

The Parents' Role in Childhood Obesity

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## Chapter 1: Introduction

It is a well known fact among Americans today that the United States holds the number one position for highest prevalence rates of obesity around the globe (Nationmaster 2004). As compared with other nations worldwide, a staggering 30.6 percent or about one third of the U.S. population is considered to have a body weight regarded as obese. Even more shocking is the fact that a large number of people belonging to this group are young children and adolescents. Results from the 2007-2008 National Health and Nutrition Examination Survey indicate that an estimated 17 percent of children and adolescents ages 2-19 years are obese. Such a large portion of young children having unhealthy weights is extremely worrisome due to the fact that obese children and adolescents are more likely to become obese adults (AACAP 2008). Obesity is associated with a number of serious health concerns including but not limited to, high blood pressure, cardiovascular disease, diabetes, and decreased life expectancy. (AACAP 2008)

Childhood obesity has become so commonplace in the U.S. and poses such serious health risks to children that this devastating trend has received widespread attention in the news and media in order to create more awareness surrounding causes and consequences of this epidemic.

Environmental factors such as increased consumption of high fat, “fast food” and decreased physical activity have already been identified as central components to the growing number of children becoming obese in early age. However, what internal factors are influencing children’s weight? Are the eating habits and nutrition guidelines children learn from their parents affecting their weight? While many factors contributing to childhood obesity have been explored and identified in past studies, few research teams have analyzed the relationship between childhood obesity and the role parent figures have in promoting or hindering the development of this

unhealthy trend in children's weight. The purpose of this study is to examine how parental attitudes towards healthy eating habits influence their children's weight and eating patterns.

Children spend a large portion of their time in the home in the company of their parents and family; therefore, examining the connection between the health habits parents are modeling to their children inside the home and its impact on children's proper weight development is of critical importance to understanding and rectifying the current childhood obesity crisis in the U.S. My interest in this issue developed when I began making connections between the eating patterns of me and my mother; I have multiple unhealthy eating habits I feel I acquired directly from my mother by observing and internalizing the unhealthy eating behaviors that she frequently modeled to me. The fact that my behavior appears strongly linked to the examples my mother modeled to me lead me to wonder if the way children view food and eating habits may have more to do with what they are learning and absorbing from their parents than originally expected. If children adopt the basis of their eating habits from how they see their parents interact with food, perhaps more research and funding could be dedicated toward exploring new interventions and techniques for resolving and preventing this issue. Children are the most important asset to this country's future, and ensuring the safety and health of the younger population should be of utmost importance. Gaining new insight into the psychological causes of childhood obesity will allow for more effective attempts at reducing the number of children in the U.S. suffering from life threatening weight problems. The following chapters will define and explain the current situation of childhood obesity, investigate the role parents have in their children's weight development, and cover methods of intervention for families dealing with this serious health issue.

## Chapter 2: Overview of Childhood Obesity

Obesity is the most common health problem facing children in the United States (Strauss & Knight 1999). Centers for Disease Control and Prevention (2010) define overweight and obesity as labels for ranges of weight that are greater than what is generally considered healthy for a given height; in addition, the terms also identify the specific weight ranges that have been shown to be strongly correlated with increased likelihood of certain diseases and other serious health problems. Calculating body mass index or BMI is the most common method of initially assessing whether or not an individual is considered overweight or obese. Body mass index is determined by measuring an individual's weight in relation to their height. In particular for children and adolescents ages 2-19 years, age and sex are factored into determining weight status due to the fact that body development varies dramatically between boys and girls during these years. Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex (CDC 2010). The American Academy of Child and Adolescent Psychology (2008) describes childhood obesity as a child weighing at least ten percent higher than what is recommended for their height and body type. It is critical to assess body fatness in overweight children who are at risk of becoming obese as early on as possible in order to lower the likelihood that the children will develop into overweight or obese adults. One study found that approximately eighty percent of children who were overweight at age 10–15 years were obese adults at age 25 years (CDC 2010). Hindering children from becoming overweight and obese adults can literally save lives; it is reported by the National Institute of Diabetes and Digestive and Kidney Diseases (2004) that approximately 300,000 adult deaths in the United States each year are attributable to unhealthy dietary habits and physical inactivity or sedentary behavior. The reason that childhood obesity is such a major public concern in this country is due to the

