Univariate	
	BMI X Demographics	t test; ANOVA	Tukey
	Weight describe X BMI	ANOVA	Tukey
	Weight describe X Demographics; BMI Class	Chi-Square	
	Doctor X BMI	t test	
	Doctor X BMI classification	Chi-Square	
	Surgery X BMI	ANOVA	Tukey
	Disease diagnosis X BMI	t test	
	Disease diagnosis X BMI classification	Chi-Square	
	Thoughts about weight; Current WL X BMI	ANOVA	Tukey
	Current weight loss X BMI classification; Disease	Chi-Square	
	Advised by a doctor X BMI classification	Chi-Square	
	Lost in last 12; Stage for weight loss X BMI	ANOVA	Tukey
	Info needed to lose X BMI	t test	
	Info needed to lose X Demographics	Chi-Square	
2	Weight loss strategies X BMI	t test	
	Weight loss strategies X Demographics	Chi-Square	
3	Barriers to WL; Motivators to WL X BMI	t test	
	Barriers to WL; Motivators to WL X Demo	Chi-Square	
4	Physical activity; Cardio X BMI	ANOVA	Tukey
	Type of cardio X BMI	t test	
	Type of cardio X Demographics	Chi-Square	
	Strength activity; Flexibility; Stage of PA X BMI	ANOVA	Tukey
	Strength activity; Flexibility X Demo	Chi-Square	
	Venue for PA X BMI	t test	
	Venue for PA X Demographics	Chi-Square	
	Barriers to PA; Motivators to PA X BMI	t test	
	Barriers to PA; Motivators to PA X Demo	Chi-Square	
5	Eating habits (Fast food, breakfast)	Univariate	
	Overeating; Cause of overeating X BMI	t test	
	Cause of overeating X Demographics	Chi-Square	
	Source of dieting info X BMI	ANOVA	Tukey
	Source of dieting info X Demographics	Chi-Square	
	Eating habits to increase; decrease X BMI	t test	
	Eating habits to increase; decrease X Demo	Chi-Square	
	Stage of Healthy eating X BMI	ANOVA	Tukey
	Barriers to HE; Motivators to HE X BMI	t test	
	Barriers to HE; Motivators to HE X Demo	Chi-Square	

CHAPTER 4
RESULTS

This descriptive, exploratory study examined the current weight status of male Baby Boomers, the strategies they use to achieve and maintain a healthy weight, current physical activity levels, healthy eating habits, and the barriers and motivators to weight loss, physical activity, and healthy eating. In addition, the stage of change for weight loss, physical activity, and healthy eating were also assessed. This chapter describes the characteristics of study participants including age cohort, income, race/ethnicity, education, and marital status. The chapter will also present data analyses for the research aims of the study.

Participant Characteristics

Study participants included men born between the years of 1946 and 1964 at the time of data collection. Participants lived within a 50 mile radius of Gainesville, Florida. Cross-sectional surveys were administered to research participants in the summer of 2009. Data collection procedures produced 211 surveys. The level of significance was set at a 95% confidence level, with an alpha of .05. Power was set at 80, with a beta of .20.

The demographic statistics are illustrated in Table 4-1. There were 104 (49.3%) participants who were categorized into the older cohort of Baby Boomers (born between the years of 1946-1955) and 107 (50.7%) placed in the younger cohort of Baby Boomers (born between the years of 1956-1964). A wide range of salaries were represented from 33.2% making $70,000.00 or more down to 5.9% making less than $20,000.00. The sample consisted of 158 (74.9%) White participants; with 34 (16.1%)

African Americans; 8 (3.8%) Hispanic; and 11 (5.2%) who identified themselves as "other."

With regard to educational level attained, one individual had less than an eighth grade education, 5 (2.4%) did not finish high school, 71 (33.7%) had graduated high school or had their GED, 47 (22.3%) had an A.A. degree or professional license; 39 (18.5%) had no higher than a bachelors degree, and the remaining 48 (22.8%) had a graduate or professional degree. The majority of participants (158) were married (74.9%), 27 (12.8%) were single, not in a committed relationship, 21 (10%) were single but in a committed relationship, and five (2.4%) were married but separated. Nearly 97% were heterosexual, 3.3% were homosexual, and no one identified themselves as bisexual. Over 79% had children, with 39.4% having one or more children aged 13-18 years old living in their household, 14.7% reported they had one or more children aged 6-12 years old living in their household, and 3.5% had one or more children under five years old currently living in their household.

Seventy-nine percent worked full-time, 3.8% worked part-time, 10% were unemployed, and 4.7% were unable to work due to disability. Sixty-seven (35.8%) participants indicated that they work in a physically demanding job. Eighty-seven percent owned their own home, and 81.5% lived in a house. Ten percent lived in an apartment or condominium and 8.5% lived in a mobile home. Forty-three percent lived in rural areas. Over 91% were born in the United States.

Nearly 52% of participants self-described their health as very good or excellent (35.9% and 16.0% respectively), 35.4% described their health as good, 10.7% stated their health was fair, and 1.9% felt their health was poor. The majority (87.5%) had

some form of health insurance. Less than 19% were smokers. Thirty percent indicated they had high cholesterol, 27.6% had hypertension, 13.7% had diabetes, 8.5% had been diagnosed with obesity, 4.8% had heart disease, 2.4% had prostate cancer, and 1.0% had experienced a stroke.

Due to sample small size, several of the demographic categories were collapsed prior to analysis. The racial/ethnic group item was reduced from four levels (Black/African American, Hispanic, White/Caucasian, and Other) to two levels, 155 White (74.9%) and 52 non-White (25.1%). The highest level of education categories "eighth grade or less," and "did not finish high school," were collapsed into one category "did not finish high school," because of small frequencies in the two separate categories. The four categories of marital status were collapsed into two categories due to the small frequencies of two separate categories of "single" and two separate categories of "married." The result was 53 (25.1%) participants identifying that they were single and 158 (74.9%) were married.

Research Aims

Research Aim # 1

Assess the weight status of Baby Boomer men

To first assess the current weight status of study participants, BMI was calculated based on their self-reported weight and height using self-reported weight and height (kg/m^2). Mean BMI for participants was 29.35±5.07 and the range was 34.25 (20.67 to 54.92). Based on the standard BMI classification, 43.1% were overweight, 39.2% were obese, and 17.7% were normal. Of individuals who were considered obese, 3.4% were further classified as extremely obese ≥ 40.0. None of the participants were underweight (See Table 4-2).

A boxplot was produced to determine the distribution of the data. Figure 4-1 shows the distribution of the calculated BMI. Five scores were identified as outliers. The BMI for each of the five scores was over 40 which is considered extremely obese (DHHS, 2010). In addition, individuals who have a BMI exceeding 40 kg/m2 meet the criteria for bariatric surgery that were established by the National Institutes of Health Consensus Development Panel (NIH, 1991). These five scores, plus two participants whose BMI was over 40, and two participants with missing values for height and weight were omitted from BMI analysis.

To determine differences in weight status for the demographic variables of age, race/ethnicity, and marital status, three separate independent samples *t* Tests were conducted. BMI was not significantly different between the older cohort and the younger cohort, between White and non-White, or for single and married men ($p > .05$). Separate one-way ANOVAs performed on mean BMI and demographic variables revealed that groups did not differ based on income or education ($p > .05$).

Eleven participants (5.4%) described themselves as underweight, 40 (19.8%) felt they were “just right,” 114 (56.4%) listed they were slightly overweight, 35 (17.3%) described themselves as very overweight, and two (1.0%) said that they were extremely overweight. Due to the small sample size, the “very overweight” and “extremely overweight” were collapsed into one “very overweight category.” There were significant differences in BMI among the four self-described weight groups, $F(3, 198) = 52.29$, $p = 0.000$. Tukey post hoc tests revealed that BMI for the underweight group (24.38±3.50) was significantly lower than all other weight self-describe groups ($p < .05$) except for the just right group, which had a BMI of 25.24±2.07. The just right group was significantly

lower than two succeeding weight categories, slightly overweight (29.04±3.27) and very overweight (33.13±2.87), $p < .05$. The slightly overweight group had a significantly lower BMI than the very overweight group, $p < .05$.

Among men who were at a normal weight (18.5 – 24.9), eight (22.2%) felt that they were underweight, 17 (47.2%) felt they were "just right," 11 (30.6%) said slightly overweight and none of the men at normal weight described their weight as very or extremely overweight. Looking at overweight men (BMI 25.0 – 29.9), two (2.2%) felt they were underweight, 20 (22.2%) felt they were "just right," 63 (70.0%) slightly overweight, and five (5.6%) felt that they were very overweight. None of the men in the overweight category indicated that they were extremely overweight. Finally, looking only at men who were classified as obese revealed that only one individual (1.3%) thought he was underweight, 2 (2.7%) reported "just right," 40 (53.3%) slightly overweight, 30 (40.0%) very overweight, and two (2.7%) reported extremely overweight. Accuracy of self-identification was then calculated by determining the percentage of men in each weight category who described themselves in each of the following: underweight (< 18.5), "just right" (18.5 – 24.9), slightly overweight (25.0 – 29.9), and very weight and extremely overweight (≥30.0). Results indicated that 89 (44.2%) inaccurately self-described their weight, with 73 (36.3%) self-describing a weight below their actual weight, and 16 (7.9%) self-describing a weight above their actual weight.

Weight preference

Participants were then asked to identify their preferred weight. The preferred weight was then calculated with self-reported height to determine what their BMI would be at the ideal weight. Based on the preferred weight, 57 (29.5%) were in the normal category, 128 (66.3%) were in the overweight category, and eight (4.1%) were in the

obese category. Looking within each weight category, 94.6% of normal weight men had a preferred weight in the normal range whereas only 25.9% of overweight men and 1.3% of obese men had a preferred weight in normal weight range. In the overweight category, 5.4% of normal weight men, 74.1% of overweight men, and 88.0% of obese men had a preferred weight in the overweight range. Results of a paired samples *t* test revealed mean ideal weight was significantly lower than mean reported weight. The results of a one-way ANOVA revealed a significant difference to exist between the means of the BMI for the classification groups, F (2, 198) = 19.861, p = 0.000. Tukey post hoc tests revealed that the obese group had a significantly higher ideal BMI than the normal weight and overweight groups.

Approximately 40% had been told by a doctor to lose weight and had a significantly higher BMI (31.58±3.40) than those who had not been told by a doctor to lose weight (26.95±3.26), t=9.691, df = 199, p = 0.000. Among obese and overweight men, 29.2% of overweight men and 70.7% of obese men had been told by a doctor to lose weight. A Chi-Square analysis of overweight and obese revealed that obese men were significantly more likely to have been told by a doctor to lose weight (χ^2 (1, N = 164) = 28.013, p = 0.000).

Medical weight loss history

When asked if they would ever consider having surgery to lose weight, 172 (86.8%) said no, 14 (7.4%) said maybe, and 10 (5.9%) said yes. Results of a one-way ANOVA revealed that individuals who would consider having surgery to lose weight had a significantly higher BMI (31.87±2.80) than individuals who said they would not consider having surgery (28.38±3.82), F (2, 193) = 5.947, p = 0.000. A posteriori comparisons were made with Tukey's procedure.

When comparing BMI to diagnosed diseases and conditions, BMI was significantly higher among individuals who had been diagnosed with obesity (34.17±2.97) than those who had not (28.40±3.78) t=5.575, df = 199, p = 0.000. Individuals with diabetes had a significantly higher BMI (31.51±3.80) than those who did not (28.41±3.89), t=3.738, df = 199, p = 0.000. BMI was also significantly higher among individuals with high cholesterol (29.79±3.64; 28.40±4.09), t=2.266, df = 199, p = 0.025 and hypertension (30.59±4.18; 28.13±3.73), t=4.031, df = 199, p = 0.000. Chi-Square analysis was conducted to determine if there were significant differences in disease diagnosis and weight status. Men who were classified as obese were significantly more likely be diagnosed with obesity, diabetes, and hypertension, $p < .05$.

Weight satisfaction

Overall satisfaction with current body weight varied from very satisfied to very unsatisfied. Twenty-one participants (10.4%) were very satisfied with their weight, 39 (19.3%) were satisfied, 67 (33.2%) were somewhat satisfied, 64 (31.7%) were unsatisfied, and 11 (5.4%) were very unsatisfied. Twenty-seven (73.0%) normal weight men were satisfied with their weight, but only 29 (32.2%) overweight men and four (5.3%) obese men were satisfied or very satisfied with their weight. BMI increased significantly as level of satisfaction decreased, F (4, 197) = 26.933, p = 0.000. There were no significant differences in BMI for the very satisfied and satisfied groups, 24.63±2.36 and 26.20±2.73 respectively, but both were significantly lower than the somewhat satisfied (28.73±3.52), unsatisfied (31.09±3.38), and very unsatisfied (32.78±3.84) groups. The BMI for the somewhat satisfied group was significantly lower than the unsatisfied and very unsatisfied groups, $p < .05$. There was no significant difference in BMI for the unsatisfied and the very unsatisfied groups ($p > .05$).

The participants were asked how often they thought about their weight. Twenty-eight (13.9%) thought about their weight at least a few times a year. Seventy-four (36.6%) thought about their weight a few times a month, 64 (31.7%) thought about their weight almost every day, and 13 (6.4%) thought about their weight a few times a day. Twenty-three (11.4%) indicated that they never thought about their weight. Results of a one-way ANOVA found that as frequency of thoughts about weight increased BMI also increased, F (4, 197) = 7.146, p = 0.000. Tukey post hoc tests revealed that individuals who thought about their weight a few times a day had a significantly higher BMI (31.53±3.31) than the few times a year (27.45±4.08) and never (26.01±2.94) groups, p < .05. The almost every day group had a significantly higher BMI than the few times a year and never groups, p < .05. The never group had a significantly lower BMI than the few times a day, almost every day, and the few times a month groups, p < .05.

Weight loss status

Over 55% (n=112) of participants were currently trying to lose weight, 46 (22.8%) were not doing anything at all about their weight, 37 (18.3%) were trying to stay the same weight, and seven (3.5%) were trying to gain weight. Significant differences in BMI were found among the four groups, F (3, 198) = 23.734, p = 0.000. Those who wanted to lose weight had a significantly higher BMI (30.46±3.67) than those who wanted to gain weight (23.35±1.51), stay the same weight (26.06±2.52), and those who were not trying to do anything with their weight (27.71±3.74), p < .05. Individuals who were trying to stay the same weight had a significantly lower BMI than those who were not doing anything about their weight, p < .05. Results of a Chi-Square analysis revealed a significant difference between weight classification and current weight loss, (χ^2 (6, N = 202) = 53.896, p = 0.000). Fifty-nine (78.7%) obese men, 46 (51.1%)

overweight men and 7 (18.95%) normal weight men were currently trying to lose weight, indicating that obese men were significantly more likely to be trying to lose weight than normal weight men. However, it should be noted that more than 20% of expected cell counts were less than five percent.

Chi-Square analysis revealed significant differences in the current weight loss status and disease diagnosis. Participants who had been diagnosed as obese were significantly more likely to be currently trying to lose weight than individuals who were not diagnosed as obese, (χ^2 (3, N = 201) = 12.201, p = 0.007). In fact, all individuals who had been diagnosed as obese were currently trying to lose weight. In addition, individuals who were diagnosed with high cholesterol (χ^2 (3, N = 201) = 14.431, p = 0.002) and hypertension (χ^2 (3, N = 201) = 9.781, p = 0.021) were significantly more likely to be trying to lose weight. Looking at professional advice and weight loss among overweight individuals, those who had been told by a doctor to lose weight (73.1%) were significantly more likely to be losing weight that those who were not told by a doctor to lose (41.3%) (χ^2 (3, N = 89) = 9.874, p = 0.020). Doctor advice to lose weight and current weight loss status in the obese group was not significant (p > .05).

Half of all participants, 106 (52.5%), had tried to lose weight in the past year and had a significantly higher BMI (30.27±3.63) than those who had not (27.14±3.75), t=6.035, df = 200, p = 0.000. Among those who had lost weight in past 12 months, 20 (18.9%) had lost less than five pounds, 42 (39.6%) lost 5-10 pounds, 19 (17.9%) lost 11-15 pounds, 13 (12.3%) lost 16-20 pounds, and 12 (11.3%) lost more than 20 pounds. There were no significant differences between BMI and previous weight lost in the past 12 months, F (4, 101) = 1.824, p = 0.130.

Among those who had lost weight in the previous 12 months, 19 (17.9%) were very satisfied with the weight they lost, 36 (34.0%) were satisfied, 31 (29.2%) were somewhat satisfied, 14 (13.2%) were unsatisfied, and five (5.7%) were very unsatisfied. With regard to how long they stayed on the weight loss program, five (4.9%) said less than one week, three (2.9%) said one week, 14 (13.6%) said two to three weeks, 20 (19.4%) stayed on four to six weeks, and 61 (59.2%) stated that they stayed on the weight loss program for more than six weeks. Twelve (11.6%) said they kept the weight off for less than one month, 14 (13.6%) one to three months, 26 (25.0%) four to six months, 23 (22.1%) seven months to one year, and 29 (27.9%) said they had kept the weight off more than one year.

Research Aim # 2

Identify weight loss strategies used by Baby Boomer men

The purpose of this section is to identify what knowledge and skills participants felt that male Baby Boomers need in order to lose weight. Stage of change for weight loss and weight loss strategies currently being used or strategies that have been used in the past will also be determined. For the stage of change and weight loss strategy analyses, all men who were in the normal BMI category (18.5 – 24.9) were excluded.

