

## **CHAPTER ONE**

### **THE OBESITY EPIDEMIC**

“Obesity is epidemic in the United States!”

“An estimated 97 million adults in the United States are overweight or obese.”

The most recent estimate is that 30 percent of the children in America are overweight. But being overweight is not only an epidemic in the United States. As we've exported the “American lifestyle” to other countries the populations have become “Americanized.” Their populations have become heavier and are experiencing health problems, such as coronary artery disease and diabetes that previously were unknown to their population. Many researchers feel that most of the world's population will become overweight as high-calorie, fatty foods become easily available and the populations decrease their physical activity. In fact, one researcher says that within the next thirty years, “thin people will become rare in our society.”

An overweight population results in enormous economic costs to families and the nation. It is estimated that the annual health care cost associated with overweight adults in the United States is 100 billion dollars. This is money that families cannot spend on education, clothing, food and housing. Families, local communities and the Government are spending more and more money on medications and surgery to treat people who are seriously overweight and the medical conditions that they suffer secondary to their weight.

It seems impossible, but having enough food to become overweight only became possible in the past 100 years. Prehistoric people were “hunters-gatherers” and were constantly in motion searching for plants, fruit and wild grains to eat. If they were lucky, they might kill or find a dead animal for meat, but their basic diet was plants, unrefined grains and fresh fruit. No dairy products were available because there were no domesticated cattle or goats. When the Agricultural Revolution began, people no longer had to constantly search for plants or animals. Families became less active and consumed more meat and fat from the animals they had domesticated. Despite this change of lifestyle, most people remained thin because they had to perform hard physical labor to plant and harvest the crops and to take care of their animals. Because there was no way to store food except by smoking or salting, almost all the food the people consumed was only available in certain seasons and had a low-fat content. When the Industrial Revolution started 200 hundred years ago in Great Britain, machines suddenly began to do most of the hard physical labor required to manufacture goods and to plant and harvest crops. People's physical activity decreased because of “labor-saving” machines and they increased their consumption of processed foods high in fats and sugar because of improved transportation, processing and food storage systems.

In the last 100 years, because of changes in lifestyle, family size and available foods, being overweight has become a common occurrence. I was born in 1947 before fast food outlets were on every corner so we ate most of our meals at home, cooked by my mother. We also had a hot lunch at school. It was a special day when the family would go out to eat at a restaurant, or on Sunday morning have the special treat of donuts from the bakery, that we ate with hot chocolate. Now, most meals are eaten outside of the

home and about one-third of a child's total daily calories are provided by snacks instead of at a set mealtime with the family. I recently saw a television show where a man said he ate at a fast food restaurant 12 times in the past week. 12 Times!

Most of us eat too much food primarily because we are constantly bombarded by advertisements for foods and because large quantities of food are so readily available. I once read an article about a restaurant in San Antonio, Texas that described a meal that was so big the restaurant owner said "it's too big for two people and we serve it to one!" This "portion distortion" results in the vast majority of children, and adults, not realizing how small a "serving" of food is supposed to be. Adults and children have come to expect huge servings of food and have lost the sense of "when to stop eating." For example, studies have shown that after the age of about 5 years children will eat whatever serving size of food you put on their plate. We'll talk about how to address portion distortion in much more detail later in the book.

Another reason that it's hard to lose or maintain weight is that some of us are genetically programmed to 1) gain weight easily, and 2) hold onto weight once we have gained it. This is because prehistoric people, because of an uncertain food supply, experienced constant cycles of "feast or famine." People who were able to store fat when they had plenty of food available would survive times when there was very little food to eat. The cavemen who survived famines passed down to their descendants their ability to easily store and hang on to fat. Even though our environment has changed over the past few thousand years so that food is constantly available, our bodies haven't changed. When I suddenly cut back on the amount of food I eat, my body cannot tell if I'm starving or just on a diet. Since my body thinks I'm starving, my body automatically starts to store fat and lowers my metabolism (how much energy I burn up) in order to conserve energy so I can stay alive until food is again easily available. This means that even though I've decreased how much food I am eating, I'm storing fat more efficiently and I won't lose weight because I'm not burning up the extra calories. This shows why it's so important to include exercise in any weight normalization program.

### **MEDICAL CONSEQUENCES OF BEING OVERWEIGHT**

80% of adults who are very overweight have at least one illness, such as heart disease, diabetes mellitus or cancer associated with their being overweight that directly impacts the quality of their life. It is estimated that being severely overweight results in 280,000 deaths each year in the United States alone. But why should we worry if children are overweight?

The sad fact is that if you're overweight as a child, you will probably be overweight as an adult. It is estimated that a child who is overweight at 10-to-13 years of age has a 70% chance of being overweight as an adult. Children who are overweight are more likely to have the same chronic diseases as adults such as diabetes or coronary artery disease and to die prematurely. Overweight children often have psychological problems such as low self-esteem and are ignored or rejected by other children. Many children will have behavior problems at home and in school as they act out their frustrations and anger about their body size and teasing from their schoolmates.

Let's talk more about medical conditions that will directly impact your children's health now and in the future if they are overweight:

## **Diabetes Mellitus (DM)**

**Type I DM** usually occurs in children and young adults and is caused by a deficiency in the hormone insulin. Insulin is essential for controlling the level of sugar (glucose) in the blood. Type I DM usually appears suddenly in children and requires lifelong, daily insulin therapy with closely monitored exercise programs and diet.