health risks associated with unhealthy amounts of excess weight gain. These risks include complications such as increased risk of cardiovascular disease, high blood pressure and cholesterol, type two diabetes, breathing problems, and impaired glucose tolerance (CDC 2010). In a population-based sample of 5- to 17-year-old American children, 70% of obese children had at least one cardiovascular disease risk factor while 39% of obese children had two or more cardiovascular disease risk factors (CDC 2010). There is also growing evidence connecting unhealthy weight with increased risk of developing cancer. Recent studies conducted by the American Institute for Cancer Research (2008) indicate that more than 100,000 cancers in the US each year are linked to excess body fat. An additional study by the American Cancer Society reported that of 900,000 men and women observed, the heaviest men had death rates from all cancers combined that were 52% higher than the rates among normal-weight men. The heaviest women participating in the study had death rates from cancer that were 62% higher than normal-weight women. In addition to posing serious dangers to physical well being, obesity also increases the likelihood of emotional problems such as depression, anxiety, and lowered self-esteem. Braet (2009) obtained research findings that indicated clinical groups of obese children reported more feelings of negative physical self-perceptions than their non-obese peers and scored lower on general self worth. Parents of the clinically obese children involved with the study also reported more behavioral and emotional problems than the parents of the non-obese counterparts. Geier (2007) suggests there is also a link between relative weight and school attendance among elementary school children. His findings showed that overweight children were absent from school significantly more than normal weight children; the data suggests that in addition to the medical and psychosocial consequences of being overweight, heavier children have greater risk for school absenteeism than their normal-weight peers (Geier 2007). It is clear

that being overweight or obese as a child bears a multitude of negative outcomes that create difficulties for the child in life. The obesity crisis does not only impart threatening physical and mental health costs to the individuals and families suffering from it; obesity also carries an enormous financial cost as well. The National Institute of Diabetes and Digestive and Kidney Diseases (2004) reports the total cost of overweight and obesity in the U.S. is estimated to be \$117 billion dollars (\$61 billion direct and \$56 billion indirect). Finkelstein, Fiebelkorn, & Wang (2003) released a study which estimated annual medical spending due to overweight and obesity to be as much as \$92.6 billion dollars in 2002, accounting for 9.1 percent of U.S. health expenditures.

In most general terms, obesity occurs when an individual consumes more calories than the body is able to burn up, which results in an accumulation of excess proportions of body fat. There are many different causes contributing to the development of obesity during childhood that include genetic, biological, behavior, and cultural environmental factors (AACAP 2008). The American Academy of Child and Adolescent Psychiatry (2008) cites that obesity in childhood and adolescence can be related to poor eating habits, overeating or bingeing, lack of exercise, family history of obesity, medical illnesses and medications, stressful life events or changes, family and peer problems, low self-esteem, and depression or other emotional problems. One study cited by the CDC (2010) discovered that less than one-third (28%) of high school students meet currently recommended levels of physical activity. Reasons for this drop in physical activity among children and teens appears linked to sedentary behaviors, including the increased amounts of time children spend engaged with media sources such as television, video games, and computers. Another research study found that time spent watching TV, videos, DVDs, and movies averaged slightly over 3 hours per day among children aged 8–18 years (CDC 2010).

Several studies have found a positive association between time spent viewing television and increased prevalence of obesity in children (CDC 2010). This connection appears rooted in the fact that watching television not only takes away from time children could be spending being physically active, but also places children in the home where snacks and food advertisements are more readily available. Galson (2008) identifies poor attention to nutrition, increased access to fast food, high fat content processed snacks, and high calorie sugary beverages as major contributors to the growing childhood obesity crisis. Quick easy access to cheap food that is high in fat and sugar content combined with infrequent exercise and physical activity seem to be two of the most widely accepted causes of the unhealthy weight trend plaguing children of the past few decades. Hoerr (2009) argues that fast food and eating away from home is not necessarily problematic for every child, but rather that children who have a stronger predisposition to developing obesity due to biological or genetic factors need to be extremely careful in monitoring their consumption of these high fats and refined sugars.