Information needed to lose weight

Participants were asked to select information that they felt men their age needed to lose or maintain a healthy weight. They were allowed to choose as many as applicable from the list provided. Information identified were: portion control/serving size (58.3%), recommended amount of physical activity (58.3%), healthy recipes (52.1%), how much food they should eat (46.0%), how to control stress (34.6%), and how to choose a weight loss program (22.3%) (See Table 4-3). BMI was significantly lower

(28.28+/-3.98) for men who indicated that men their age would benefit from information on how much exercise they need than men who did not (29.47+/-3.96), t=-2.110, df = 200, p = 0.036. There were no other significant differences between BMI and information needed to lose weight (p > .05). A Chi-Square analysis, conducted to examine group differences in knowledge and skills needed to lose weight, yielded that White men were significantly more likely than non-White men to identify that men their age needed information on portion control and serving size, χ^2 (1, N = 211) = 6.461, p < 0.05 (See Table 4-4). There were no other significant group differences (p > .05).

Stage of change for weight loss

Univariate statistical analysis was conducted to determine the proportions of men in each stage of change for currently trying to lose weight. The results for each stage were: precontemptaion (22.0%), contemplation (15.5%), preparation (6.5%), action (36.3%), and maintenance (19.6%). Mean BMI was then calculated for each stage of change for weight loss and are provided in Table 4-5. Results of a one-way ANOVA and Tukey post hoc test, comparing BMI and stage of change, revealed that the BMI for participants who had no intention to lose weight (precontemplation) was significantly lower than the BMI for all other stages for weight loss, F (4, 158) = 4.645, p = 0.001.

Weight loss strategies currently being used or attempted in the past

Participants were asked to identify healthy and unhealthy weight loss strategies that they were currently using or had tried in the past. The strategies provided came from those identified in the weight loss literature. They were allowed to choose as many as applied from the list provided. The current or previous healthy weight loss strategies that were most commonly identified were: eat less food (63.0%), exercise more often (51.5%), cut back on fried foods (42.4%), cut back on sweets and desserts (41.2%), cut

back on alcohol (15.2%), and join a weight loss program (7.9%). Unhealthy strategies used were: fasting or skipping meals (9.1%), meal replacement drinks/bars (9.1%), and diet or water pills (4.2%). Ten percent indicated that they had never tried to lose weight (See Table 4-6). A Chi-Square analysis test, conducted to examine if persons who selected eat less food also selected exercise more often, resulted in a significant effect (χ^2 (1, N = 165) = 18.765, p = 0.000). In the total sample, 40.6% listed eating less food and exercising more often.

To determine differences in BMI and reported weight loss strategies, independent samples t Tests were used. The categorical variables of using one for yes and two for no for each weight loss strategy were compared to the calculated BMI (See Table 4-7). There were significant differences in mean BMI for men who reported yes to eating less food, skipping meals, joining a weight loss program, using meal replacement bars, and using diet or water pills, $p < .05$. In addition, men who had never tried losing weight had a significantly lower BMI than those who had tried to lose before, $p < .05$.

Chi-Square analysis was used to determine demographic group differences for weight loss strategies used. Results indicated that White men were significantly more likely than non-White men to eat less food (χ^2 (1, N = 165) = 5.743, $p < .05$) and cut back on sweets, (χ^2 (1, N = 165) = 5.247, $p < .05$). Non-White men were more likely to have never tried to lose weight than White men (χ^2 (1, N = 165) = 4.662, $p < 0.05$). Single men were significantly more likely than married men to have never tried to lose weight (χ^2 (1, N = 165) = 5.312, $p < 0.05$) and married men were significantly more likely than single men to cut back on sweets and desserts (χ^2 (1, N = 165) = 6.810, $p < 0.05$) (See Table 4-8). There were no other significant group differences ($p > .05$).

Research Aim # 3

Identify barriers and motivators to weight loss among Baby Boomer men

This section will describe the current barriers participants identified that are preventing them from losing weight. As a follow up question, the men were then asked to provide what they feel would best motivate them to lose weight. For the barriers and motivators to weight loss analyses, all men who were in the normal BMI category (18.5 – 24.9) were excluded.

Barriers to weight loss

Participants were asked to identify barriers to losing weight; they were allowed to choose as many as applied from the list provided. Nearly 14% indicated that they did not need to lose weight. The most frequently reported barriers to losing weight were: not disciplined/no will power (28.5%), not a priority (28.5%), not motivated to lose weight (22.4%), and have not found a plan that works for me (17.6%) (See Table 4-9).

Independent *t* tests comparing mean BMI to the reported barriers to weight loss revealed significantly higher BMI in men who identified that they were not disciplined or had no will power to lose weight, were not motivated to lose weight, could not lose weight because they had not found a plan that worked for them, and said that nothing they had previously tried had worked, $p < .05$. BMI was significantly lower for men who indicated that weight loss was not a priority for them and who said that they (or reported) did not need to lose weight or were happy with their weight, $p < .05$. There were no other significant differences in BMI and reported barriers to losing weight ($p > .05$) (See Table 4-10).

Chi-Square analysis indicated that the younger cohort was significantly more likely than the older cohort to list not disciplined/no willpower as a barrier to weight loss (χ^2 (1, N = 165) = 3.990, p = 0.46). With regard to race, non-White were significantly more likely to list they did not need to lose weight than White (χ^2 (1, N = 165) = 4.575, p = 0.032). There were no other significant relationships between barriers to weight loss and age cohort, income, race/ethnicity, education, or marital status (p > .05).

Motivators to weight loss

Participants were asked to select as many motivators to losing weight as applied from a provided list (See Table 4-11). The main factors that would motivate individuals to lose weight were: to feel stronger and fitter (65.5%), to look better (54.6%), being dissatisfied with my body (38.2%), to prevent from getting certain diseases (36.4%), being diagnosed with a disease or illness (30.9%), if a doctor tells them to (24.2%) and of their partner is dissatisfied with their body (16.4%). Although not significantly different, there were a greater percentage of single men (21.6%) who reported being motivated if their partner was dissatisfied with their body than married men (15.2%). BMI was significantly higher for men who were motivated to lose weight in order to look better and among men who were dissatisfied with their body, p < .05 (See Table 4-12).

A Chi-Square analysis test comparing motivators to weight loss for the two age cohorts indicated a significant difference in wanting to look better as a motivator for weight loss. The younger was significantly more likely to list to look better as a motivator to lose weight than the older cohort, (χ^2 (1, N = 165) = 4.086, p = 0.043). There were no other significant group differences for age cohort and motivators to weight loss (p > .05).

Chi-Square analysis was used to investigate the relationship between race/ethnicity and motivators to weight loss. Forty-four percent of White men indicated

that they would be motivated to lose weight if they were dissatisfied with their body, as compared with 19.0% of non-White men (χ^2 (1, N = 165) = 8.739, p = 0.003). White men were also more likely than non-White to be motivated to lose weight in order to feel stronger and fitter (χ^2 (1, N = 165) = 4.259, p = 0.039). There were no other significant group differences for race/ethnicity and motivators to weight loss (p > .05).

Chi-Square analysis was used to investigate the relationship between education level and motivators to weight loss. Fifty-six percent of men with graduate or professional degrees, 44.1% of men with bachelor's degrees, and 38.5% of men with associates or professional degrees indicated that they would be motivated to lose weight to prevent from getting certain diseases, as compared with 20.0% of men with high school degrees and 20.0% of men who did not finish high school (χ^2 (4, N = 165) = 13.369, p = 0.010). There were no other significant group differences at for education and motivators to weight loss (p > .05). With regard to marital status and motivators to weight loss, married men were significantly more likely to list to be more productive at work than single men (χ^2 (1, N = 165) = 5.368, p = 0.021). There were no significant demographic differences for income (p > .05).

Research Aim # 4

Assess current physical activity levels of Baby Boomer men

This section will describe the participants' perceived physical activity level as well as current participation in cardiovascular, muscular, and flexibility exercises. For the cardiovascular exercises, occurrence, duration, and type of activity will also be identified. Preferred exercise venue(s) and competitive activities most frequently participated in on a regular basis will be listed. Finally, stage of change for physical activity and the barriers and motivators to increasing physical activity will be determined.

Amount, type, frequency, and duration of physical activity

When asked to describe their current physical activity level 15.1% self-described themselves as very active and had a BMI of 27.05±4.03, 31.9% were active with a BMI of 27.84±3.83, and 43.8% were moderately active with a BMI of 29.48±3.93. Due to small sample sizes, not active and "certified couch potato" was collapsed into one "not active" activity level. The result was 9.2% that were "not active" and had a BMI of 31.31±3.72 (See Table 4-13). One-way ANOVA was performed and determined significant differences existed in BMI and described physical activity level, F (3, 181) = 6.232, p = 0.000. Follow-up Tukey multiple comparisons tests found that mean BMI for the not active group was significantly higher than active and very active groups (p < .05), and the mean BMI for the very active group was significantly lower than the moderately active and not active groups, p < .05.

With regard to planned moderate cardiovascular activity, 14.2% exercised 5-7 times per week, 26.9% exercised 3-4 times per week, 26.4% exercised 1-2 times per week, and 32.5% did not exercise regularly. Mean BMI according to exercise frequency are provided in Table 4-14. One-way analyses of variance revealed significant differences between groups, F (3, 193) = 2.294, p = 0.035. Means were compared with Tukey's HSD which found significant differences between BMIs of individuals who exercised 5-7 times per week (26.68±3.40) and individuals who did not exercise regularly (29.15±4.19), p < .05.

On days of planned moderate cardiovascular activity, 38 (22.9%) exercised for less than 30 minutes, 77 (46.4%) exercised for 30-45 minutes, 24 (14.5%) for 46 minutes to 1 hour, and 27 (16.3%) for more than 1 hour. There were no significant differences in BMI between groups.

Walking was chosen as the primary cardiovascular activity by 60.9% of the participants, followed by biking (20.3%), and running (18.8%). Swimming (7.6%) and playing basketball (3.1%) were the least selected activities (See Table 4-15). This survey question also allowed for participants to write in any other forms of preferred cardiovascular activity, 5.1% of write in responses consisted of exercise machines (elliptical, treadmill, cardio machine, etc.). Individuals who participated in running had a significantly lower BMI (27.09±3.88) than those who did not (29.11±3.95) (t= -2.816, df = 195, p = 0.005). There were no other significant BMI differences for cardiovascular activities that were significant (p > .05). Results of a Chi-Square analysis indicated that the younger cohort was significantly more likely to list running as a cardiovascular activity than the older cohort, (χ^2 (1, N = 205) = 8.551, p = 0.003) and non-White men were more likely to list running than White men (χ^2 (1, N = 205) = 4.427, p = 0.035). There were no other significant group differences for demographics and cardiovascular activity (p > .05).

With regard to lifting weights, 0.5% lifted 5-7 times per week, 18.7% lifted 3-4 times per week, 14.1% lifted 1-2 times per week, and 66.7% did not lift weights regularly. There were no significant differences in BMI between groups (p > .05). Looking at participation in flexibility exercises such as stretching or yoga, 8.1% participated 5-7 times per week, 13.6% participated 3-4 times per week, 22.7% participated 1-2 times per week, and 55.6% did not stretch regularly. Individuals who participated in flexibility exercises 5-7 times per week had a significantly lower BMI (26.84±2.39) than those who did not participate at all in flexibility exercises

(29.40±4.18), F (3, 194) = 2.934, p = 0.035.). There were no other significant group BMI differences for flexibility exercises that were significant (p > .05).

The most common places that participants usually exercised were: at home (55.1%), at the gym (30.3%), at work (23.7%), around their neighborhood (19.2%), and at a nearby park (16.7%) (See Table 4-16). There were no significant differences in BMI between groups. A Chi-Square analysis indicated the younger cohort was significantly more likely to exercise at the gym than the older cohort, (χ^2 (1, N = 206) = 4.938, p = 0.026), while the older cohort was more likely than the younger cohort to exercise in the neighborhood, (χ^2 (1, N = 206) = 4.374, p = 0.036). With regard to education, men with graduate or professional degrees were significantly more likely than men with high school degrees to exercise at the gym, (χ^2 (4, N = 206) = 15.807, p = 0.003). Married men were significantly more likely than single men to exercise at home (χ^2 (1, N = 206) = 5.101, p = 0.024). There were no other significant group differences for demographics and places of exercise (p > .05).

Golf was the most frequently chosen competitive activity participated in on a regular basis by 12.1% of participants, followed by 5K-10K run/walk (9.6%), coaching or refereeing youth sports (5.6%), softball (5.1%), cycling or bike racing (4.5%), and tennis (2.0%). BMI was significantly lower (24.52±2.00) for participants who participated in tennis than those who did not (28.82±3.98) (t= -2.153, df = 196, p = 0.033), however, this may have been due to the group size of participants who selected tennis (n=4). There were no other significant differences in BMI, between groups (p > .05). Chi-Square analysis indicated that married men were significantly more likely than single men to participate in golf, (χ^2 (1, N = 206) = 4.116, p = 0.042). Looking at 5K-10K

participation, the younger cohort was significantly more likely than the older cohort to participate (χ^2 (1, N = 206) = 5.118, p = 0.024) and non-White were significantly more likely to participate than White men (χ^2 (1, N = 206) = 5.178, p = 0.023). There were no other significant group differences for demographics and physical activity type (p > .05).

Stage of change for physical activity

Univariate statistical analysis was conducted to determine the proportions of men in each stage of change for currently trying increase exercise. The results for each stage of change for exercise were: precontemplation (16.0%), contemplation (13.0%), preparation (5.0%), action (19.5%), and maintenance (46.5%). The calculated BMI for each stage of change for current weight loss are provided in Table 4-17. Results of a one-way ANOVA and Tukey post hoc test, comparing BMI and stage of change, revealed that participants in the maintenance stage for increasing exercise had a significantly lower mean BMI than individuals in the contemplation stage, F (4, 195) = 3.029, p = 0.019.

Barriers to physical activity

Participants were asked to select barriers that prevented them from being physically active on a regular basis from a provided list and were allowed to choose as many as applied. The reported barriers to physical activity were: don't have time (33.5%), get home too late (25.6%), not motivated (21.0%), not a priority (18.0%), get enough exercise at work (16.0%) I would rather rest and relax than be active (15.0%), don't like to exercise (9.5%), have health problems (7.0%), cannot afford to join a gym (5.0%), and my neighborhood is to unsafe to exercise in (1.5%) (See Table 4-18). Independent t tests were conducted to determine differences in mean BMI and barriers to physical activity. Mean BMI was significantly higher for those who said they don't

have time to exercise and for those who were not motivated to be physically, $p < .05$ (See Table 4-19).

A Chi-Square analysis was used to determine differences among age cohort and barriers to physical activity. Results indicated that the younger cohort was significantly more likely than the older cohort to list "I get home too late" as a barrier to physical activity (χ^2 (1, N = 200) = 5.175, p = 0.023). There were no significant demographic differences for income and barriers to physical activity ($p > .05$). A Chi-Square analysis was used to investigate the relationship between race/ethnicity and barriers to physical activity. White men were significantly more likely to list don't like to exercise as a barrier to physical activity than non-White men, (χ^2 (1, N = 200) = 7.376, $p < 0.007$). There were no other significant group differences for race and barriers to physical activity ($p > .05$).

Chi-Square analysis was used to investigate the relationship between educational level and barriers to physical activity. Men with high school degrees were significantly more likely to list getting enough exercise as work as a barrier to physical activity than men with graduate or professional degrees, (χ^2 (4, N = 200) = 13.835, p = 0.008). There were no other significant group differences for education and barriers to physical activity ($p > .05$).A Chi-Square analysis test comparing barriers to physical activity and marital status indicated a significant difference in reporting not being motivated to be physical active. Married men were significantly more likely to list not motivated as a barrier to physical activity than single men, (χ^2 (1, N = 200) = 6.108, p = 0.013). There were no other significant group differences for marital status and barriers to physical activity ($p > .05$).

Motivators to physical activity

Participants were then asked to select motivators that helped them to be more physically active on a regular basis and were again allowed to choose as many as applied. The reported motivators to physical activity were: to lose weight (53.2%) being diagnosed with a disease or illness (36.8%), if a doctor tells me to (32.3%), having someone to exercise with (28.9%), if my partner was physically active (21.4%), having more convenient places to exercise (12.4%), to be a better role model (12.4%), if my friends were more physically active (7.5%), having a membership to a gym (7.0%), and if I had transportation (1.5%) (See Table 4-20).

Independent *t* tests were conducted to determine differences in mean BMI and the reported motivators to increasing physical activity. Mean BMI was significantly higher for those who would be more active in order to lose weight and if their friends were more active, $p < .05$ (See Table 4-21).Chi-Square analysis was used to investigate the relationship between race/ethnicity and motivators to physical activity. Forty percent of White men indicated that they would be motivated to be physically active if they were diagnosed with a disease or illness, as compared with 19.1% of non-White men (χ^2 (1, N = 201) = 4.210, p = 0.040). There were no other significant group differences for race/ethnicity and motivators to weight loss ($p > .05$).

A Chi-Square analysis was used to investigate the relationship between education level and motivators to physical activity. Men with a B.A./B.S. degree were significantly more likely than men with high school degrees to list if my partner was more physically active as a motivator to physical activity, (χ^2 (4, N = 201) = 10.791, p = 0.029). There were no other significant group differences for education and motivators to physical activity ($p > .05$). A Chi-Square analysis test comparing motivators to physical activity

and marital status indicated a significant difference in wanting to lose weight. Married men were significantly more likely to be motivated to be physically active in order to lose weight than single men, (χ^2 (1, N = 201) = 6.270, p = 0.012). There were no other significant group differences for marital status, age cohort, or income and motivators to physical activity (p > .05).