**Type II DM** usually develops slowly and occurs primarily in adults after years of eating a diet high in sugar and carbohydrates. 95% of all people with diabetes are Type II diabetics. People who have Type II DM usually produce enough insulin, but the insulin doesn't control blood sugar levels because their body has become resistant to the effects of insulin. Many of the people who have DM Type II are able to control their blood sugar by closely watching their diet and, even more importantly, normalizing their weight. Unfortunately, more and more children are now being diagnosed with Type II DM. Children and teenagers in my practice with Type I or Type II DM have a difficult time following a diet that will keep their blood sugar from getting out of control. When they go out with their friends they immediately feel set apart when everyone is eating ice cream or candy and they know they should say "no, thank you". Unfortunately, many of the children don't say "no" and then have blood glucose problems.

**Orthopedic Conditions** are a major concern in overweight children. In very overweight children the bones and muscles are unable to support the children's weight. This leads to problems with their hips, legs and feet which sets up a vicious cycle of gaining more weight because the children can no exercise to burn up calories.

**High Blood Pressure and Cardiac Problems.** A diet high in fat and cholesterol will usually cause coronary artery disease and peripheral vascular disease. These conditions are direct causes of blood pressure and serious heart problems. Besides the physical changes that happen within the blood vessels and heart, the hearts of heavier children have to work harder just to pump blood through their body leading to high blood pressure and cardiac problems.

**Early Maturation** Some overweight children grow faster and mature earlier sexually than their classmates. Many children suffer low self-esteem because their classmates begin to make fun of their larger, more adult figure.

**Breathing Problems** Many overweight children experience shortness of breath with mild exertion and wake up in the middle of the night gasping for breath. Because of their breathing problem is made worse with exercise they begin to avoid walking or running and like orthopedic problems, they enter the vicious cycle of gaining more weight because they no exercise to burn up calories

**Psychological Problems and Educational Problems** The cultural obsession with thinness among children and teens results in children becoming the focus of jokes and teasing if their bodies do not fit the "ideal" shape of the children that are shown on television or in magazines. Children may become depressed because of the teasing or they may become the "class clown" so that they aren't always the target of other children's jokes.

## **WHY ARE CHILDREN GETTING HEAVIER?**

Children are getting heavier primarily because of three closely related factors.

- 1) Unhealthy eating patterns and distorted food portions
- 2) Decreased activity
- 3) Change of school and home environments

### **Unhealthy Eating Patterns and Distorted Food Portions**

New food technologies and distribution methods have made food unbelievably affordable and available almost instantly. At any hour of the day or night you can walk or drive to buy, or have delivered, tasty and easy-to-eat food at impossibly low prices. Unfortunately, most of this easy to obtain food contains large amounts of saturated fat, sugar is served in incredibly large portions. You can “supersize” or “kingsize” an already large portion for just a few pennies more. Just one fast food meal often contains the total number of calories a child should consume in a day. To make it even worse, fast foods are low in fiber and lack vitamins and minerals that are essential for normal growth and development of bones, muscles and most importantly for school, the brain. In many neighborhoods, fast food is much easier to buy than fresh fruits and vegetables. Because fresh foods require more preparation than fast foods, even if fresh foods and vegetables are available, many families with limited time will choose to buy fast foods, despite knowing they aren’t as healthy for them and their children.

Most children no longer eat breakfast at home, or if they do eat something, they eat a breakfast such as a bowl of sugar-coated cereal or a breakfast bar, which is high in sugar and refined carbohydrates. Because of not eating breakfast, or having a high sugar breakfast, children can experience wide swings in their blood sugar and marked decrease in their ability to focus and behave in school. Everyday I see children in my son’s school who have had little or no breakfast hurrying into the classroom and then have trouble staying awake or focusing on the lesson. How can children do good school work when they don’t have any energy?

Children have increased the amount of soda they drink. Studies have established that there is a direct connection associated with being overweight and the amount of soft drinks children consume. It’s not uncommon to see children drinking sodas instead of milk for breakfast. My son’s dentist stresses the importance of minimizing the use of soft drinks. In fact he calls soft drinks and sodas “liquid candy.”

### **Decreased Activity**

The increasing number of overweight children is closely linked to decreased levels of activity. Children play less with their friends, don’t participate in sports, and in general are less active than in the past. Children spend more time watching television, playing video games and working on the computer. The average American child spends approximately 24 hours each week watching television. That is over three hours a day that could be spent in other activities such as playing with their friends or in sports. In addition to being less active, while children watch television they are bombarded with commercials for foods that are high in calories and fat such as potato chips, candy and soft drinks or juices which they will want to buy when they go to the grocery.

## **Change of school and home environments**

A children's "job" is to go to school to study and learn. Just as you and I may spend 8 to 10 hours at work, your child spends 8 to 10 hours at school. Two big changes in the school environment have led to increased weight in children. First, because schools have suffered cuts in their budgets they welcome revenues from vending machines and have contracts with fast food and beverage companies that make high calorie foods and drinks readily available to students. Whenever I visit elementary and high schools to make presentations or just to talk with students, I am amazed to see how many vending machines for candy and soft drinks are located in hallways and lunchrooms. Because of time constraints, children only go to the lunchroom for a quick lunch and then go back to sit in their classrooms. If the school has an "open lunch" the children can leave the school grounds to seek out other meal alternatives, usually fast foods restaurants. Fast food chains will specifically choose locations close to schools for their restaurants so they can increase their sales during the day. Schools have decreased or eliminated physical education classes and exercise periods where kids can go outside and just run around. Playground and gymnasiums are becoming increasingly scarce in schools as the schools become stretched for additional class space. Even if schools have team sports, they usually don't have physical education programs for the rest of the children in school.

We've talked before about how neighborhoods have become more and more isolated, cut in two by superhighways and cul-de-sacs. When I was a child I was able to walk to junior high and high school. Some experts feel that you can judge the health of a community by whether or not a child can walk safely to school. Unless our children have the opportunity to burn off calories in their daily activity, it is almost certain that they will continue to gain weight and suffer decreased physical fitness.