It appears that prevalence rates of obesity occur in different patterns among particular ethnic groups. The American Obesity Association (2004) cites that overweight and obesity in the U.S. occur at higher rates for African-Americans and Hispanics as compared with whites; in addition, the American Indian population also has high prevalence rates of overweight. It is further reported that women and persons of low socioeconomic status within these minority populations in particular appear to be especially affected by overweight and obesity. While considering the potential causes of obesity, it is therefore important to take into consideration the cultural factors that influence an individual's beliefs about proper nutritional habits and physical activity behaviors. While nutrition and exercise have proven to be important and influential factors in defining the underlying causes of childhood obesity, the role of the home and parental



guidance in contributing to unhealthy children's weight development remains to be a less discussed point of interest. In the following chapter will specifically explore the significance of the influence parents have on children's development of obesity; in particular, how the attitudes pertaining to proper nutrition and exercise that parents convey and model in the home can contribute to the health attitudes and weight patterns of their children.

### Chapter 3: The Role of Parents

There is abundant evidence supporting the idea that a child's attitudes towards healthy living habits are significantly related to those of their parents. The most common description of the socialization that occurs between child and parent is referred to as parental modeling. The Nutrition Research Newsletter (2001) defines parental modeling as a process of observational learning in which the behavior of the parent acts as a stimulus for similar behavior in his or her child. Important childhood behaviors such as good manners, proper hygiene, and other social norms are frequently modeled by parents in hopes that the children will internalize them and continue repeating the behaviors on their own. The question is: how significant is the role of parents in modeling and encouraging healthy behaviors to children in regards to weight management and preventing childhood obesity? Tinsley (2003) recognizes that although parents represent only one of many possible socializing agents (e.g., peers, schools), socialization of health-related behavior occurs within the family, with parents' beliefs, attitudes, and behaviors substantially affecting their children's health behaviors. Further research by Tinsley (2003) indicates that parental modeling has been examined across a wide variety of youth health behaviors such as smoking, seatbelt use, and physical activity, and suggests that observational learning is in part responsible for the transmission of health promoting or risky behavior in children.

## Parental Modeling and Healthy Eating

One study conducted by Tibbs et al. (2001) examined the effects of parental modeling on children's food intake by having parents answer multiple surveys and questionnaires to assess the frequency with which parents model dietary behaviors for their children. The results of the study indicate that parents reported greater frequency in sitting with their children at meals or eating foods they want their child to eat. However, they infrequently reported modeling the intake of low-fat snacks to their child or a willingness to set rules about how many fruits and vegetables their child should eat (Tibbs et al. 2001). It seems reasonable to conclude from this research that parents are frequently inconsistent in their methods of modeling health behaviors to their children. Although eating at the family dinner table may help children eat healthily that particular evening, not learning to reach for low-fat snacks or fruits and vegetables may cause children to exhibit unhealthy eating behaviors when dining elsewhere than home (a friend's house, at school, etc.). Tibbs et al. (2001) also believes it is worth noting that despite parental reports of modeling, a majority of parents did not follow recommended guidelines on fat or fruit and vegetable consumption. Perhaps part of the reason children are eating unhealthily is because they are not learning and internalizing correct nutritional guidelines from their parents. Since obesity most commonly begins in childhood between the ages of five and six, and during adolescence (AACAP 2008), it is alarming that parent's are not setting stricter rules and actively encouraging and practicing healthy habits to their children during the early years of life in which it would be most beneficial.

## Family Narratives and Perception of Weight

A fascinating and often overlooked component to understanding the parents' role in childhood obesity has to do with analyzing the beliefs that the parents hold about their children's weights. Families with an overweight child have different narratives, understandings and explanations regarding the development and presence of excess weight Gronbaek (2008). These family narratives can be viewed as the family's way of understanding and explaining to one another and to the world, how they think and who they are (Polkinhorne 1998). An in depth study lead by Gronbaek (2008) explored parental cognitions relating to familial obesity issues and also studied the way in which families attribute their poor weight management. The study produced a multitude of interesting findings; almost all families participating in the study or 91% stated that they had played a part in the development of their children's obesity. Many of the parents (59% of the mothers and 22% of the fathers) had experience in trying to lose weight by dieting. In addition, the dietary factors specified by families as having played a part in the development of the child's obesity were: too much food or unhealthy food such as candy, ice cream, and cake (Gronbaek 2008). Not only did parents claim responsibility for allowing children to consume unhealthy food, but parents also expressed the specific emotions and thought processes they experienced while permitting their children to eat junk food. Several parents talked about feelings of guilt that could result in 'spoiling' their children or about lacking the energy to look into the reasons for a child's hunger and just giving in to the child's requests for e.g. more food (Gronbaek 2008). While many families viewed the development of obesity in their family to be a result of their own actions, slightly more than one third of the families looked to external causes over which they had no control, like genetics. Parents also attributed moments of poor dietary monitoring of their children to periods of crisis; stressful times such as heavy