Research Aim 5

Assess areas of improvement that are needed eating habits of Baby Boomer men

The purpose of this section is to describe the eating habits of participants, including what they are eating, drinking, and prevalence and cause of overeating. Sources of dieting information will be determined as well as comprehension and use of food labels. Eating habits that need to be either increased or decreased in order to eat a healthier diet will also be assessed. Finally, the stage of change for healthy eating will be determined as well as the reported barriers and motivators to eating healthier.

Eating habits

When asked to describe their diets, 19 (9.0%) indicated that their diet was excellent, fifty (23.7%) stated that their diet was very good, 94 (44.5%) said their diet was good, 43 (19.9%) felt their diet was fair, and 6 (2.8%) had a poor diet. Over half (64%) indicated that they usually ate breakfast. Three individuals (1.4%) ate at fast food restaurants every day, 8 (3.8%) ate fast food almost every day, 31 (14.7%) went a few days a week, 84 (39.8%) a few days a month, and 85 (40.3%) ate fast food rarely or never. Only 15 (7.1%) said that they paid extra to “super size” their meal. One participant frequented “all you can eat” style restaurants daily, 3 (1.4%) went almost every day, 4 (1.9%) went a few days a week, 46 (21.8%) a few days a month, and 155 (74.2%) went rarely or never (See Table 4-22).

Just over 40% were primarily responsible for doing the grocery shopping in their household. Thirty-four (16.1%) cooked meals in their home every day, 48 (22.7%) almost every day, 63 (29.9%) a few days a week, 34 (16.1%) a few days a month, and 32 (15.2%) cooked meals in their home rarely or never. Over 54% packed a lunch to take to work. Forty-two (20.0%) drank sodas every day, 28 (13.3%) almost every day, 34 (16.2%) a few days a week, 41 (19.5%) a few days a month, and 65 (31.0%) drank sodas rarely or never. When asked about consumption of sweetened beverages (Kool Aid, sweet tea, lemonade, etc), 17 (8.1%) drank them every day, 25 (11.8%) almost every day, 25 (11.8%) a few days a week, 38 (18.0%) a few days a month, and 106 (50.2%) drank them rarely or never. Over 37% usually drank diet sodas and 36.0% usually used sugar substitutes.

With regard to alcohol use, 26.1% did not drink, 38.7% had low usage, 26.6% were in the middle (neither low nor high), 7.7% considered their use high, and 1.0% reported very high alcohol use. Overweight men were significantly more likely to be in the middle range of use, while normal weight men were more likely to report low use (χ^2 (8, N = 199) = 15.921, p = 0.044). Among those who did drink, 34.9% listed they had at least one occasion in the past 30 days when they consumed more than five drinks in one sitting. Results of a Chi-Square analysis revealed that men who reported middle to very high alcohol use were significantly more likely to have consumed more than five drinks in one setting then men who reported low use (χ^2 (4, N = 156) = 52.526, p = 0.000).

Participants were asked how frequently they overate. Four (1.9%) said they overeat at every meal, 19 (9.0%) one meal a day, 55 (26.1%) a few times a week, 69

(32.7%) a few times a month, 40 (19.0%) a few times a year, and 24 (11.4) said they never overate. Persons who overate a few times a week had a significantly higher BMI (29.85±4.33) than men who only overate a few times a year (26.96±3.82), F (5, 196) = 2.873, p = 0.016. Of those who indicated they overate at least a few times a year, the most frequently listed reasons for overeating were: “free food, or food was just there” by 125 (65.8%) participants, stress (22.6%), and boredom (14.7%). The least frequently listed reasons for overeating were: depression (6.3%), tiredness (5.3%), being overwhelmed (3.2%), and 2.6% listed both loneliness and anger. Table 4-23 shows the results of independent t-Tests on BMI and causes of overeating. BMI was significantly higher for individuals who indicated they overate because they were stressed, depressed, overwhelmed, and bored, $p < .05$.

Sources of dieting information

Participants were asked where they got most of their nutrition and dieting information and could select as many choices as applied from a list provided (See Table 4-24). Wife, female friend or relatives was most frequently listed by 38.1% of participants followed by doctor (32.2%), Internet (30.2%), television (27.2%), books (26.2%), magazines (23.8%), newspapers (14.9%), buddies (7.9%), and commercial weight loss websites (3.5%). Results of a one-way ANOVA and Tukey post hoc analysis found significant group differences and sources of dieting information. Non-White men were significantly more likely than White men to get their information from a television, F (1, 202) = 8.037, p = 0.005. Participants whose highest attained education was graduate or professional degree were more likely than participants with high school/GED to get info from the internet, F (4, 202) = 20.277, p = 0.000, as well as from a book, F (4, 202) = 12.342, p = 0.015. Married men were significantly more likely than

single men to list wife, female friend, or relative as a source of nutrition and dieting information, F (1, 202) = 21.371, p = 0.000.

Over half of the participants (57.8%) usually read food labels however, nearly half (48.8%) indicated that they didn't usually understand everything on food labels. Looking at comprehension of those who did read food labels, 59.5% indicated that understood everything on food labels. Table 4-25 provides the information most frequently looked for on food labels. Participants most frequently listed fats (65.1%) followed by calories (58.9%), sugar (46.9%), sodium (45.9%), cholesterol (41.2%), serving size (36.4%), carbohydrates (31.6%), protein (25.4%), fiber (24.9%), and vitamins and minerals (18.2%).

Eating habits that need to be improved

Participants were asked to identify foods that they needed to eat more of in order to improve their diets. They were allowed to choose as many as applied from the list provided (See Table 4-26). The items that were selected to increase were: fruits (58.9%), vegetables (42.1%), water (41.6%), healthier snacks (39.1%), fiber (27.7%), low fat foods (22.8%), whole grains (22.8%), protein (10.4%) and dairy products (5.5%).

Results of independent t tests comparing BMI and foods Baby Boomers needed to eat more of, revealed that BMI was significantly higher for individuals who reported needing to eat more low fat foods, grains, and healthier snacks, $p < .05$ (See Table 4-27). There were no other significant differences in BMI between selected food items ($p > .05$). There were also no significant differences by demographic variables and food items that needed to be increased ($p > .05$).

Eating habits that need to be decreased

Participants were asked to identify any eating habits that they needed to decrease in order to eat healthier. The items that participants selected to consume less of were: fried foods (37.6%), food in general (35.2%), junk food (30.7%), salt and salty foods (29.2%), sugar (28.7%), meat (14.9%), and alcohol (13.9%) (See Table 4-28). Results of independent *t* tests comparing BMI and reported eating habits, revealed that BMI was significantly higher for individuals who indicated they needed to eat less fried foods, less food in general, and less junk food, $p < .05$ (See Table 4-29). There were no other significant differences in BMI between groups ($p > .05$). Results of a Chi-Square analysis indicated non-White men were significantly more likely than White men to choose I need to eat less fried foods (χ^2 (1, $N = 202$) = 9.825, $p < 0.002$). Men with bachelor's degrees were significantly more likely to list eat less food than men whose highest attained degree was high school or GED (χ^2 (1, $N = 202$) = 10.281, $p < 0.036$). There were no other significant group differences ($p > .05$).

Stage of change for healthy eating

Univariate statistical analysis was conducted to determine the proportions of men in each stage of change for healthy eating. The results for each stage of change were: precontemplation (22.7%), contemplation (12.1%), preparation (8.1%), action (23.7%), and maintenance (33.3%). The calculated BMI for each stage of change for current weight loss was precontemplation (27.40±3.54), contemplation (31.29±3.77), preparation (30.26±4.58), action (30.06±3.62), and maintenance (27.68±3.80) (See Table 4-30). Results of a one-way ANOVA and Tukey post hoc test, comparing BMI and stage of change, revealed that participants who had no intention to eat healthier (precontemplation) had a significantly lower mean BMI than participants in the

contemplation and action stages, individuals in the contemplation stage had a significantly higher mean BMI than individuals in the maintenance stage, and individuals in the action stage had a significantly higher BMI than persons in the maintenance stage, F (4, 193) = 7.558, p = 0.000.

Barriers to eating healthy

The participants were asked to identify their barriers to eating healthier. The reported barriers to consistently eating a healthy diet were: I do not want to give up some of my favorite foods (40.6%), I have a very busy life (34.7%), I already eat healthy (18.3%), not a priority (16.8%), I am not motivated (13.4%), healthy foods are not available at work (12.9%), healthy foods are expensive (12.4%), healthy foods take too much time to prepare (9.4%), healthy foods do not taste good (7.4%), and I do not know how to cook (2.5%) (See Table 4-31). Results of independent t tests comparing BMI and barriers to eating healthy, revealed that mean BMI was significantly higher for those who indicated they could not eat healthy because they had a very busy life and for individuals who indicated healthy foods were not available at work, $p < .05$. Individuals who reported that they already eat healthy had a significantly lower BMI than those who were not currently eating healthy consistently, $p < .05$ (See Table 4-32). There were no other significant differences in BMI and reported barriers to consistently eating healthy ($p > .05$).

A Chi-Square analysis test comparing barriers to consistently eating a healthy diet for the two age cohorts indicated that men in the younger cohort were significantly more likely than men in the older cohort to report not wanting to give up favorite foods (χ^2 (1, N = 202) = 4.504, $p < 0.034$), as a barrier. In addition, the older cohort was significantly more likely to already be eating healthy (χ^2 (1, N = 202) = 5.282, $p < 0.022$). White men

were significantly more likely than non-White men to not want to give up their favorite foods (χ^2 (1, N = 202) = 5.427, p < 0.020). There were no other significant group differences for barriers to consistently eating a healthy diet (p > .05).

Motivators to eating healthy.

The participants were then asked to identify what would motivate them to eat healthier. The reported motivators to consistently eating a healthy diet were: to lose weight (48.5%) being diagnosed with a disease or illness (40.1%), to prevent from getting certain diseases (30.2%), I already eat healthy (29.2%), to be a better role model for my kids (15.8%), if restaurants offered healthier foods (11.9%), if my family members were willing to change (8.9%), if someone close to me is diagnosed with a disease (8.4%), and nothing would motivate me (5.5%) (See Table 4-33). Results of independent *t* tests comparing BMI and motivators to eating healthy revealed that mean BMI was significantly higher for individuals who would be motivated to eat healthy to lose weight and being diagnosed with a disease or illness, p < .05. Individuals who already ate healthy consistently had a significantly lower BMI than those who did not eat healthy, p < .05 (See Table 4-34).

A Chi-Square test comparing motivators to consistently eating a healthy diet for the two age cohorts indicated that men in the older cohort were significantly more likely than the younger cohort to state that they already eat healthy (χ^2 (1, N = 202) = 6.453, p < 0.011). Comparing race/ethnicity, White men were significantly more likely than non-White men to be motivated by being diagnosed with a disease or illness (χ^2 (1, N = 202) = 8.447, p < 0.004) but non-White men were significantly more likely than White men to list to prevent from getting certain diseases (χ^2 (1, N = 202) = 4.872, p < 0.027). White men were also more likely to list if restaurants offered more healthy foods as a motivator

than non-White men (χ^2 (1, N = 202) = 6.633, p < 0.010). Within marital groups, married men were significantly more likely than single men to list wanting to lose weight as a motivator to eating healthier (χ^2 (1, N = 202) = 8.301, p < 0.004).There were no other significant group differences for motivators to consistently eating a healthy diet (p > .05).

Summary

This chapter reports the findings from the participant survey. Most participants were white, married, and evenly split between the younger and older cohorts. Findings indicate that the overall prevalence of overweight and obesity was 82.3% with 39.2% falling in the obese range, yet 87.3% self-described their health as very good to excellent. High cholesterol was present in 30% of men and hypertension in 28%. Only 8.5% had been formally diagnosed with obesity and less than 40% had been told by a doctor to lose weight. Only 30% expressed that they were satisfied or very satisfied with their bodies, while 37% stated that they were unsatisfied or very unsatisfied. Over one-third of participants (38%) thought about their weight almost every day if not more. Overall, participants had an accurate perception of where their weight was at and had a preferred weight that would put them in a healthier weight category. Fifty-six percent were in the action or maintenance stage for weight loss and as such 52.5% indicated that they had tried to lose weight in the past 12 months. Among those trying to lose weight, all lost weight and only 20% were unsatisfied with their weight loss. However, 72% had gained their weight back within a year.

The strategies for weight loss that were most frequently reported were eating less food, exercising more often, and cutting back on certain foods such as fried foods and desserts. Forty percent used the recommended weight loss strategy of combining exercise with reduced caloric intake. In order to lose weight they reported needing more

information on portion control, the amount of physical activity that was sufficient for weight loss, how to prepare healthy recipes, how much food they should eat, and how to manage stress. The reported barriers to losing weight were not being disciplined, not being motivated, and that weight loss was not a priority. The reported motivators to losing weight were to look stronger, look better, increasing body satisfaction, preventing disease, being diagnosed with a disease, or being told to lose weight by their doctor.

One-third did not participate regularly in cardiovascular activity and accordingly 34% were in the precontemplation, contemplation, and preparation stages for increasing exercise. Over half (67%) did not participate regularly in muscular strength exercises, and 56% did not participate regularly in flexibility exercises. The preferred venues for exercise were in the home, at the gym, at work, or in the neighborhood. Walking was the preferred cardiovascular exercise by 61% of participants. The reported barriers to increasing physical activity were not having time, getting home too late, and not being motivated. The reported motivators to physical activity were to lose weight, being diagnosed with disease, being told by their doctor to exercise more, having someone to exercise with, and if their partner was more physically active.

The majority of men ate healthy with 77% reporting that their diet was good, very good, or excellent yet only 57% reported that they were in the action or maintenance stages for healthy eating. Over half ate breakfast regularly, 80% did not go out regularly to fast food, and 96% frequented buffets style restaurants a few times a month or less. One-third drank soda almost every day and 32% drank sweetened beverages a few days a week. Thirty-seven percent of men said they overate a least a couple times per week, primarily because food is just “there.” In order to have a healthier diet they

indicated they needed to eat more fruits and vegetables, drink more water, and eat healthier snacks and eat less food in general including fried foods, junk foods, salty foods, and foods high in sugar content. Men in this study get their dieting information primarily from their wives, physicians, the Internet, television, and from books. Half read food labels but only 60% understood everything that they were reading on them. Some of the barriers that they reported to eating healthier included not wanting to give up their favorite foods, being too busy to eat healthy, and not being motivated to eat healthier. The motivators to eating healthy were to lose weight, being diagnosed with a disease or illness, and to prevent from getting certain diseases. Chapter 5 presents a discussion of the major results, implications for health educators, practitioners, and clinicians, and recommendations for weight loss programs that will best meet the needs of Baby Boomer men.

Table 4-1. Demographical distribution by age cohort, income, race/ethnicity, education, and marital status

Demographic variables	n	%
Age cohort		
Older cohort	104	49.29
Younger cohort	107	50.71
Income		
Less than $19,999	12	5.85
$20,000 to $29,999	25	12.20
$30,000 to $39,999	20	9.76
$40,000 to $49,999	19	9.27
$50,000 to $59,999	35	17.07
$60,000 to $69,999	26	12.68
More than $70,000	68	33.17
Ethnicity		
Black/African American	34	16.11
Hispanic	8	3.79
White/Caucasian	158	74.88
Other	11	5.21
Education		
Eight grade or less	1	0.47
Did not complete high school	5	2.37
High school graduate/GED	71	33.65
A.A. degree/professional license	47	22.49
B.A./B.S. degree	39	18.66
Graduate or professional degree	48	22.75
Marital Status		
Single, not in a relationship	27	12.80
Single, committed relationship	21	9.95
Married, separated	5	2.37
Married, living with spouse	158	74.88

Table 4-2. Classification according to Body Mass Index (BMI)

Classification	BMI (kg/m^2)	n	%
Underweight	< 18.5	0	0
Normal	18.5 – 24.9	37	17.70
Overweight	25.0 – 29.9	90	43.06
Obese	≥30.0	75	35.89
Extremely Obese	≥40.0	7	3.35

Table 4-3. Information needed for weight loss identified by Baby Boomers

Information needed	n	%
Portion control/serving sizes	123	58.29
Recommended amount of physical activity	123	58.29*
Healthy recipes	110	52.13
How much they should eat	97	45.97
How to control stress	73	34.60
How to choose a weight loss program	47	22.27
Online dieting	10	4.74
Other	10	4.74

Table 4-4. Information needed for weight loss by race/ethnicity

	Non-White		White				
Information needed	n	%	n	%	X^2	df	p
Portion control/serving sizes	23	43.4	100	63.3	6.461	1	0.011*
Recommended amount of PA	28	52.8	95	60.1	0.869	1	0.351
Healthy recipes	27	50.9	83	52.5	0.040	1	0.841
How much they should eat	21	39.6	76	48.1	1.149	1	0.284
How to control stress	16	30.2	57	36.1	0.608	1	0.436
How to choose a program	11	20.8	36	22.8	0.094	1	0.759
Online dieting	4	7.5	6	3.8	1.236	1	0.266
Other	2	3.8	8	5.1	0.146	1	0.702

*$p < .05$.