workloads, illness, divorce, and mental illness in the family seemed to affect their ability to maintain and promote healthy behaviors in their children (Gronbaek 2008). The detailed results of this study provide an inside view of how parents perceive obesity within their own family. Costanzo & Woody (1984) also explored parental perceptions of their children's weight, but instead focused on the differing views parents hold about their obese children according to the gender of the child. Their striking findings concluded that greater overweight in boys was related to parents' perceptions of less exercise, less emotional excitability, less peer involvement, greater compliance, and a stronger pattern of food preferences. Greater overweight in girls, on the other hand, was related to the parental perceptions of: greater influence of positive and negative moods on eating, greater need for parental restraint of eating, more emotionality and displeasure with self, and greater peer rejection (Costanzo & Woody 1984). Parents' views about the reasons causing their children's obesity could not be more differentiated between genders; the differing parental views according to gender may play a large role in parent's involvement or indifference to their child's obesity problem. These misguided gender stereotypes may hinder parents from providing adequate help and support to their child. For example, a parent who assumes their teenage daughter developed obesity due to low self-esteem may overlook the fact that the daughter's self-esteem is just fine, and she simply needs to exercise more.

#### Parental Influence on Physical Activity

As discussed in the previous chapter, it is generally recognized that one of the main causes of overweight and obesity in children is lack of exercise and physical activity. Recent data on physical activity for children age 9–13 indicate that approximately one fifth engage in no free-time physical activity (Duke, Huhman, & Heitzler, 2003). This means twenty percent of children are not participating in recreational sports or any other type of physical activity during

their elementary and middle school years. The rates of regular exercise for adolescents are also concerning; only 38.5% of U.S. adolescents in grades 9–12 meet present national standards for physical activity, and 9.6% report no vigorous physical activity at all (CDC 2010). Numerous studies have examined the levels of physical activity in children in relation to the extent of parents' involvement and support. There are many different ways in which parents can get involved in monitoring their child's physical activity, but which factors seem to be the most effective in promoting regular exercise habits? Sallis et al. (2007) found that both encouragement and instrumental behaviors (transportation, payment of fees, purchase of home equipment) were significantly related to child and adolescent physical activity, and do not appear to vary as a function of sample age. These findings are also consistent with the Surgeon General's report (U.S. Department of Health and Human Services, 1996), identifying parent support and direct help from parents as consistently associated with child and adolescent physical activity. Among the convincing evidence that parental modeling and encouragement are associated with increased child and adolescent physical activity, there are other research studies that disconfirm this conclusion. A study conducted by Duncan et al. (2005) produced interesting results indicating that parental modeling demonstrated the weakest relation with regard to child and adolescent physical activity when compared with other parental behaviors investigated; however, the relation between parental modeling and child and adolescent physical activity was moderated by the sample age. The most intriguing result from the study shows that the relation between parental modeling and early adolescents' physical activity was significantly lower than that with children or older adolescents (Duncan et al. 2005). A possible speculation as to why early adolescents respond less to parental modeling than children and older adolescents is that parents may not represent very prominent models for early adolescent teenagers in regards to physical

activity behaviors; teens may look to alternate sources such as peers, school, television, and or media to obtain their models for physical health.