Table 4-5. Stage of change for currently trying to lose weight and BMI

Stage of change	n	%	BMI	SD	Classification
Precontemplation	37	22.70	27.95	2.70	Overweight
Contemplation	25	15.34	30.44	3.27	Obese
Preparation	10	6.13	30.80	4.52	Obese
Action	60	36.81	30.34	3.32	Obese
Maintenance	31	19.02	30.97	3.53	Obese

Table 4-6. Weight loss strategies currently being used or used in the past

Strategies	n	%
Eat less food	104	63.03
Exercise more often	85	51.52
Cut back on fried foods	70	42.42
Cut back on sweets and desserts	68	41.21
Cut back on alcohol	25	15.15
I have never tried to lose weight	17	10.30
Fast or skip meals	15	9.09
Meal replacement drinks/bars	15	9.09
Join a weight loss program	13	7.88
Diet pills or water pills	7	4.24

Table 4-7. Reported weight loss strategies by BMI

Strategy used	BMI yes	SD	BMI no	SD	df	t	p
Eat less food	30.38	3.69	29.22	2.89	163	2.103	0.037*
Exercise more often	30.25	3.57	29.63	3.31	163	1.153	0.251
Cut back on fried foods	30.26	3.62	29.72	3.33	163	0.984	0.327
Cut back on sweets and desserts	30.45	3.49	29.60	3.40	163	1.551	0.123
Cut back on alcohol	30.69	3.93	29.82	3.36	163	1.171	0.243
I have never tried to lose weight	27.60	2.70	30.22	3.48	163	-3.044	0.003*
Fast or skip meals	32.09	3.60	29.74	3.38	163	2.558	0.011*
Meal replacement drinks/bars	32.11	3.90	29.73	3.34	163	2.582	0.011*
Join a weight loss program	32.65	2.34	29.72	3.44	163	3.004	0.003*
Diet pills or water pills	32.87	2.26	29.82	3.44	163	2.320	0.022*

*$p < .05$.

Table 4-8. Cross tabulation table for demographics and weight loss strategies

Strategy	Cohort p	Marital p	Race p	Edu p	Income p
Eat less food	0.307	0.747	0.017*	0.288	0.772
Exercise more often	0.069	0.436	0.346	0.419	0.124
Cut back on fried foods	0.359	0.694	0.250	0.999	0.055
Cut back on sweets and desserts	0.366	0.009*	0.022*	0.962	0.927
I have never tried to lose weight	0.621	0.021*	0.031*	0.208	0.381
Cut back on alcohol	0.937	1.000	0.497	0.282	0.473
Fast or skip meals	0.622	1.000	0.910	0.853	0.351
Join a weight loss program	0.933	0.248	0.126	0.581	0.637
Meal replacement drinks/bars	0.300	0.498	0.611	0.715	0.319
Diet pills or water pills	0.811	0.176	0.847	0.947	0.348

*$p < .05$.

Table 4-9. Reported barriers preventing Baby Boomers from losing weight

Barrier	n	%
Not disciplined, no will power	47	28.48
Not a priority for me	47	28.48
I am not motivated to lose weight	37	22.42
Have not found a plan that works for me	29	17.58
I do not need to lose weight	23	13.94
Not sure if I can do it	9	5.45
Can’t afford to join a weight loss program	9	5.45
Nothing I have tried has worked	8	4.85
I just don’t care	8	4.85
Can’t afford to join a gym	6	3.64

Table 4-10. Reported barriers to losing weight and BMI

Barrier	BMI yes	SD	BMI no	SD	df	t	p
Not disciplined, no will power	31.13	3.71	29.48	3.24	163	2.834	0.005*
Not a priority for me	28.50	2.85	30.53	3.51	163	-3.517	0.001*
I am not motivated to lose weight	31.23	3.41	29.58	3.39	163	2.602	0.010*
Have not found a plan that works	31.34	3.01	29.65	3.48	163	2.425	0.016*
I do not need to lose weight	27.20	2.03	30.40	3.43	163	-4.335	0.000*
Not sure if I can do it	31.13	2.85	29.88	3.48	163	1.056	0.293
Can't afford to join a program	31.20	3.04	29.88	3.47	163	1.117	0.266
Nothing I have tried has worked	32.70	4.82	29.81	3.33	163	2.340	0.021*
I just don't care	29.50	3.54	29.97	3.46	163	-0.381	0.704
Can't afford to join a gym	30.37	3.43	29.93	3.46	163	0.303	0.762

*$p < .05$

Table 4-11. Reported motivators for Baby Boomers to lose weight

Motivator	n	%
To feel stronger and fitter	108	65.45
To look better	90	54.55
Being dissatisfied with my body	63	38.18
To prevent me from getting certain diseases	60	36.36
If I am diagnosed with a disease or illness	51	30.91
If a doctor tells me to	40	24.24
If my partner was dissatisfied with my body	27	16.36
To be a better role model for my kids	26	15.76
To be more productive at work	19	11.52
If someone close to me is diagnosed with a disease	13	7.88

Table 4-12. Reported motivators for Baby Boomers to lose weight and BMI

Motivators	BMI yes	SD	BMI no	SD	df	t	p
To feel stronger and fitter	30.23	3.51	29.43	3.31	163	1.418	0.158
To look better	30.66	3.55	29.10	3.15	163	2.941	0.004*
Being dissatisfied with my body	30.65	3.97	29.52	3.03	163	2.065	0.041*
To prevent certain diseases	29.83	3.66	30.02	3.35	163	-0.337	0.736
If I am diagnosed with a disease	30.34	3.48	29.78	3.44	163	0.967	0.335
If a doctor tells me to	29.15	3.53	30.21	3.30	163	-1.699	0.091
If my partner was dissatisfied w/ body	29.87	3.85	29.97	3.38	163	-0.132	0.895
To be a better role model for my kids	29.71	3.90	30.00	3.37	163	-0.388	0.699
To be more productive at work	30.26	3.80	29.91	3.42	163	0.411	0.682
Someone close diagnosed w/disease	29.98	3.60	29.95	3.45	163	0.028	0.978

*$p < .05$.

Table 4-13. Current level of physical activity

Current activity	n	%	BMI	SD	Classification
Very active	28	15.14	27.05	4.03	Overweight
Active	59	31.89	27.84	3.83	Overweight
Moderately active	81	43.78	29.48	3.93	Overweight
Not active	17	9.19	31.31	3.72	Obese

Table 4-14. Planned moderate cardiovascular activity

Exercise bout	n	%	BMI	SD	Classification
5-7 times per week	28	14.21	26.68	3.40	Overweight
3-4 times per week	53	26.90	29.00	4.05	Overweight
1-2 times per week	52	26.40	28.95	3.71	Overweight
I do not exercise regularly	64	32.49	29.15	4.19	Overweight

Table 4-15. Primary cardiovascular activity

Physical activity	n	%
Walking	120	60.91
Biking	40	20.30
Running/jogging	37	18.78
Swimming	15	7.61
Other (exercise machines)	10	5.08
Basketball	6	3.05

Table 4-16. Preferred venue(s) typically used for exercise

Venue	n	%
Home	109	55.05
Gym	60	30.30
Work	47	23.74
Around the neighborhood	38	19.19
At a nearby park	33	16.67
At a stadium	3	1.52
At the YMCA	2	1.01
Community center	1	0.51

Table 4-17. Stage of change for trying to increase physical activity and BMI

Stage of change	n	%	BMI	SD	Classification
Precontemplation	32	16.00	28.46	4.27	Overweight
Contemplation	26	13.00	30.22	3.87	Obese
Preparation	10	5.00	30.87	5.14	Obese
Action	39	19.50	29.55	3.39	Overweight
Maintenance	93	46.50	27.95	3.91	Overweight

Table 4-18. Reported barriers to physical activity

Barrier	n	%
I don't have time	67	33.50
I get home too late	51	25.50
I am not motivated to be physically active	42	21.00
It is not a priority for me	36	18.00
I get enough exercise at work	32	16.00
I would rather rest and relax than be active	30	15.00
I don't like to exercise	19	9.50
I have health problems	14	7.00
I can't afford to go to a gym	10	5.00
My neighborhood is unsafe	3	1.50

Table 4-19. Reported barriers to physical activity and BMI

Barrier	BMI yes	BMI no	df	t	p
I don't have time	29.63	28.42	198	2.037	0.043*
I get home too late	29.58	28.56	198	1.567	0.119
I am not motivated to be active	29.95	28.52	198	2.081	0.039*
It is not a priority for me	28.56	28.88	198	-0.440	0.661
I get enough exercise at work	28.57	28.87	198	-0.387	0.699
I would rather rest and relax	28.88	28.81	198	0.467	0.931
I don't like to exercise	30.04	28.69	198	1.393	0.165
I have health problems	28.24	28.86	198	-0.560	0.576
I can't afford to go to a gym	27.55	28.89	198	-1.032	0.303
My neighborhood is unsafe	31.57	28.78	198	1.199	0.232

*$p < .05$.

Table 4-20. Reported motivators to increase physical activity

Motivator	n	%
To lose weight	107	53.23
Being diagnosed with a disease or illness	74	36.82
If a doctor tells me to	65	32.34
Having someone to exercise with	58	28.86
If my partner was physically active	43	21.39
If I had more convenient places to exercise	25	12.44
To be a better role model	25	12.44
If my friends were more physically active	15	7.46
If I had a membership to a gym	14	6.97
If I had transportation	3	1.49

Table 4-21. Reported motivators to be more physically active and BMI

Motivator	BMI yes	SD	BMI no	SD	df	t	p
To lose weight	30.46	3.81	26.93	3.33	199	6.941	0.000*
Being diagnosed with a disease	29.11	4.23	28.64	3.86	199	0.806	0.421
If a doctor tells me to	28.19	4.21	29.11	3.87	199	-1.532	0.127
Having someone to exercise with	29.09	4.41	28.70	3.83	199	0.630	0.530
If my partner was physically active	29.36	4.32	28.66	3.90	199	1.017	0.310
If I had more convenient places	29.02	4.39	28.78	3.95	199	0.277	0.782
To be a better role model	28.28	4.49	28.88	3.93	199	-0.704	0.483
If my friends were more active	30.81	4.65	28.65	3.91	199	2.028	0.044*
If I had a membership to a gym	28.78	4.98	28.81	3.93	199	-0.028	0.978
If I had transportation	26.75	6.29	28.84	3.97	199	-0.897	0.371

*$p < .05$.

Table 4-22. Eating habit frequency

Eating pattern	Daily n	%	Almost daily n	%	Weekly n	%	Monthly n	%	Never n	%
Eat at fast food restaurants	3	(1.4)	8	(3.8)	31	(14.7)	84	(39.8)	85	(40.3)
Eat at “all you can eat” buffets	1	(0.5)	3	(1.4)	4	(1.9)	46	(21.8)	155	(74.2)
Cook own meals	34	(16.1)	48	(22.7)	63	(29.9)	34	(16.1)	32	(15.2)
Drink sodas	42	(20.0)	28	(13.3)	34	(16.2)	41	(19.5)	65	(31.0)
Drink sweetened beverages	17	(8.1)	25	(11.8)	25	(11.8)	38	(18.0)	106	(50.2)

Table 4-23. Cause of overeating

Cause	n	%	BMI yes	SD	BMI no	SD	df	t	p
Free food	117	64.64	28.77	4.03	29.12	3.99	179	-0.567	0.571
Stress	41	22.65	30.80	3.79	28.33	3.91	179	3.575	0.000*
Boredom	29	16.02	30.96	4.30	28.50	3.84	179	3.108	0.002*
Depression	11	6.08	32.20	3.78	28.68	3.94	179	2.881	0.004*
Tiredness	10	5.52	30.83	4.31	28.78	3.97	179	1.583	0.115
Overwhelmed	6	3.31	33.36	4.07	28.74	3.93	179	2.829	0.005*
Loneliness	5	2.76	26.55	4.24	28.96	3.99	179	-1.327	0.186
Anger	4	2.21	31.46	1.90	28.83	4.03	179	1.298	0.196

*$p < .05$.

Table 4-24. Sources of information about nutrition and dieting

Information source	n	%
Wife, female friend, or relative	77	38.12
Doctor	65	32.18
Internet	61	30.20
Television	55	27.23
Books	53	26.24
Magazines	48	23.76
Newspaper	30	14.85
Buddies	16	7.92
Commercial weight loss website	7	3.47

Table 4-25. Information looked for on food labels

Information	n	%
Fats	136	65.07
Calories	123	58.85
Sugar	98	46.89
Sodium	96	45.93
Cholesterol	86	41.15
Serving size	76	36.36
Carbohydrates	66	31.58
Protein	53	25.36
Fiber	52	24.88
Vitamins and minerals	38	18.18

Table 4-26. Items Baby Boomers need to consume more of to improve their diet

Food item	n	%
I need to eat more fruits	119	58.91
I need to eat more vegetables	85	42.08
I need to drink more water	84	41.58
I need to choose healthier snacks	79	39.11
I need to eat more fiber	56	27.72
I need to eat more low fat foods	46	22.77
I need to eat more whole grains	46	22.77
I need to eat more protein	21	10.40
I need to eat more dairy products	11	5.45

Table 4-27. Items Baby Boomers need to consume more to improve their diet and BMI

Food item	BMI yes	SD	BMI no	SD	df	t	p
I need to eat more fruits	28.99	4.06	28.49	3.92	200	0.863	0.389
I need to eat more vegetables	29.32	4.09	28.39	3.91	200	1.638	0.103
I need to drink more water	28.60	3.75	28.92	4.18	200	-0.556	0.579
I need to choose healthier snacks	29.87	4.27	28.09	3.67	200	3.148	0.002*
I need to eat more fiber	29.20	3.96	28.62	4.02	200	0.920	0.359
I need to eat more low fat foods	30.56	4.11	28.26	3.83	200	3.528	0.001*
I need to eat more whole grains	29.91	3.77	28.45	4.02	200	2.193	0.029*
I need to eat more protein	29.75	4.36	28.67	3.96	200	1.176	0.241
I need to eat more dairy products	28.19	3.46	28.82	4.04	200	-0.502	0.616

*$p < .05$.

Table 4-28. Items Baby Boomers need to consume less of to improve their diet

Food item	n	%
I need to eat less fried foods	76	37.62
I need to eat less food	71	35.15
I need to eat less “junk” food	62	30.69
I need to eat less salt and salty foods	59	29.21
I need to eat less sugar	58	28.71
I need to eat less meat	30	14.85
I need to drink less alcohol	28	13.86

Table 4-29. Items Baby Boomers need to consume less and BMI

Food item	BMI yes	SD	BMI no	SD	df	t	p
I need to eat less fried foods	29.66	3.86	28.26	4.01	200	2.446	0.015*
I need to eat less food	30.66	3.44	27.77	3.93	200	5.202	0.000*
I need to eat less “junk” food	30.21	4.48	28.15	3.61	200	3.473	0.001*
I need to eat less salt and salty foods	28.85	4.12	28.75	3.97	200	0.160	0.873
I need to eat less sugar	29.20	4.49	28.61	3.79	200	0.945	0.346
I need to eat less meat	29.76	3.58	28.61	4.05	200	1.448	0.149
I need to drink less alcohol	28.42	3.62	28.84	4.07	200	-0.517	0.606

*$p < .05$.

Table 4-30. Stage of change for currently trying to eat healthier and BMI

Stage of change	n	%	BMI	SD	Classification
Precontemplation	45	22.73	27.40	3.54	Overweight
Contemplation	24	12.12	31.29	3.77	Obese
Preparation	16	8.08	30.26	4.58	Obese
Action	47	23.74	30.06	3.62	Obese
Maintenance	66	33.33	27.68	3.80	Overweight

Table 4-31. Reported barriers to consistently eating healthy

Barrier	n	%
I do not want to give up favorite foods	82	40.59
I have a busy life	70	34.65
I consistently eat a healthy diet	37	18.32
It is not a priority for me	34	16.83
Not motivated to eat healthy	27	13.37
Healthy foods are not available at work	26	12.87
Healthy foods are expensive	25	12.38
Healthy foods take too long to prepare	19	9.41
Healthy foods do not taste good	15	7.43
I do not know how to cook	5	2.48

Table 4-32. Reported barriers to consistently eating healthy and BMI

	BMI		BMI				
Barrier	yes	SD	no	SD	df	t	p
I do not want to give up favorite foods	28.91	3.77	28.70	4.17	200	0.371	0.711
I have a busy life	29.93	3.95	28.17	3.91	200	3.028	0.003*
I consistently eat a healthy diet	27.01	4.22	29.18	3.85	200	-3.047	0.003*
It is not a priority for me	28.96	4.00	28.75	4.01	200	0.277	0.782
Not motivated to eat healthy	29.82	4.57	28.62	3.90	200	1.444	0.150
Healthy foods are not available at work	31.38	4.02	28.40	3.86	200	3.658	0.000*
Healthy foods are expensive	30.00	3.74	28.61	4.02	200	1.624	0.106
Healthy foods take too long to prepare	29.82	4.03	28.66	3.99	200	1.188	0.236
Healthy foods do not taste good	29.16	3.99	28.75	4.01	200	0.382	0.703
I do not know how to cook	28.77	4.20	28.78	4.01	200	-0.006	0.995

*$p < .05$.

Table 4-33. Motivators for Baby Boomers to consistently eat healthy

Motivator	n	%
I want to lose weight	98	48.51
Being diagnosed with a disease or illness	81	40.10
To prevent me from certain diseases	61	30.20
I already eat healthy	59	29.21
To be a better role model for my kids	32	15.84
If restaurants offered more healthy foods	24	11.88
If family members are willing to change	18	8.91
Someone close is diagnosed with a disease	17	8.42
Nothing would motivate me	11	5.45

Table 4-34. Motivators to consistently eat healthy and BMI classification

Motivator	BMI yes	SD	BMI no	SD	df	t	p
I want to lose weight	30.32	3.67	27.34	3.78	200	5.676	0.000*
Being diagnosed with a disease	29.61	4.44	28.23	3.59	200	2.437	0.016*
To prevent me from certain diseases	29.20	4.18	28.60	3.92	200	0.971	0.333
I already eat healthy	26.82	3.24	29.59	4.02	200	-4.711	0.000*
To be a better role model for my kids	29.35	4.32	28.68	3.94	200	0.873	0.383
If restaurants offered healthy foods	29.28	4.19	28.72	3.98	200	0.644	0.520
If family members are willing to change	30.42	4.77	28.62	3.90	200	1.827	0.069
Someone close diagnosed with disease	28.75	4.25	28.79	3.99	200	-0.041	0.967
Nothing would motivate me	28.70	3.60	28.79	4.03	200	-0.067	0.947

*$p < .05$.