### Genetics and Obesity

The role of the parents in regard to childhood obesity cannot be examined completely without mentioning the influence of genetics on a child's weight development. The question of whether or not genes seriously influence a person's risk of becoming obese is a hotly debated topic in today's medical health field. Centers for Disease Control and Prevention (2010) states that science shows genetics play a role in obesity; genes can directly cause obesity in disorders such as Bardet-Biedl syndrome and Prader-Willi syndrome. Although these disorders are extremely rare, the existence of such disorders provides proof of a genetic link to obesity. The American Academy of Child and Adolescent Psychiatry (2008) released information indicating that if one parent is obese, there is a 50 percent chance that the children will also be obese; however, when both parents are obese, the child will have an 80 percent chance of being obese. Although these figures seem daunting, there is evidence to support that having an obese parent or obese parents does not mean a child is doomed to become obese. The CDC (2010) explains that genes and behavior may both be needed for a person to be overweight. In some cases multiple genes may increase one's susceptibility for obesity and require outside factors; such as abundant food supply or little physical activity in order to fully become obese. In other words, if children acquire genes from their parents predisposing them to obesity, a strict moderation of environmental factors (i.e. diet and exercise) can hinder children from ever developing obesity. Hill, J. (1998) elaborates on the idea of genetics and the current obesity epidemic, he states "Despite obesity having strong genetic determinants, the genetic composition of the population does not change rapidly. Therefore, the large increase in . . . [obesity] must reflect major changes

in non-genetic factors." Basically, the current rise in obesity among the population is most likely due to changing environmental factors rather than genetics. Although it is tempting for parents or any individual for that matter to blame 'bad genes' for problems managing excess weight, the facts strongly suggest that "we should not forget that, while the genetic contribution to obesity is substantial, a large part of obesity susceptibility remains down to our lifestyle" (Loos 2010).

#### Chapter 4: Interventions

Now that the biological and environmental factors contributing to childhood obesity have been discussed and examined, the various methods of treatment and intervention can be better understood. In this section I will discuss the government and community based efforts in fighting childhood obesity along with the different forms of individual treatment and interventions that are helpful in decreasing obesity in children. In addition, I will also be covering the risks and concerns associated with certain interventions, and elaborate on possible barriers to successful treatment.

##### Government and Community Programs

In response to the growing prevalence of childhood obesity in the United States, many nationwide plans and community based efforts have been developed in order to generate a greater awareness to the public about the severity of this issue. Many Americans are already aware of the recent White House Task Force initiative (lead by first lady Michelle Obama) which is directed at reversing the childhood obesity epidemic through measurable outcomes and concrete goals. The White House plan seeks to cut child obesity and overweight rates by 2.5 percent by 2015 and by 5 percent by 2020. It's not a vague goal; scorekeeping will be up to the CDC, which reports child obesity rates every two years (DeNoon 2010). To accomplish this, the plan makes 70 specific recommendations for early childhood, for parents and caregivers, for

school meals and nutrition education, for access to healthy food, and for increasing physical activity (DeNoon 2010). A few examples of these recommendations include: improve federal early childhood programs' child nutrition and physical activity practices, prioritize research into chemicals in the environment that may cause or worsen obesity, educate and support parents in efforts to reduce kids' screen time (i.e. less time watching television and using digital media and more time being physically active), and work with local communities to spread the word about the 2010 Dietary Guidelines for Americans and the next generation of the food pyramid (DeNoon 2010). Although the outcomes and success rate of this government supported plan are not yet known, it is certain that the creation of such a widely recognized program that promotes the importance of early development of health habits is a step in the right direction. Community organizations are also onboard with initiatives aimed at reducing childhood obesity. The YMCA of the U.S., one of the nations leading nonprofits known for strengthening communities through youth development, healthy living, and social responsibility, is recognizing the importance of promoting childhood obesity prevention and awareness. The YMCA recently joined 70 other national organizations in promoting the Healthier Kids, Brighter Futures initiative, which educates and empowers families and youth to live healthy lifestyles, eat nutritious food and be physically active (YMCA 2010). For example, of the goals of the YMCA's Healthier Communities Initiatives includes reducing health disparities among communities, and increasing access to fruits and vegetables in underserved areas through making community gardens and farmers' markets more accessible (YMCA 2010). This type of community outreach is critical because it allows children and families of all different cultures, socioeconomic status, religion, and ethnic backgrounds to be provided with equal opportunities and resources for combating childhood obesity and maintaining healthy families. In addition to the large scale efforts of the



government and community organizations that are aimed at preventing and reducing the prevalence of childhood obesity, there are numerous treatments and interventions that are available to children on a much more personal and individual level.