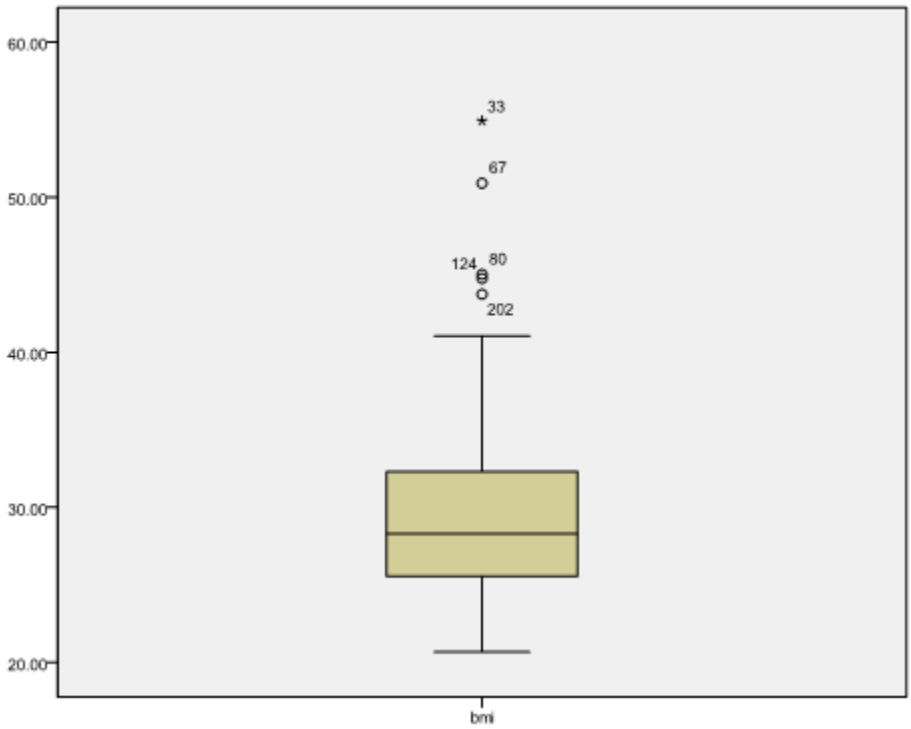

Figure 4-1. Boxplot distribution of calculated BMI

CHAPTER 5
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

In 2008, obese Americans cost the United States $147 billion in medical bills, which pales in comparison to the $1.8 trillion spent in medical costs for the treatment of chronic diseases associated with obesity (Hellmich, 2009). With medical expenses for obese individuals estimated to reach $344 billion by 2018, prevention is imperative. The risks associated with obesity are well known, hypertension, high blood cholesterol, sleep apnea, respiratory diseases, stroke, type 2 diabetes, and some forms of cancer (DHHS, 2010). While recent data indicates that obesity prevalence does not appear to be increasing at the same rates as previously seen (Flegal et al., 2010), 68.3% of adults in the United States are overweight and of that percentage, 38.9% are obese (Flegal et al., 2010). While the obesity epidemic is present among all age groups, the greatest prevalence is among persons aged 40 and older (Flegal et al., 2010). This is even more concerning for men who on average have a lower life expectancy and higher death rates within 12 of the 15 leading causes of death (Hoyert et al., 2006).

The modifiable risk factors of obesity, physical inactivity, sedentary behavior, and poor diet, are well known, yet only 36% of overweight men and 68% of obese men are trying to lose weight (Baradel et al., 2009). With the aging population of Baby Boomers this is concerning as the earliest members of this generation became eligible for social security in 2008 and will be eligible for Medicare by 2011. As they continue to retire, social security payments will increase and those who are continuing to develop or continue to live with the chronic medical conditions associated with obesity, will cause long-term care costs to grow (Knickman & Snell, 2002). Moreover, survival rate among

this population may decrease. Data from the Framingham Heart Study found that men who are obese at 40 live 6-7 years less and are 81% more likely to die before the age of 70 than their normal-weight counterparts (Peeters et al., 2003). Thus, understanding how these men view their weight, what weight loss or weight management strategies they are using, and what is preventing them from losing weight is essential. This study examined the weight status, healthy eating behaviors, and physical activity patterns of a sample of male Baby Boomers living in North Central Florida. The following sections provide a discussion of these findings.

Discussion

Study Findings

Weight status

Consistent with national data (2007-2008 NHANES), there was a high prevalence of overweight and obesity among men in this study indicating that this sample of men was representative of the greater population. Combined, the prevalence for overweight and obesity was 82.3% which was higher than the 2007-2008 NHANES data of 77.8% (Flegal et al., 2010) for men aged 40-59 and 78.4% for men 60 and over. Obesity rates were also higher than national data at 39.2% compared to 34.3% in men 40-59 and 37.1% in men 60 and older.

The percentage of men who were overweight or obese is not shocking, given the current weight status of male Baby Boomers, but what is concerning is the fact that many overweight and obese adults do not perceive their weight to be a health risk (Gregory, Blanck, Gillespie, Maynard, & Serdula, 2008) or perceive themselves to be overweight (Johnson-Taylor, Fisher, Hubbard, Starke-Reed, & Eggers, 2008). Previous research on weight perception indicates that 30% of men place themselves in weight

categories that are not consistent with public health classifications (Chang & Christakis, 2003). In the present study, 44% of men inaccurately described their weight according to their BMI classification. Further examination of the data revealed that 53% of obese men reported that they were one category below their actual classification (slightly overweight) and 22% of overweight men reported “just right,” also one category below their actual classification. In an examination of NHANES data from 2001-2006, Merrill and Richardson (2009) assessed that 47% of overweight men thought that they were “about the right weight.” The present findings suggest that while some overweight men may view their weight as about right, a greater percentage of obese men may consider their weight to be only slightly higher than normal weight, which may be indicative of increased acceptance of a heavier weight (Merrill & Richardson, 2009).

Despite the discrepancies between perceived weight and actual weight, obese individuals less frequently reported very good or excellent health than those who were closer to normal weight. Consistent with the data from the 2008 National Health Interview Survey (Pleis, Lucas, & Ward, 2009) that indicated 56.1% of adults 45 to 65 years old assessed their own health at very good or excellent, 52% of all participants in this study felt that they were in very good or excellent health. However, only 34.7% of obese participants reported very good or excellent health. These individuals were also significantly more likely to be diagnosed with obesity, diabetes, and hypertension. These findings support evidence (Hart, Hole, Lawlor, & Smith, 2007; Villareal et al., 2005) that persons who are obese are at an increased risk for developing these life-threatening conditions. In addition, the health risks associated with obesity are more severe than in persons who are overweight (Field et al., 2000; Hart et al., 2007; Villareal

et al., 2005), thus the overweight participants may not have felt their weight was a health risk which may be cause of their increased perception of very good or excellent health.

Previous research on preferred weight suggests that self-reported ideal weight has increased over time (Kuk et al., 2009). Although 88% of obese men indicated preferred weights in a healthier range, they still had a preferred weight that was considered overweight. Only 26% of overweight men had a preferred weight in the normal weight range. A study by McPherson and Turnbull (2005) on Scottish men produced similar findings with obese men reporting they would like a smaller body and overweight men wanting to remain the same size. The authors suggested that the way in which men report weight satisfaction is in terms of adiposity. Thus, overweight men may not feel that their current weight is aesthetically undesirable. In addition, with 81% of overweight and obese men combined preferring a weight in the overweight range it is possible that they may be identifying more feasible weights for them to achieve. There is evidence to support that men are more realistic than women with regard to goal and ideal weight losses, including obese men (Linde, Jeffery, Levy, Pronk & Boyle, 2005), and thus their preferred weight may be more in line with recommended weight loss goals of 1-2 lbs of weekly weight through a reduction of 500 to 1,000 kcal/day (DHHS, 1998). Research has shown that even modest weight loss has been shown to reduce the risk for some diseases. A study by Hamman et al. (2006) that a reduction of weight of 1 kg (2.2 lbs) reduced the risk of diabetes in obese adults by 17% and estimated that a loss of 5 kg (~11 lbs) could reduce the risk of diabetes by as much as 55%. Nevertheless, the high percentage of overweight men and obese men preferring a weight in the overweight

range may provide further evidence that a certain level of overweight is acceptable among men (McPherson & Turnbull, 2005; Rand & Resnick, 2000).

Motivators for weight loss

Predominate research on body satisfaction has provided conflicting evidence with regard to men. Men are typically more satisfied with their weight than women (Feingold & Mazzella, 1998; Frederick, Forbes, Grigorian, & Jarcho, 2007; McCabe & Ricciardelli, 2004; Ogden & Taylor, 2000; Yates et al., 2004), even overweight and obese men (James, 2003; Markey & Markey, 2005) but do report some dissatisfaction, with an equal split for men who desired to gain weight and lose weight (De Souza & Ciclitira, 2005). In a study of body dissatisfaction among adult men and women by Phillips and deMan (2010), overweight men wished to be thinner whereas normal and underweight men wished to have a larger physique. However, studies that report men wanting to gain weight predominately focus on younger men and college students (Ochner, Gray, & Brickner, 2009; McCabe & Ricciardelli, 2004). Given the current overweight and obese prevalence, older men are more likely to be heavier than younger men and thus may have a greater desire to lose weight than gain. As such, in this population of Baby Boomers, 51% of overweight men and 79% of obese men were currently trying to lose weight which may indicate why only 32% of overweight men and 5% of obese men reported body satisfaction. While there were no underweight men in the present study, 19% of the normal weight men were trying to lose weight which may indicate why 73% of normal weight men were either satisfied or very satisfied with their bodies. Analysis of weight loss trends of BRFSS data from 1996-2003, (Baradel et al., 2009) revealed that while there has been little change in weight loss among overweight adults over the time period, weight loss among obese adults has increased significantly. Weight loss

prevalence in the present study was slightly higher than weight loss prevalence of 40-59 year olds for both overweight and obese in 2003, 48% and 71% respectively. However, this may be indicative that weight loss trends continue to increase as overweight and obesity prevalence increases. Nevertheless, study findings support that a high percentage of obese men are less satisfied with their bodies and more likely are trying to lose weight.

Although previous research by Ogden and Taylor (2000) found that married men derive their body dissatisfaction with reference to the beliefs of their partner, only 15% of married overweight and obese men in the present study were motivated to lose weight if their partner was dissatisfied with their body. Further, partner dissatisfaction was less frequently reported than self-dissatisfaction, thus men may be less concerned with partner's beliefs than previously identified. While reasons behind their reported self-dissatisfaction were not addressed, overweight and obese men did indicate that they were motivated to lose weight predominately for appearance reasons, such as feeling stronger, looking better, and being dissatisfied with their bodies. The motivation of appearance is not uncommon among men and has been previously reported in the literature (Hankey, Leslie, & Lean, 2002; O'Brien et al., 2007; Wolfe & Smith, 2002; Yates et al., 2004). Thus, much like younger men, overweight and obese Baby Boomers would be more satisfied with a stronger physique, but will be more likely to need to lose weight rather than gain weight to achieve it.

Health reasons have also previously been shown to motivate men to lose weight (Hankey et al., 2002; O'Brien et al., 2007; Roberts & Ashley, 1999). In this study, more men indicated they would be motivated to prevent from getting diseases than indicated

they would lose weight if they were diagnosed with disease. Men who were diagnosed with high cholesterol or hypertension were significantly more likely to be trying to lose weight which may suggest that the presence of disease may serve as a greater motivator for some men than is actualized. The observation of an illness of a colleague or friend had previously been identified as a motivator for weight loss (Sabinsky et al., 2007), but only 8% of men in this study said they would be motivated by someone close to them was diagnosed with disease. Thus, being diagnosed or preventing one's own disease may have a greater impact than merely knowing someone who is diagnosed with disease.

Men also stated that they would be motivated if their doctor told them to lose weight. Clinicians are a highly trusted source of health information and thus they can be a powerful motivator in advocating for changing lifestyle habits (DHHS, 2010). Previous findings suggest that patients who are advised to lose weight by their physician are more likely to attempt weight loss (Sciamanna, Tate, Lang & Wing, 2000). In a study of trends in professional advice data from 1994-2000 BRFSS (Jackson, Doescher, Saver & Hart, 2005) the percentage of obese persons receiving advice to lose weight fell from 44.0% to 40.0%. Findings in this study were much higher at 71% of obese men reporting that they had been told by a doctor to lose weight. Among overweight men, 29% reported that they had that a doctor had told them to lose weight. Receiving advice to lose weight has previously been shown to have strong associations with trying to lose weight among overweight individuals (Sciamanna et al., 2000). While not statistically significant among obese men, overweight men who had been told to lose weight were significantly more likely to be currently trying to lose weight than those who had not

been told to lose weight. These findings may suggest that for overweight men who do not feel that their weight is a health concern, a doctor advising them to lose weight may serve as a motivator to attempt weight loss.

Barriers to weight loss

A lack of motivation had previously been identified by adult men as a barrier to weight loss (Sabinsky et al., 2007). While motivation was also listed as barrier in this study, the barriers to weight loss differed for overweight men and obese men. Obese men were significantly more likely to not be motivated or have the will power to lose weight whereas overweight men were significantly more likely to state that weight loss was not a priority for them or that they didn't feel they needed to lose weight. The discrepancies in these weight loss barriers may provide support that overweight men do not have the same concerns about their weight as obese men.

While not defined specifically as barriers, men identified three major areas where they felt increased education was needed to assist in losing weight: appropriate portions serving sizes, and healthy meals; necessary physical activity for weight loss; and how to manage stress. Increasing knowledge in these seemingly intertwined areas may enhance the skills and abilities further enabling overweight and obese men to lose weight. Portion sizes have increased in marketplaces and fast-food restaurants over the past two decades (Young & Nestle, 2003) and while there is no empirical evidence linking portion sizes to obesity (DHHS, 2005), controlling portion sizes will assist men with consuming fewer calories. Regular participation in moderate physical activity is a necessary component for weight management. For adults to receive health benefits, current recommendations are for 150 minutes a week of moderate physical activity (DHHS, 2008). However, if weight loss is desired, the duration of weekly participation

should be increased to 300 minutes (DHHS, 2008). Education should be provided that clearly delineates the recommendations and desired outcomes of physical activity. Increasing physical activity may also offset the body's reaction to stress, which has previously been identified as a contributing factor in abdominal obesity and may contribute to an increase in caloric consumption (Bjorntorp, 2001). Providing education on the connection between healthy stress management, reduced caloric consumption, and appropriate levels of physical activity, is essential for men to manage and or lose weight.

Weight loss strategies

According to the 1998 Clinical Guidelines from the U.S. Department of Health and Human Services for the treatment of overweight and obesity, to lose weight a caloric deficit of 500-1000 kcal/day is needed. Further, this caloric deficit can be achieved through a reduction in calories consumed or an increase in calories burned (DHHS, 1998). The weight loss strategies most frequently listed to lose weight were eating less food and exercising more often, both of which are consistent with previous research (Baradel et al., 2009: Kruger et al., 2004; Weiss et al., 2006). However, because achieving weight loss through physical activity may be difficult for most adults (ADA, 2009) recommendations for weight loss include a combination of exercising more with consuming fewer calories (DHHS, 2005). In previous studies of overweight and obese men, 45% were using this strategy (Baradel et al., 2009). Results from the present study were slightly lower at 41% of men reporting use of this weight loss strategy, but still higher than national average of 34% reported in the 1998 National Health Interview Survey (Kruger et al., 2004). Data from the 2001-2002 NHANES found that less than one-fourth of adults combined caloric restriction with higher levels of physical activity

(Weiss et al., 2006). However, this study used the U.S. Department of Health and Human Services and U.S. Department of Agriculture 2005 dietary guidelines for weight loss of 300 or more minutes of physical activity per week. Thus, fewer men may be properly using recommended weight loss strategies than is reported.

In addition to eating less food and increasing exercise, cutting back on fried foods and sweets and desserts was also mentioned. While these foods have not specifically been identified in previous research on weight loss strategies, Weiss, Galuska, Khan, and Serdula (2006) found that switching to foods with lower calories was a strategy used by men to lose weight. Identifying ways for men to include many of their preferred foods, using lower calorie options, may assist them with realistic weight loss options.

Results of this study also support past research that suggests that men are less likely to use unhealthy strategies to lose weight (James, 2003; Kruger et al., 2004; Weiss et al., 2006). Less than 10% of overweight and obese men reported fasting or skipping meals, using meal replacement drinks or bars, and using diet or water pills. Men who did use unhealthy strategies to lose weight were on average heavier which may suggest that men who are obese may opt for unhealthier strategies, which in turn may cause their weight loss to be ineffective. With regard to formal weight loss programs, less than 10% of men in this study had ever joined a weight loss program to lose weight. This is consistent with previous research that indicates that men typically make up only 10% to 15% commercial weight loss program clientele (Wolfe & Smith, 2002).