#### Individual Treatment and Prevention

Treatment options for children are broad and widely differentiated, therefore can be viewed from multiple perspectives. The general consensus among health care professionals is that the key to treatment of childhood obesity is early intervention. There are undoubtedly biological mechanisms that favor early intervention. Hill, Dorton, Sykes, & DiGirolamo (1989) suggest that there is animal evidence to show that duration and severity of weight gain influences the reversibility of dietary obesity. This research implies that weight gain may have an evolutionary component; it is much more difficult for the human body to return to a normal weight range after it has adapted to significantly increased body fat over a long period of time. Early intervention is also favored due to the fact that children are less ingrained in bad habits than in adulthood. Wilson (1994) states that it is easier to teach healthy eating and activity habits to children rather than adults because children's habits are more malleable. Furthermore, the result of studies conducted by Epstein, Valoski, Kalarchian, & McCurley (1995) provide evidence that weight gain prevention and weight-loss programs for children are often more successful than similar programs targeting adults. Prompt intervention is clearly beneficial. In addition, each year numbers of obese youth are treated by one or some union of four therapies: dieting; dieting and taking anorectic agents; dieting and exercising; or dieting, exercising, and behavior therapy (LeBow 1986). Mann (2007) released a study suggesting there is little support for the notion that rigorous calorie-restrictive diets lead to lasting weight loss or health benefits in the treatment of obesity. The study shows that one third to two thirds of dieters regain more

weight than they lost on their diets, and dieting is counterproductive because of several methodological problems, mainly stemming from poor weight loss maintenance. Dieting alone is proven to not be extremely successful in combating childhood obesity; however combining nutritional awareness with therapeutic intervention an effective method shown to help children reverse obesity.

### Family Based Therapy

As the focus of this study is specifically interested in the role of the parents in relation to childhood obesity, it is especially apt to discuss family based treatments for obese and overweight children. Family-based interventions for pediatric obesity are programs that focus on changing the behavior of multiple family members, not only that of the overweight child (Epstein, Myers, Raynor, & Saelens, 1998). Family-based interventions are incredibly relevant because these programs recognize the main points mentioned in the previous chapter: children's weight problems develop and are maintained in a family context (Golan & Weizman, 2001), parents play a role in shaping children's health behaviors (Davison & Birch, 2001), and parent functioning can influence the course of treatment (Epstein, Wisniewski, & Weng, 1994; Favaro & Santonastaso, 1995).

Behavioral modification therapy is an example of the many clever techniques used by clinicians during family based intervention. Behavior modification is a treatment approach based on the principles of operant conditioning; undesirable behaviors are replaced with more desirable ones through positive or negative reinforcement (Martin, 1988). Lesperance (2007) believes that behavioral therapy for obesity should involve three things: developing specific and realistic goals that can be easily measured (e.g. walking for 20 minutes, three times per week), developing a reasonable plan for reaching those goals, and making incremental changes (rather than large

changes) to promote successful experiences that can be used as a foundation for additional lifestyle alterations. By addressing children's weight management as a complete lifestyle change rather than a "quick fix" or temporary concern, the child will likely internalize and continue the learned positive behaviors. Good behavior modification strategies for children's weight loss include encouraging verbal praise, avoiding using food as a reward, including self-modification, promoting realistic and positive body image, and developing a social support network; additionally, it is considerably more effective for children when parents are included in the plan (Lesperance 2007). Berry (2004) carefully studied thirteen families (with at least one obese family member) participate in behavioral modification and therapy interventions designed to increase healthy habits and promote overall weight-loss. The study examined whether intervention for childhood obesity is more effective from a family based approach versus treating the child alone. The results indicate that behavioral modification interventions designed to targeted children and parents together or separately and were reported to be successful in improving weight-loss outcomes in both parents and children (Berry 2004). This research implies that treating a child simultaneously with their parents is not necessary in order to achieve weigh-loss; children and adults can have successful interventions when treated separately, as long as parents and children are acquiring the same type of reinforcement.