Physical activity participation

While physical activity has known benefits which the risks for hypertension, diabetes, heart attacks (Simon, 2002) and mortality (Leitzmann et al., 2007), over 60%

of American adults are not active enough to receive cardiorepiratory benefits (Adams et al., 2003; Lee et al., 2000; Sesso et al., 2000; Towers et al., 2005). Consistent with the literature, only 47% of men in this study described their current physical activity level as active or very active. On average, as reported activity went up, BMI went down which is consistent with previous research on the activity levels of overweight individuals (Adams et al., 2003; Carnethon et al., 2005).

In order to receive cardiorespiratory benefits, adults should receive at least 150 minutes of moderate-intensity training per week or 75 minutes of vigorous intensity (DHHS, 2008). The recommendation for moderate activity roughly equates to a minimum of 30 minutes, five or more days per week (Pate et al., 1995; USDA, 1998; DHHS, 1996). Only 14% of men in this study participated in at least five days per week of planned moderate cardiovascular activity. Health benefits can still be achieved with participation in physical activity on fewer days of the week. However, research shows that the exercise bout needs to be longer in duration to receive benefits (Lee et al., 2000; 2004). In this study, 77% of men exercised for at least 30 minutes, thus, it may be possible that while men are not exercising on most days of the week they may still be exercising long enough to receive the minimum of 150 minutes or intense enough to achieve the 75 minutes recommended for vigorous intensity that are necessary to receive cardiorespiratory benefits.

However, men wanting to manage or lose weight may need to increase their weekly physical activity minutes from 150 to 300 minutes or roughly 60 minutes per day depending upon intensity (DHHS, 2008). In addition, research indicates that 45-60 minutes of moderate physical activity is required to prevent overweight individuals from

transitioning to obese (Saris et al., 2003). With only 16% of men in this study reporting cardiovascular workouts longer than 60 minutes and 15% reporting workouts of 45-60 minutes in duration it would seem unlikely that the majority of overweight and obese men were exercising long enough or intense enough to change their weight status or to prevent themselves from gaining more weight. These findings may further support that men are in need of education on how much physical activity is sufficient for weight loss.

The 2008 Physical Activity Guidelines for Americans identified moderate physical activity as brisk walking (walking 3 miles per hour or faster, but not speed walking) (DHHS). While the intensity was not determined, walking was the primary cardiovascular activity as identified by 60% of the men which is consistent with previous research (James, Hudson, & Campbell, 2003; Kaiser, Brown, & Baumann, 2010; Littman, Kristal, & White, 2005). In a 10-year follow up study, James, Hudson, & Campbell (2003) found that fast walking was associated with less weight gain over the ten-year period while slow walking was not. Thus, men who are not walking for long periods of time will likely not be walking at a pace that is sufficient for weight loss.

Biking, swimming, and golf was also listed by participants, but mentioned far less frequently than walking. Golfing without a cart is also considered a moderate physical activity and along with walking, recreational biking, and swimming has a low injury rate (DHHS, 2008; Sherwood & Jeffery, 2000). Cart use was not identified with regard to subjects who selected golf, so it is unknown how many were potential receiving benefits from golf, but regardless there appears to be little moderate physical activity beyond walking among this group of men. Moreover, they indicated little participation in more vigorous activities such as running, only identified by 19% of participants. However,

those who did participate in running activities had a significantly lower BMI than those who did not. While barriers to vigorous physical activity were not specifically addressed, age may play a role in running participation. Men in the younger cohort were more likely to report participation than men in the older cohort. This may have been due to concern for injury as running is a higher-impact activity and has a greater risk for injury than walking (DHHS, 2008; Sherwood & Jeffery, 2000). Unfortunately, while lesser amounts of vigorous physical activity are needed for weight loss (Saris et al., 2003), participation in vigorous physical activity was less preferred. Understanding, key barriers and motivators to increasing participation in both moderate and vigorous physical activity may assist with potentially more efficient weight loss in these men.

Adults should also participate in muscle-strengthening activities at a moderate intensity on two or more days of the week that involve major muscle groups (DHHS, 2008). In the present study, 67% of the men reported that they did not lift weights regularly (less than 1 time per week). While not as effective as aerobic activities alone (DHHS, 2008) muscle-strengthening activities, when combined with aerobic activity and proper diet, may be helpful in promoting weight loss (Masley, Weaver, Peri, & Phillips, 2008). The high percentage of men who did not participate regularly in muscle-strengthening activities, indicates that men may not be aware of the benefits that weight training has on weight management or may not have the skills to participate. Most men indicated that they preferred to work out at home, and may not have access to facilities or equipment that would enable to them to participate in these activities. However, those who did participate regularly in weight training exercises did not differ in BMI from those who did not.

The benefits of participation in flexibility exercises are unknown, but may help to increase flexibility for activities that require more flexibility (DHHS, 2008). Recommendations for older adults are to participate in flexibility activities two or more days per week at a minimum duration of 10 minutes per bout (Houston et al., 2009). In the present study, 56% did not participate regularly in flexibility exercises. While there are no known links between flexibility and weight control, those who participated 5-7 times per week in flexibility exercises had lower BMIs than those who did not participate at all. This may simply be due to those who are participating regularly in flexibility exercises may be more active in general.

Barriers and motivators to physical activity

Research on physical activity determinants indicates that there are numerous barriers preventing adults from being physically active. As with previous studies (Booth et al., 1997; Brown, 2005; Brownson et al., 2001; Buman, Yasova, & Giacobbi, 2010; De Bourdeaudhuij & Sallis, 2002; Sherwood & Jeffery 2000), not having time to be physically active was the most frequently listed barrier by 34% of men in the study. Similarly, 26% said that they get home too late which may also be an issue of time for these individuals, particularly the younger individuals in this study who were more likely to list getting home too late as a barrier.

Consistent with barriers to weight loss and in line with previous research (Brown, 2005; Brownson et al., 2001), motivation was an issue for 21% of men in the study. Individuals who said that they were not motivated to be active were also more likely to be heavier or married. This may suggest that individuals who weigh more may lose motivation as they continue to put on weight whereas those who weigh less may feel that weight control is still within reach. In addition, married men may feel less of a need

to lose weight than single men who are still trying to look more attractive to a potential partner.

Physical activity was not a priority for 18% of the men, which again may have been due to time being allotted to more pressing responsibilities. While 36% of men worked in a physically demanding job only 16% said that they get enough exercise at work. This is even less prevalent among men with more education as, men with graduate or professional degrees in the study were less likely to list this barrier than men with high school degrees. Quite possibly, those with less education may be working in more labor-intensive positions and thus may be more likely to report more physical activity on the job.

Poor health has previously been identified as a barrier to physical activity (Booth et al., 1997) especially among older populations (Towers et al., 2005) yet only 7% of men reported that their health was a barrier. This may have been a result of the large of percentage of individuals in this study who reported that their health was very good or excellent. The least frequently reported barriers, reported by less than 5% of subjects, were not being able to afford the gym and having unsafe neighborhoods. While environmental barriers, such as unsafe neighborhoods, have previously shown to limit physical activity among some populations (CDC, 1999), men in this study either did not live in unsafe areas or did not perceive their areas unsafe, so as to prevent them from being active. These findings may also be explained by previous research that suggests men have little difficulty with finding places to exercise (Brownson, et al., 2001).

Weight control has been previously identified as a motivator for physical activity (Brown, 2005; Buman et al., 2010). With 51% of overweight men and 79% of obese

men in this study trying to lose weight, it is not surprising that the leading motivator to increasing physical activity was to lose weight, mentioned by 53% of participants, who were on average, obese.

Health reasons have previously been cited in the literature as motivators to increase physical activity levels (Brown, 2005; Buman et al., 2010; De Bourdeaudhuij & Sallis, 2002), and 37% said they would be more active if they were diagnosed with a disease while 32% said they would increase their physical activity level if their doctor told them to do so. The role that physicians play in increasing physical activity is seemingly an important one as previous research indicates that lack of encouragement to be physically active from a physician is associated with decreased levels of physical activity (Fink & Wild, 1995).

Social support for physical activity in the form of a spouse, friends, or family members has been previously identified as a motivator among younger age and older age groups to increase exercise levels (De Bourdeaudhuij & Sallis, 2002). In this study, 29% of men said that they would be motivated to be more physically active if they had someone to exercise with and 21% said they would if their partner was physically active. Research suggests that individuals whose spouses are active are 20% more likely to be physically active if their partner is more active and 41% more likely to be active if their friends are active (Janzen & Cousins, 1995). The activity levels of friends was less concerning among men in this study as only 7.5% indicated they would be more active if their friends were active. Thus, it would seem among these men that having social support for physical activity from a spouse may serve as a greater motivator than active friends. However, the mean BMI was significantly higher and in the obese range for

those who listed they would be more active if their friends were active. This may suggest that obese men may be in greater need of support from everyone in their life than non-obese men.

While convenience in the form of access has previously been correlated with physical activity (Brownson et al., 2001) having more convenient places to exercise was only listed by 12% of participants. In addition, only 7% stated they would be motivated to be more physically active if they had a gym membership. With 55% of participants indicating that they preferred to work out from home, convenience may not be a concern among these men as they don't have to go far to be physically active. In addition, as walking is the most preferred physical activity among these men the issue of access may not be as much of a barrier for them as other forms of activity.

Eating habits

Small reductions in caloric intake are recommended for preventing weight gain and a reduction of 500 calories or more per day is recommended for weight loss (DHHS, 2005). Over 35% of men in the present study indicated that they needed to eat less food (in general). These men, on average had a BMI within the obese category, which was higher than those who felt they did need to eat less food. Availability of food may lead to higher consumption as 66% of men indicated that on occasions that they overate they did so, because the food was "simply there" or "free." These findings are consistent with previous research on failed weight loss attempts that participants complained it was difficult to lose weight because food was readily available, having difficulty controlling what they ate, and not being able to estimate appropriate portion sizes (Burke et al., 2008). Thus, helping individuals buy foods that are more nutrient dense and readily available or to reduce the overall availability of all foods, may help

with unnecessary eating. With portion sizes increasing (Young & Nestle, 2003), health educators need to provide training that helps men understand how portion sizes compare to the recommended serving sizes and reduce the occurrence of overeating (DHHS, 2005). Some men did, however, indicate that they overate because they were stressed, which has been previously shown to contribute to increased calorie consumption and abdominal fat (Bjornthorp, 2001). In addition these men had a significantly higher BMI than those who did not overeat, due to stress. Thus, stress management techniques for this population may need to go beyond physical activity recommendations and address the influence of stress on increased caloric consumption. While only a small percentage indicated overeating due to being depressed, depression has also been an associated risk for developing cardiovascular disease, type 2 diabetes, and accumulating additional body fat (Bjorntorp, 2001). Stress management techniques such as increasing energy output through physical activity may help offset the body's reaction to stress (Bjornthorp, 2001).

An examination of dietary patterns reported in the 1987 and 1992 National Health Interview Surveys by Kant, Graubard, and Schatzkin (2004), revealed that consumption of fruits, vegetables, whole grains, low-fat dairy, and lean meats, is associated with a lower risk for mortality. The men most frequently listed that they needed to consume more fruits and vegetables to improve their diets. This is consistent with the 2005 Dietary Guidelines for Americans which found that men aged 31-50 currently do not meet the recommended consumption of nine daily servings of fruits and vegetables (DHHS, 2005). The servings of fruits and vegetables were not included in the present study. Increasing daily intake of fruits and vegetables may offset the consumption of

foods that have a higher caloric content and help sustain weight loss (DHHS, 2010). Thus, incorporating more fruits and vegetables into the diets of these men may be an important strategy for successful weight management.

Consumption of grains and low-fat foods were only mentioned by 23% of subjects, however, BMI was significantly higher among those who did indicate needing to eat more grains and low-fat foods. Previous research on the benefits of eating a low fat diet revealed that adults do perceive that reducing fat prevents heart attacks and lowers cholesterol levels (Artinian, 2001). Despite the small percentage identifying a need to increase the consumption of low-fat foods, the most frequently listed foods that men indicated that they needed to eat less of were fried foods, reported by 38% of participants who on average had a significantly higher BMI. Fried foods are typically high in *trans* and saturated fats and consumption of these foods in excess is associated with obesity (DHHS, 2010). Eating healthier snacks was also listed by 39% of individuals who on average had a higher BMI than those who did not list healthier snacks. Snacks can also be high in fat, cholesterol, sugar, and sodium, which may lead to excessive, extra calories consumed (DHHS, 2005). While “fat content” was most frequently listed as important to those reading food labels, only 58% of the men indicated that they read food labels, and only 60% of them understood everything on the label. This further suggests that while they are aware of the associations between fat consumption and health, they may not be aware of the potential sources of fat.

Eating more fiber was listed by 28% of men. With a high percentage of individuals indicating a need to increase fruits and vegetables, it is likely that a far greater percentage may need to increase their fiber consumption. Inadequate fiber intake

reflects a low consumption of grains, fruits, and vegetables (DHHS, 2005). In a previous study assessing the perceived benefits to eating high-fiber foods, men over 60 indicated that consumption of fiber helped prevent constipation. While men aged over 60 do not encapsulate the entire sample of this study, these findings may suggest that the benefits of fiber may not be well known among men. In addition, fiber was infrequently looked for on nutrition labels further suggesting that men might not be aware of suggested fiber intake.

Most Americans consume more salt than they need on average (DHHS, 2005) yet only 30% of men in this study indicated that they needed to eat less salt or salty foods. Salt consumption helps regulate blood pressure which if too high can lead to hypertension and increase the risk for coronary heart disease, stroke, and kidney disease (DHHS, 2005). Sugar, another contributor to obesity, was mentioned by 29% of men. Consumption of sugars can lead to excessive calorie intake with little to no essential nutrients. Sugar sweetened foods, like soda for example, provide calories, but ultimately displace more nutritious foods in a person's diet (DHHS, 2010). Soda consumption was high, 50% of men drank sodas at least a few times a week. Another 32% drank sweetened drinks at least a few days a week. Diet sodas and sugar substitutes were usually consumed by 37% and 36% of men respectively. Diet sodas and sugar substitutes have been used as weight loss strategies in previous studies (Kruger et al., 2004; Levy & Heaton, 1993). Drinking more water was listed by 42% of men in this study which has previously been identified by adults a weight loss strategy (Weiss et al., 2006). Increased consumption of water can help keep the body hydrated,

which will help starve off hunger sensations and help with the digestion and absorption of nutrients (Hoeger & Hoeger, 2010, p. 136).

In a comparison of data from NHANES III and NHANES 2001-2006, moderate alcohol consumption in men 40-74 increased from 49.8% to 57.2% (King et al., 2009). While moderate alcohol use was not specifically addressed, 26% of men in the present study had a consumption that was not considered high but not considered low, and thus may be comparable to the moderate. However, actual quantity was not identified. Still, use may have been lower than national average for men in this age range. In addition, alcohol consumption fell from 40.0% in NHANES III to 32.6% in NHANES 2001-2006 (King et al., 2009) and was even lower among participants, with only 26.1% stating that they did not drink at all. While many of these men drink, their drinking levels are relatively low which might indicate why only 14% reported that they needed to drink less alcohol to improve their diet. Alcohol consumption provides additional calories but few essential nutrients, and while one to two per day may lower the risk of heart disease overall caloric consumption may increase (DHHS, 2005). Overweight men were significantly more likely to be in the middle range of use, while normal weight men were more likely to report low use. Thus, the added calories from alcohol consumption might be contributing to weight gain in these men. However, having to give up alcohol and meat has previously been identified as a barrier to losing weight (Sabinsky et al., 2007). This may indicate that these men may not be willing to include reducing alcohol consumption as part of a weight loss strategy. This may also explain why only 15% of men reported that they needed to eat less meat and may indicate why the least mentioned food items that men indicated that they needed to improve upon was protein.

The average daily consumption of high protein foods such as meat and beans for men aged 31-50 is currently above recommended levels (DHHS, 2005). In addition, men do not eat enough dairy products (DHHS, 2005), but consumption of dairy products was also less frequently identified as an area needing improvement. Thus, men in this study may be getting the recommended amounts of dairy or may not be familiar with how much dairy they actually should be consuming.

Barriers and motivators to healthy eating

Men typically do not make dietary changes to manage their weight (Davis et al., 1991; Verbrugge, 1985) and frequently list lack of time and having to give up favorite foods as barriers to eating healthy (Hagdrup et al., 1998; Lappalainen et al., 1997). Consistent with previous research, 40.6% of men in the present study most frequently listed that they did not want to give up their favorite foods, with younger men reporting this barrier more often than the older cohort. The second most listed barrier, by 35% of the subjects, was life being too busy to make time to eat healthier. Men who listed having a very busy life were also heavier on average.

Twenty-nine percent of men indicated that they ate a healthy diet, while 33% self-described their diet to be very good or excellent. The men who ate healthy had a significantly lower BMI than those who did not eat healthy, but were still in the overweight category. The older cohort was more likely to list that they were eating healthy, which may explain why the younger cohort had greater concerns about giving up their favorite foods.

Thirteen percent indicated that they did not have healthy options at work which has also been previously identified in the literature (Smith & Owen, 1992). These men were on average obese and had a significantly higher BMI than those who did not list

this barrier. One solution to unhealthy food options at work would be for individuals to pack their own lunches to take to work. In this study 54% did pack their own lunch which suggests that this barrier is relatively easy for Baby Boomers to overcome.

Unlike barriers to weight loss and physical activity, a lack of motivation was listed by only 13% of subjects. Lack of motivation has not been previously reported in the literature to be a barrier to healthy eating. As eating is something necessary for basic survival, one rarely needs to be motivated to eat and thus individuals may not need motivation to change their diets, but rather be provided with the skills necessary in preparing healthier foods. Another reported barrier to healthy eating that has been identified specifically among men is healthy eating not being a priority (Sigrist et al., 2005) and in this study this was listed by 17% of participants.