There are other methods of treatment that are less family focused and are more concerned with the individual circumstances of each child. White (1986) examined treatment alternatives for children and adolescents based on whether they were suffering from mild, moderate, or severe obesity. The weight categories for this study were based on the Stunkard (2000) simple threefold classification system for mild, moderate, and severe obesity. Mild obesity is generally defined as 20-40% overweight, moderate obesity as 41-100% overweight, and severe obesity as

more than 100% overweight. Each category of obesity has specific guidelines indicating what type of treatment is the most effective for children identified to be in a particular category. White (1986) states that treatment for mild obesity should be preventive, emphasizing long-term changes in eating and activity patterns with the goal of weight maintenance and relative weight reduction; short-term behavior modification programs (e.g. parental support) are effective in achieving these goals. White (1986) further indicates that more comprehensive behavioral programs are needed for treating moderate obesity. Such programs include extended treatment periods, deposit refund contracts, direct parental involvement, and increased emphasis on lifestyle exercise (White 1986). It is clear from this research that outpatient clinics and schools remain optimal treatment settings for moderately obese children, but the study expressed the need for more research on camp type settings. Severe obesity requires consideration of radical interventions, and evidence to date supports the experimental use of very low calorie diets (protein-sparing modified fasts) in conjunction with behavior modification; however, it is imperative that such extreme dietary treatment must be conducted under strict medical supervision (White 1986). The study strongly insists that neither drugs nor surgery can be recommended for severe obesity in children and adolescents.

#### Weight-Loss Surgery

It is general consensus among the medical community that weight loss surgery should only be used as a last-resort procedure for severely obese children (Blackburn & Bistrian, 1980; Polich et al., 1978). Some physicians will only approve surgery for children if stringent criteria is met, such as 100% overweight for at least two years (Randolph, Weintraub, & Rigg, 1974) or even 300% ideal body weight (Polich et al., 1978). Blackburn and Bistrian (1980) state that surgical treatment of obesity is a "hazardous procedure with many metabolic complications. Its

use must be restricted to institutions with established protocols and teams to properly select the patient, carry out the procedures, and to manage the difficult metabolic, psychological and social problems created by the disease and its medical treatment" (p. 401). Basically, weight loss surgery is not advised in the treatment of children except under very extreme circumstances. This consequently makes severely obese children the most difficult group to treat since intensive exercise programs are also not recommended for this weight group, which can make it difficult for the children to maintain any weight loss (White 1986). Although there are certain risks and complications that accompany treatment of childhood obesity, therapeutic intervention is overall a highly supported and recommended plan for decreasing the risk of health complications in obese children.

#### Common Concerns

Garner and Wooley (1994) emphasize that it is important that interventions do not encourage the type of dietary restraint that has been linked to the development of eating disorders and other forms of psychological distress. There is distinct possibility that dietary and behavioral treatments are not only ineffective but also often harmful; a major concern is that the caloric restriction that is a part of such interventions may trigger binge eating and other forms of eating disorders (Garner and Wooley 1991). In addition to the concern that restrictive diets may cause other types of eating difficulties, there is also the distinct possibility that once the diet ends or is not followed correctly, the weight will steadily return. Obesity frequently becomes a lifelong issue. The reason most obese adolescents gain back their lost pounds is because after they have reached their goal, they go back to their old habits of eating and exercising (AACAP, 2008). In the essence that it is impossible to help someone who does not want to help themselves, motivation in regard to losing weight and adopting healthy lifestyle behaviors must

be examined. Motivational problems may occur because a child does not want treatment, has too many possessions at the outset, or sees a particular treatment program as silly, useless, or embarrassing (LeBow, 1984). Although there are certain risks and complications that accompany treatment of childhood obesity, therapy and intervention is overall a highly supported and recommended plan for decreasing the risk of health complications in obese children.

There is a clear theme underlying the various therapeutic interventions and treatments of childhood obesity; parental involvement is necessary. Gaining support and participation from parents is critical for promoting weight-loss in children and sustaining the learned positive behaviors introduced during treatment. (Wilson 1994) states that parents play an essential role because they can exert external control, including social support and food management, on children and even adolescents living at home. Sure children have the ability to control and manage their weight by their own doing, but the evidence strongly suggests that successful long term weight management is best achieved when parents take an active role in encouraging and modeling healthy behaviors, reinforce positive non-food reward systems, and offer themselves as a source of social support for their child.