Consistent with the literature on barriers to healthy eating, healthy foods being too expensive (Hagdrup et al., 1998; Lloyd et al.,1995; Smith & Owen, 1992), taking too much time to prepare (Artinian, 2001), not tasting good (Gough & Conner, 2006), and not knowing how to cook (Smith & Owen, 1992) were all listed as barriers in this study. However, each of these barriers was listed by 12% or less of participants. There appears to be less of a concern about expense and being able to prepare healthy meals and more of a concern with enjoying eating healthy foods and having time to eat healthy. Thus, greater emphasis can be placed on improving the eating habits of male Baby Boomers by helping them find ways to incorporate healthier meals into their busy schedules that include foods that they enjoy.

Limited research is available on what motivates men to eat healthy beyond eating healthy for appearance reasons, to improve health or prevent disease, and being

motivated by family members (Sigrist et al., 2005; Artinian, 2001). Consistent with previous studies, losing weight was again the main concern and was identified as a motivator by 49% of subjects. Similar to motivators to physical activity, those who selected lose weight were obese on average and more likely to be married. While 30% were motivated to prevent certain diseases, 40% were motivated if they were diagnosed and had a significantly higher BMI than men who did not state they were motivated by disease diagnosis. White men were also more likely than non-White men to be motivated by diagnosis of disease or illness but non-White men were more likely to list prevention. Thus, it would seem individuals are more motivated to eat healthy for treatment of disease rather than for prevention. This is alarming as individuals who wait for diagnosis to eat healthier may put themselves further at risk for other chronic medical conditions.

Similar to the motivators to weight loss, only 8% of men would be motivated to eat healthy if someone close to them was diagnosed with disease. As evidenced by the increase in motivation simply through diagnosis over prevention it is not surprising that the diagnosis of someone beyond themselves would not have as great of an impact. Furthermore, they might not perceive themselves as susceptible to the same disease, thus limiting any potential motivation for change.

Two motivators relating to family members were listed by participants. While only 12% listed to be a better role model for my kids as a motivator to be more physically active, 16% were motivated to eat healthier for their children. With the potential influence parents have on their children in the areas of physical activity and eating habits, this may provide some insight as to the level of concern parents may have for

being a role model. Nine percent of men stated that they would be motivated to change if their family members were willing to change. Men who have children living at home may find it difficult to avoid certain foods that teens or children may enjoy. Health educators need to help families plan meals that everyone can enjoy that focus more on portion control and variety. Healthier foods consumption should be a practice that is adopted by the family rather than viewed as temporary avoidance of certain foods.

Finally, 12% reported that they would be motivated to eat healthier if restaurants offered healthier foods. While it is unknown what restaurants these men were frequenting, and with 19% eating at fast-food restaurants at least a few days a week and 8% eating at all you can eat buffet restaurants at least a few days a week, health educators need to help men make healthier choices when they choose to eat out. Moreover, assistance with meal planning and grocery shopping may further aid in the avoidance of eating out.

Stage of change for weight loss

Looking at stage of change for weight loss, 36.3% were in the action stage (trying to lose weight but for less than 6 months) and 19.6% were in the maintenance stage (trying to lose weight for more than 6 months). Of those in these two stages the mean BMI indicated that they were in the obese category. Those who were not interested in losing weight also reported the lowest mean BMI which was significant, however at 27.95 they were still in the overweight category. However, the findings that these individuals possessed the lowest mean BMI are encouraging in that at least those who are obese are in the later stages of change for weight loss.

Stage of change for physical activity

A combined 66% of men in this study were in either the maintenance (46.5%) or action (19.5%) stage of change with regard to exercise. These findings are higher than the 47% of men in this study that self-described their current physical activity as active or very active. Only 5% of men were in the preparation stage, and the remaining men were either in the precontemplation (16%) or contemplation (13%) stages. Men who were in the maintenance stage for exercise had a significantly lower mean BMI than men who were in the contemplation stage. Unlike stage of change for weight loss, those in the later stages of change had the lowest mean BMI. This is not surprising as physical activity involvement is necessary to maintain weight whereas individuals who have lost weight would no longer need to continue to be actively losing weight once they had reached their goal weight.

Stage of change for healthy eating

Over half of the men in this study were making some sort of positive changes in their eating with 57% indicating they were in the action or maintenance stages for healthy eating. Similar to weight loss, the 23% in the precontemplation stage had a significantly lower mean BMI than those in the contemplation stage who had the highest BMI. While, their BMI was still in the overweight category this would again seem to indicate that those who are not thinking about eating healthier, either already eat healthy or do not perceive their current weight as a concern as far as eating healthier. The 12% of men in the contemplation stage had the highest mean BMI which was significantly higher than the action and maintenance stages. This indicates that these men are concerned about their weight and understand that they need to eat healthier, but may be unsure how to change or have the necessary skills.

Limitations

The study has limitations that should be addressed. First, the subjects were recruited from North Central Florida region and results cannot be generalized to other populations of in other regions of the United States. Second, because purposive and snowball sampling were used, a true representation of the population in the North Central Florida region may not have been attainted. Third, the recruitment procedures involved men from fitness centers and thus may have been more homogenous in nature which may have influenced the findings. Fourth, the use of self-report surveys may have lead participants to provided responses that were more socially desirable. Fifth, the participants may have unable to accurately remember the occurrence or frequency of their behaviors. Sixth, men who are motivated to lose weight may have been more inclined to participate in the study than men who were not interested in losing weight. Finally, there may have been inconsistency with how participants reported how they typically behave and how they actually behave.

Recommendations

With Baby Boomers entering retirement age, the looming health care costs for treating the chronic health conditions associated with obesity will no doubt put a significant strain on the resources available to treat these conditions. The overweight and obesity prevalence in this population of men is among the highest in the United States, yet many are not concerned about their weight or may not perceive their weight to be a problem. While obese men reported less body satisfaction and high rates of current weight loss, overweight men typically did not express the same concerns and as such were less likely to be trying to lose weight. Unfortunately, overweight men tend to take a more reactive than proactive stance with regard to their weight loss. Thus, more

education needs to be provided on what is considered a “healthy” weight range. The predominant motivators to weight loss that were found in this study were disease diagnosis and being told by a doctor to lose weight. Fortunately, a doctor recommendation for weight loss may have a greater impact on the weight change status of overweight men than obese men who may already be aware of their risks. Thus, clinicians play an important role in helping men who are overweight with initiating change. The strategies that men who were trying to lose weight were consistent with the literature, however, it is apparent that men may not fully understand the amounts of physical activity needed for weight loss. With walking as the primary source of cardiovascular activity, men will need to walk an hour a day for most, if not all, days of the week in order to lose weight. Thus, health practitioners must provide education to this population of men on the recommended amounts and intensity of walking needed to lose weight. In addition, more low-impact activities beyond walking must be made available as well as training in the skills necessary for participation. Furthermore, education on healthy portions can assist those who reportedly overeat, quite often due to food being in front of them. Social support appears imperative to improving physical activity and healthy eating habits and should be utilized when developing weight loss programs for this population. Implications for the roles of practitioners, clinicians, health educators, and recommendations for future research follow.

Implications for Practitioners

The study findings provide important information for practitioners interested in assisting men with losing weight. Results indicate that motivations for weight loss differ depending on age. Younger individuals may be more receptive to physical activity that can be incorporated earlier in the day. Thus, partnerships with worksite health

promoters are needed to develop physical activity programs that can be conducted before work or at a company sponsored gyms. In addition, the younger population is more likely to want to participate in running activities and thus programs can be created that provide group training for 5K-10K races within the community. With regard to healthy eating, programs that include lower calorie substitutions of their favorite foods are going to be best received. For the older Baby Boomers, walking programs can be designed in their own neighborhoods as well as other low-impact physical activities such as tennis, golf, bicycling, and swimming. Finally, group programs should be developed that incorporate social interaction and family involvement, particularly that of spouse involvement. These men may be best reached through motivation and support from their significant others. Thus, targeting men through women may be a successful strategy for recruitment.

Implications for Clinicians

The role of clinicians may be most important in initiating weight loss with this population. Thus, it is important for physicians to assess the weight of their patients and explain the risks associated with their current weight status. The current physical activity levels for patients should be assessed as well as eating habits so appropriate recommendations and treatments may be suggested. These recommendations should be specific as to the amounts, type, and intensity of physical activity needed as well as for the servings and types of foods that need to be increased. In this sense doctors can prescribe physical activities and healthy foods that they want their patients to increase. In addition, clinicians must work with health practitioners and health educators with referring patients to the appropriate resources within the community that will assist them with increasing physical activity and eating healthy. Working with employers on

establishing health screenings is also imperative when reaching out to those men who do not seek medical advice.

Implications for Health Educators

Health educators play an important role in assisting Baby Boomers with developing skills and knowledge regarding healthy portions, physical activity amounts, and stress management techniques. Education must be provided on how to prepare healthy meals at home, how to read food labels and the amounts and the importance of increasing the intake of fruits and vegetables, fiber, protein, whole grains, and low-fat foods. In addition, physical activity recommendations for weight loss specifically must be made clear as well as healthy goals for weight loss. Proper stress management through proper time management techniques, healthy outlets such as physical activity, appropriate sleep, and relaxation techniques must also be taught. Further, health educators can help men set goals and specific objectives with regard to each individual's needs. Pedometers may assist with helping men track daily step counts. Health educators can provide training for these instruments as a way to break daily physical activity goals into multiple bouts throughout the day. They must also work to motivate individuals to get health screenings from clinicians as well as counsel physicians on effective recommendations for patients. Finally, they need to work with practitioners on establishing physical activity groups within the community and increase support for walking areas.

Implications for Worksite Health Promotion

The workplace environment can assist men with both healthier options as well as provided opportunities for activity. Men in this study identified not having healthy options at work as a barrier to healthy eating. Thus, health promoters must work with

employers to establish wellness programs that include healthy eating in the workplace. This must also include making healthy foods and beverages not only available but affordable for employees. In addition, physical activity opportunities need to be provided in the form of exercise groups, programs, or workout areas. As work is a preferred venue to exercise at, the added convenience of being able to exercise during the day may assist some men with overcoming the barrier of time.

Implications for Men's Health and Gerontology

The present study provided many implications that may assist men with aging successfully. First, understanding what a healthy weight is may help educate those individuals who are not aware of the potential health risks that are associated with being overweight. Men must be encouraged to routinely schedule check-ups with their physicians that not only provide them with education on weight loss but to assess their current health risks. This will enable men to adopt healthier behaviors as part of their daily living and increase the quality and quantity of the years they have remaining. In addition, men will be able to work longer and remain productive allowing them to enjoy greater social security benefits and financial support upon retirement. Furthermore, prevention of chronic conditions such as diabetes and arthritis will enable them to remain independent reducing the need for ADLs and potentially improve mental and psychological health in the process.

Recommendations for Future Research

With the discrepancies between reported physical activity participation and the amounts necessary to achieve weight loss, it is important for future research to determine if men know the required amounts of moderate physical activity needed to lose weight. In addition, while motivators and barriers to physical activity were

addressed it is unknown what barriers and motivators that these men have toward both moderate and vigorous activity. In addition, the barriers and motivators to muscular strength activities should also be determined. With high participation in walking programs, research on the success of walking programs for weight loss in this population is also needed. Understanding the determinants of participation in lifetime activities such as golf, tennis, and swimming may also aid in developing weight loss programs given a greater variety of physical activities. In addition, determining the frequency of visits to a physician as well as the potential barriers and motivators to these visits will assist in developing strategies to increase physician interaction with less-seen patients. Further studies should also include more in-depth questions on the eating behaviors of Baby Boomers to accurately determine what foods they need to increase and decrease. In addition, future research should include assessment of stress levels of these men as well as the stress management techniques that they employ to determine how physical activity and eating behaviors are influenced by stress. Finally, with the growing numbers of individuals who live with arthritis, understanding how physical activity levels are influenced by this chronic condition can help with designing weight loss programs that include more appropriate physical activity recommendations.

Conclusion

In conclusion, this study was conducted to examine the weight status, physical activity patterns, and eating behaviors of male Baby Boomers. The findings suggest that while Baby Boomers are overweight or obese they feel that they are in good health. Obese men are not fully aware of how severe their weight problem is, but are still likely to be losing weight while overweight men are aware that they need to lose weight, but are quite often satisfied with their weight. In addition, this population does not participate

frequently enough in physical activity, or at an intensity sufficient enough to lose weight. They also experience a high frequency of overeating due to a lack of knowledge on portion sizes. Thus, health practitioners, educators, and clinicians play an important role in helping to educate these individuals on the severity of obesity and the proper weight loss strategies necessary to lose weight. With the growing numbers of overweight and obesity and the chronic conditions that they face, including morbidity and mortality, programs and interventions must be developed that meet their specific needs.

APPENDIX A
PARTICIPANT SURVEY

This study is investigating the eating patterns, weight management, and physical activity practices of male Baby Boomers. Information from this study will be used to develop weight loss and weight management programs designed to meet the needs of male Baby Boomers.

Please help us by completing this survey by answering all of the questions. Please circle or put a check next to your answer. Your information will be kept confidential. Completing the survey is completely voluntary and you do not have to answer any of the questions that you do not want to. This survey will take 15 to 25 minutes to complete.

Q1. What year were you born? _____

Q2. What is your marital/relationship status?
① Single, not in a committed relationship
② Single, in a committed relationship
③ Married, separated
④ Married, living with spouse

Q3. How would you describe your sexual orientation?
① Heterosexual (straight)
② Homosexual (gay)
③ Bisexual (sex with men **and** women)

Q4. Do you have any children?
① Yes **(Go to Q 5)**
② No **(Go to Q 6)**

Q5. Please indicate if you have any children in your household that falls in any of the following age categories. **Choose as many as apply**.
① 5 years of age or younger
② 6 years to 12 years
③ 13 years to 18 years

Q6. What is your current work status? **Choose one.**
① Work full-time
② Work part-time
③ Unemployed
④ Unable to work due to disability

Q7. Do you rent or own your home?
① Rent
② Own

Q8. What type of home do you live in?
① Apartment/condominium
② House
③ Mobile home

Q9. Would you classify the area where you live as rural?
① Yes
② No

Q10. Were you born in the United States?
① Yes **(Go to Q 12)**
② No **(Go to Q 11)**

Q11. Approximately how many years have you lived in the United States? _____

Q12. Which Racial/ethnic group best describes you?
① Black/African American
② Hispanic
③ White/Caucasian
④ Other

Q13. What is the highest level of education that you have achieved?
① Eight grade or less
② Did not finish high school
③ High school graduate/GED
④ A.A. degree or professional license
⑤ B.A./B.S. degree
⑥ Graduate or professional degree

Q14. Approximately how much is your yearly income?
Less than $19,999
② $20,000 to $29,999
③ $30,000 to $39,999
④ $40,000 to $49,999
⑤ $50,000 to $59,999
⑥ $60,000 to $69,999
⑦ More than $70,000

EATING PATTERN
This section tells us how you usually eat.

Q15. How would you describe your diet?
① Excellent
② Very good
③ Good
④ Fair
⑤ Poor

Q16. Do you usually eat breakfast?
① Yes
② No

Q17. How often do you eat at fast food restaurants (McDonalds, Burger King, Wendy's, etc.)?
① Everyday
② Almost every day
③ A few days a week
④ A few days a month
⑤ Rarely or never

Q18. Do you usually pay extra to "super size" a meal?
① Yes
② No

Q19. How often do you eat at "all you can eat" buffet style restaurants?
① Everyday
② Almost every day
③ A few days a week
④ A few days a month
⑤ Rarely or never

Q20. Are you the person who is <u>primarily</u> responsible for grocery shopping in your home?
① Yes
② No

Q21. How often do you cook any of the meals in your home?
① Everyday
② Almost every day
③ A few days a week
④ A few days a month
⑤ Rarely or never

Q22. Do you usually pack a lunch to take to work?
① Yes
② No

Q23. How often do you drink sodas?
① Everyday
② Almost every day
③ A few days a week
④ A few days a month
⑤ Rarely or never

Q24. How often do you drink sweetened beverages such as Kool Aid, sweet tea, lemonade, or HiC?
① Everyday
② Almost every day
③ A few days a week
④ A few days a month
⑤ Rarely or never

Q25. Do you usually drink diet sodas?
① Yes
② No

Q26. Do you usually use sugar substitutes to sweeten your foods or drink (Equal, Sweet N Low, Splenda, etc.)?
① Yes
② No

Q27. Do you usually read food labels when you shop?
① Yes
② No

Q28. Do you understand everything you read on the food labels?
① Yes
② No

Q29. What information do you usually look for on food labels? **Choose as many as apply.**

① Calories
② Fat
③ Cholesterol
④ Sodium
⑤ Carbohydrates
⑥ Sugar
⑦ Fiber
⑧ Protein
⑨ Vitamins & minerals
⑩ Serving size

Q30. How often do you overeat? **Choose one.**

① At every meal
② A least one meal a day
③ A few times a week
④ A few times a month
⑤ A few times a year
⑥ Never **(Go to Q 32)**

Q31. What usually leads you to overeat?
Choose as many as apply.

① Stress
② Loneliness
③ Depression
④ Anger
⑤ Overwhelmed
⑥ Boredom
⑦ Tiredness
⑧ Free food or food was just there

Q32. What are the main reasons that **prevent you** from **consistently** eating a healthy diet? **Choose as many as apply.**

① It is not a priority for me
② Not Motivated
③ I have a very busy life
④ Healthy foods are expensive
⑤ Healthy foods take too much time to prepare
⑥ Healthy foods are not available at work
⑦ Healthy foods do not taste good
⑧ I do not want to give up some favorite foods
⑨ I do not know how to cook
⑩ I consistently eat a healthy diet

Q33. What would **motivate you** to consistently eat a healthy diet? **Choose as many as apply.**

① I want to lose weight
② I am diagnosed with a disease or illness
③ Someone close is diagnosed with a disease
④ To be a better role model for my kids
⑤ To prevent getting certain diseases
⑥ Restaurants offered more healthy foods
⑦ Family members are willing to change
⑧ Nothing
⑨ I already eat healthy

Q34. Indicate if you need to improve your diet by eating **more** of the following? **Choose as many as apply**.

① I need to eat more fruits
② I need to eat more vegetables
③ I need to eat more fiber
④ I need to drink more water
⑤ I need to eat more dairy products
⑥ I need to eat more low fat foods
⑦ I need to eat more protein
⑧ I need to eat more whole grains
⑨ I need to choose healthier snacks

Q35. Indicate if you need to improve your diet by eating **less** of the following? **Choose as many as apply**.

① I need to eat less food
② I need to eat less fried foods
③ I need to eat less sugar
④ I need to eat less salt and salty foods
⑤ I need to drink less alcohol
⑥ I need to eat less meat
⑦ I need to eat less “junk food”

Q36. Please indicate if you are currently making significant positive changes in your diet. **Choose one**.

① No, and I do not intend to in the next 6 months
② No, but I intend to in the next 6 months
③ No, but I intend to in the next 30 days
④ Yes, and I have been, but for less than 6 months
⑤ Yes, and I have been for more than 6 months

WEIGHT STATUS AND DIETING
This section tells us about your weight, dieting behaviors, and body satisfaction.

Q37. What is your height (without shoes)?
(Example 5 feet 10 inches)._____

Q38. What is your **current** weight (in pounds)?
(Example 185 pounds)._____

Q39. What is your **preferred** or "ideal" weight (in pounds)?
(Example 185 pounds). _____

Q40. What is the current waist size of the dress pants that you wear (not counting baggy pants)? (Example 36 inches). _____

Q41. How satisfied are you with your weight?
① Very satisfied
② Satisfied
③ Somewhat satisfied
④ Unsatisfied
⑤ Very unsatisfied

Q42. How would you describe your weight?
① Underweight
② Just right
③ Slightly overweight
④ Very overweight
⑤ Extremely overweight

Q43. How often do you think about how much you weigh?

① A few times a day
② Almost everyday
③ A few times a month
④ A few times a year
⑤ Never

Q44. Please indicate if you are currently trying to lose weight. **Choose one**.
① No, and I do not intend to in the next 6 months
② No, but I intend to in the next 6 months
③ No, but I intend to in the next 30 days
④ Yes, and I have been, but for less than 6 months
⑤ Yes, and I have been for more than 6 months

Q45. Has a doctor ever told you to lose weight?
① Yes
② No

Q46. What are you currently trying to do with your weight?
① Trying to lose weight
② Trying to gain weight
③ Trying to stay the same weight
④ Not doing anything

Q47. Have you tried to lose weight in the last **12 months**?
① Yes **(Go to Q 48)**
② No (Go to Q 52)

Q48. Approximately how much weight did you lose the last time you tried?
① Less than 5 pounds
② 5 to 10 pounds
③ 11-15 pounds
④ 16-20 pounds
⑤ More than 20 pounds

Q49. Were you satisfied with that weight loss?
① Very satisfied
② Satisfied
③ Somewhat satisfied
④ Unsatisfied
⑤ Very unsatisfied

Q50. How long did you stay on the weight loss program?
① Less than 1 week
② 1 week
③ 2 to 3 weeks
④ 4 to 6 weeks
⑤ More than 6 weeks

Q51. How long did you keep the weight off?
① Less than 1 month
② 1 to 3 months
③ 4 to 6 months
④ 7 months to 1 year
⑤ More than 1 year

Q52. Where do you get most of your **nutrition and dieting** information? **Choose as many as apply.**

① TV
② Newspaper
③ Magazine
④ Wife, female friends & relatives
⑤ Buddies
⑥ Doctor
⑦ Internet (general web search)
⑧ Commercial weight loss website (e.g. weight watchers)
⑨ Books
⑩ Other (Specify)_____

Q53. What weight loss strategies are you using or have you tried in the past? **Choose as many as apply.**

① Eat less food
② Fast or skip meals
③ Cut back on alcohol
④ Cut back on fried foods
⑤ Cut back on sweets and desserts
⑥ Join a weight loss program
⑦ Exercise more often
⑧ Meal replacement drinks/bars (e.g. Slim Fast)
⑨ Diet pills or water pills
⑩ I have never tried to lose weight

Q54. What do you think are the main factors that **prevent you** from losing weight? **Choose as many as apply.**

① Not a priority for me
② I am not motivated to lose weight
③ Nothing I have tried has worked
④ Not sure if I can do it
⑤ Have not found a plan that works for me
⑥ Can't afford to join a weight loss program
⑦ Can't afford to join a gym
⑧ Not disciplined, no will power
⑨ I just don't care
⑩ I do not need to lose weight or I am happy with my weight

Q55. What do you think are the main factors that would **motivate you** to lose weight? **Choose as many as apply.**

① To look better
② To feel stronger and fitter
③ To be more productive at work
④ If I am diagnosed with a disease or illness
⑤ If someone close to me is diagnosed with a disease
⑥ To prevent me from getting certain diseases
⑦ If a doctor tells me to
⑧ To be a better role model for my kids
⑨ Being dissatisfied with my body
⑩ Partner dissatisfied with my body

Q56. What type of information do you think would help **men your age** who are trying to lose weight? **Choose as many as apply**.

① Healthy recipes
② Portion control, serving sizes
③ How to choose a weight loss program
④ How to control stress
⑤ How much they should eat
⑥ How much exercise they need
⑦ Online dieting
⑧ Other (Specify)_____

Q57. Would you consider **having surgery** to help you lose weight? (Example: gastric bypass, liposuction)

① Yes
② No
③ Maybe

PHYSICAL ACTIVITY

This section tells us about your activity patterns.

Q58. Do you have an injury, physical disability, or medical problem that prevents you from getting regular physical **exercise**?

① Yes (**Go to Q 60)**
② No (**Go to Q 59)**

Q59. How would you describe your current physical activity level?

① Very active
② Active
③ Moderately active
④ Not active
⑤ Certified couch potato

Q60. How do you **normally** travel to work?
① Walk (**Go to Q 61)**
② Bike (**Go to Q 61)**
③ Take the bus or other public transportation (**Go to Q 62)**
④ Drive (**Go to Q 62)**
⑤ Work from home (**Go to Q 62)**

Q61. If you walk or bike, approximately how long does it take you to get to work?

_____ minutes per day.

Q62. Do you work in a physically demanding job that involves construction, digging, heavy lifting, etc?
① Yes
② No

Q63. How often do you do **planned moderate** cardiovascular activity on a weekly basis (walking briskly, swimming, biking at a regular pace)?
① 5 to 7 times per week
② 3 to 4 times per week
③ 1 to 2 times per week
④ I do not exercise regularly

Q64. On the days you do **planned moderate** cardiovascular exercise how long do you usually do so?
① Less than 30 minutes
② 30 to 45 minutes
③ 46 minutes to 1 hour
④ More than 1 hour

Q65. What is your **primary** cardiovascular activity? **Choose as many as apply.**
① Walking
② Running, jogging
③ Biking
④ Swimming
⑤ Basketball
⑥ Other _____

Q66. How many times a week do you lift weights?
① 5 to 7 times per week
② 3 to 4 times per week
③ 1 to 2 times per week
④ I do not lift weights regularly

Q67. How often do you do flexibility exercises such as stretching or yoga?
① 5 to 7 times per week
② 3 to 4 times per week
③ 1 to 2 times per week
④ I do not stretch regularly

Q68. Do you push yourself harder on the weekend by having longer bouts of exercise?
① Yes
② No
③ Sometimes

Q69. Does your neighborhood have adequate sidewalks for people to walk, run, or ride bikes?
① Yes
② No

Q70. Where do you <u>usually</u> exercise?
Choose as many as apply.
① At home
② At the gym
③ At a nearby park
④ At a community center
⑤ Around the neighborhood
⑥ At the YMCA
⑦ At work
⑧ At a stadium

Q71. Do you currently participate in any of the following competitive activities on a regular basis? **Choose as many as apply.**
① 5K, 10K run/walk
② Marathons
③ Cycle team, Bike race
④ Triathlon
⑤ Tennis
⑥ Golf
⑦ Softball
⑧ Coaching or refereeing youth sports

Q72. Approximately how many **hours of TV** do you watch every day?
① Less than 1 hour
② 1-3 hours
③ More than 3 hours
④ I do not watch TV regularly

Q73. Approximately how many hours a day do you spend **surfing the Internet** for non-work related purposes?
① Less than 1 hour
② 1-3 hours
③ More than 3 hours
④ I do not surf the Internet regularly

Q74. Approximately how many hours a day do you spend on any of the following activities: online gambling, computer gaming, simulation games, video games, etc?
① Less than 1 hour
② 1-3 hours
③ More than 3 hours
④ I do not do any of the above

Q75. Please indicate if you currently exercise. **Choose one**.
① No, and I do not intend to in the next 6 months
② No, but I intend to in the next 6 months
③ No, but I intend to in the next 30 days
④ Yes, and I have been, but for less than 6 months
⑤ Yes, and I have been for more than 6 months

Q76. What do you think are the main reasons that **prevent you** from being physically active on a regular basis? **Choose as many as apply.**
① It is not a priority
② Don't have time
③ Get home too late
④ Can't afford to join a gym
⑤ Unsafe neighborhood
⑥ Not motivated
⑦ Get enough exercise at work
⑧ Don't like to exercise
⑨ Have health problems
⑩ I would rather rest and relax than be active

Q77. What do you think would **motivate you** to be more physically active? **Choose as many as apply.**

① To lose weight
② Being diagnosed with a disease or illness
③ Doctor tells me to
④ Having someone to exercise with
⑤ If my partner was physically active
⑥ If my friends were more physically active
⑦ Having a membership to a gym
⑧ To be a better role model
⑨ More convenient places to exercise
⑩ If I had transportation

LIFESTYLE AND MEDICAL HISTORY
This section tells us about your lifestyle and medical history.

Q78. How would you describe your health?

① Excellent
② Very good
③ Good
④ Fair
⑤ Poor

Q79. Do you have any type of health insurance?

① Yes
② No

Q80. Do you smoke cigarettes?

① Yes
② No

Q81. How would you describe your current alcohol usage?

① Very high
② High
③ In the middle, neither high nor low
④ Low
⑤ I do not drink **(Go to Q 83)**

Q82. In the last 30 days, have you ever had more than 5 drinks in one sitting?

① Yes
② No

Q83. Please indicate if you are taking any of the following. Choose as many as apply.

① Multivitamin (e.g. One-a-day)
② Vitamin C
③ Vitamin E
④ Fish oils
⑤ Protein supplement
⑥ Muscle building supplements
⑦ Other _____

Q84. Please indicate if you have been diagnosed with any of the following diseases or conditions? **Choose as many as apply.**

① Obesity
② Diabetes
③ Heart disease
④ High cholesterol
⑤ Hypertension (high blood pressure)
⑥ Stroke
⑦ Prostate cancer
⑧ Colon cancer
⑨ HIV/AIDS

Thank you for time and your support.

APPENDIX B
INSTITUTIONAL REVIEW BOARD

UFIRB 02 – Social & Behavioral Research

Protocol Submission

Title of Protocol: Weight Loss Practices Among Male Baby Boomers and Perceptions and Needs for Participation and Adherence to a Weight Loss Program

Principal Investigator: Christopher K. Wirth	**UFID #:** 9606-7890
Degree / Title: M.S.E.S.S. **Department:** Health Education and Behavior	**Mailing Address:** Room 5, FLG PO Box 118210 Gainesville, FL 32611 **Email Address & Telephone Number:** Tel: 392-0583 x1283 E-mail: cwirth@ufl.edu Fax: 392-1909
Co-Investigator(s):	**UFID#:**
Supervisor: Dr. Delores C.S. James	**UFID#: 1868-9210**
Degree / Title: PhD, RD, LD, FASHA/Associate Professor **Department:** Health Education and Behavior	**Mailing Address:** Room 5, FLG PO Box 118210 Gainesville, FL 32611 **Email Address & Telephone Number:** Tel: 392-0583 x1276 E-mail: djames@hhp.ufl.edu Fax: 392-1909
Date of Proposed Research: February 1, 2008 to September 1, 2008	
Source of Funding *(A copy of the grant proposal must be submitted with this protocol if funding is involved):* Unfunded	

Scientific Purpose of the Study:
Obesity levels are increasing among the Baby Boomer population and thus it is necessary for these individuals to lose and maintain a healthy weight. Current research suggests that men are less likely than women to do anything about their weight or to join a weight loss program. The primary aim of this investigation is to determine what male Baby Boomers do to achieve and maintain a healthy weight. A secondary aim of the investigation is to identify what elements of a weight loss program would be appealing to male Baby Boomers. A tertiary aim of the investigation is to identify strategies to motivate male Baby Boomers to exercise more.

Describe the Research Methodology in Non-Technical Language: ***(****Explain what will be done with or to the research participant.****)***

Twenty participants will be recruited to participate in a semi-structured interview that will last approximately 1hour. Each participant will be asked a series of interview questions relating to weight management strategies, desirable components of a weight loss program, and motivational strategies to improve exercise levels. The interview will help develop recommendations for a weight loss program targeted at male Baby Boomers. [See Interview Attachment]

Additionally, 350 participants will be recruited to complete a survey that will last approximately 25 minutes. The survey will ask questions about general demographics, as well current participation in regards to weight management, healthy eating, and exercise. The survey will help determine how weight management, healthy eating, and exercise practices may differ among groups within the male Baby Boomer community. [See Survey Attachment]

Describe Potential Benefits and Anticipated Risks: (*If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.)*

There is no more than minimal risk involved with the survey and interview portions of this study. The interview question participants will be ask about personal perceptions of healthy weight, individual weight loss practices, and individual physical activity practice. Answering the questions is voluntary and the participants do not have to answer any of the interview questions that they do not want to. The individuals participating in the interview portion of the investigation will receive an incentive of a $15 Wal-Mart card. The survey participants will be asked questions about weight management practices and will not receive any direct benefit for participation.

Describe How Participant(s) Will Be Recruited, the Number and AGE of the Participants, and Proposed Compensation:

Participants for the proposed investigation will be recruited from various community agencies and businesses in Alachua County. Participants will be male Baby Boomers born between 1946 and 1964. 400 male Baby Boomers will be approached in an attempt to recruit 350 for the survey portion of the investigation. No compensation will be provided. 20 male Baby Boomers will be recruited for the interview portion of investigation and will receive $15 gift certificates to Wal-Mart for participating in the interview.

Describe the Informed Consent Process. Include a Copy of the Informed Consent Document: Each interview participant will read and sign the Informed Consent Form (attached) before participation. Survey participants will provide consent by agreeing to complete the survey (script attached).	
Principal Investigator(s) Signature:	**Supervisor Signature:**
Department Chair/Center Director Signature:	**Date:**

APPENDIX C
INFORMED CONSENT SCRIPT FOR SURVEY

"Hi, my name is Chris Wirth and I am a PhD student from the Department of Health Education and Behavior at the University of Florida. I am studying the weight loss practices of male Baby Boomers. Specifically I am looking at what male Baby Boomers are doing to lose weight, what physically activities they are participating in, and what barriers and motivators they have towards weight management, healthy eating, and physical activity. I would appreciate it if you would agree to complete one of the surveys. It will take approximately 25 minutes to complete. I do not need your name so the information will be kept anonymous. Would you be willing to complete a survey?"

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BIOGRAPHICAL SKETCH

Christopher Kevin Wirth was born in Laramie, Wyoming in 1979. During his youth and adolescence, he was actively involved with sports and by the time he graduated high school he had developed a strong passion for coaching. He attended the University of Wyoming where he spent four years working as an equipment manager for the Wyoming football team and majoring in physical education teaching. In 2001, he was hired to teach physical education and health education at Johnson Jr. High in nearby Cheyenne, WY.

In 2002, Chris moved to Gainesville, Florida where he attended classes at the University of Florida while teaching classes for the Sport and Fitness program. In addition, he provided physical education to K-8 students at Millhopper Montessori School. In 2004 he received the Norma Leavitt Scholarship and was nominated for the Graduate Student Teacher of the Year. Later that spring, he graduated with a degree of Master of Exercise and Sport Sciences in the area of Sport Pedagogy.

Following graduation, Chris was accepted into the doctoral program at the University of Florida. In the fall of 2004, he began working on his Ph.D. in Health and Human Performance in the department of Health Education and Behavior. During his time in the doctoral student he taught undergraduate students in the areas of health education and foundations of health promotion. He was also able to spend two years teaching methods courses in the physical education teacher preparation program and spent time in the local school district observing student teachers.

In August of 2008, Chris was hired by Methodist University in Fayetteville, North Carolina, to teach physical education and health education. Chris received his Ph.D. from the University of Florida, in August of 2010. He plans to continue his career in

teacher preparation and will be expanding his research to also include adolescent weight issues. In the fall of 2010 he intends to take the Certified Health Education Specialist (CHES) exam, pass the Praxis I and II exams to gain his teaching license in North Carolina, and establish an Ultimate Frisbee recreational league at Methodist University.