## Chapter 5: Conclusion

Researchers have done an incredible amount of work in isolating the factors contributing to childhood obesity that they believe to be the most profound. It is of critical importance to thoroughly examine these factors because understanding the causes of childhood obesity can provide the opportunity to focus resources, interventions, and research in directions that would be most beneficial in addressing the problem (CDC 2010). There is a large enough body of evidence to conclude that parents do play a significant role in determining the eating and exercise habits of their children. Parents take part in modeling influential health behaviors to

their children, provide children access to certain foods, make physical activity equipment more or less readily available, and of course, relate to their child's weight by way of genetics. The conclusion that parents have a significant relationship in relation to their child's development of obesity produces several important implications.

It is crucial for parents to realize that they do share a part in contributing to their child's obesity. If parents understand that their children do subtly pick up on the behaviors that they model, perhaps parents would be more willing to monitor their behaviors in ways that show a positive example to their child. Of course children do not prefer to eat broccoli or vegetables, but it is the parents job influence the child to consume vitamin rich foods they would not normally chose to eat on their own. Birch (1980) and Duncker (1983) sum up nicely, "For many children, eating is a social event that often times occurs in the presence of parents, other adults, older siblings and peers. In these contexts, children observe the behaviors and preferences of others around them. These role models have been found to have an influential effect on future food selection, especially when the model is similar to the child, or perceived as being powerful as in the case of older peers." Children are not yet old enough to realize the value of good nutrition, and it is clear that the parents are an instrumental part of setting children on the right track by teaching and modeling healthy lifestyle choices. However, this is not to say that parents are solely to blame; currently, childhood obesity is considered to be caused primarily by sedentary lifestyle and access to food or "fast food" with high fat and sugar content. Certainly these variables contribute to the childhood obesity epidemic, especially considering that the time period of the rise of technology and desire for fast, quick meals coincides with the generation of children being affected by this unfortunate disease. There are multitudes of reasons that a child

may become obese; the point being that parents have a larger influence on their child's development of unhealthy eating and exercise habits than previously expected.

An important concept to consider after reviewing this research is that effort to reduce childhood obesity should be aimed at changing the health behaviors within an entire family with an obese child rather than focusing on altering the health habits of only the obese child. Since intervention is proven to be more successful with the support of the entire family, then perhaps this could have implications for prevention as well. Further research on this subject may want to examine whether or not parental modeling of healthy behaviors can prevent a child from developing childhood obesity. A very interesting study to conduct would be to observe the development of very young average weight children who have a genetic predisposition to becoming obese; examine whether consistent parental modeling of healthy eating and exercise in the home would create similar habits in young child so that their weight never reaches the point of becoming a pressing concern. As mentioned in the previous chapter, the longer an individual maintains a heavier body weight, the more difficult it is to return to a lighter weight. Since it is relatively difficult for obese individuals to keep weight off once they have lost it, the answer may lie in preventing obesity from first developing. In the future, perhaps focusing efforts on early education of parents will allow the family to take necessary steps to prevent, rather than eventually diagnose and treat childhood obesity later down the line.

The influence of parental involvement in the development of childhood obesity is a less frequently discussed factor contributing to obesity, but there is no doubt that the role is extremely significant and worth conducting closer examination. Sure fast food can cause unhealthy weight gain, but where are the children obtaining this food from? The obvious answer is: the parents. Getting parents to take an active role in promoting good health habits to their



children is necessary; children cannot do it on their own. Tibbs et. al (2001) agrees that strategies promoting frequent parental role modeling of healthful dietary behaviors need to be further assessed, and dietitians also need to emphasize to parents the importance of their own dietary behaviors in developing the long-term eating patterns of their children. Community based programs and school curriculum that educate children and parents about nutrition, exercise, and healthful lifestyle choices are certainly a good start. In addition to education, the support and encouragement children receive from their parents is crucial in combating childhood obesity. Parents should not have to suffer in silence, worrying that their child may not outlive them due to the dangers and health risks associated with childhood obesity; they can decide to take action and be the healthy role model and source of support that many children desperately need, having been born into an era of inactivity and over consumption.

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