7.1: Prelude to Energy Balance and Body Weight

As you probably already know, the number of people who struggle with being overweight and/or obese is rising rapidly in the United States of America and in many other countries around the world. There is a new term being used to try to understand this rapid rise in obesity. The new term is "obesogenic" environments. The Centers for Disease Control and Prevention (CDC) defines an obesogenic environment as "an environment that promotes increased food intake of non-healthful foods, and physical inactivity." The CDC reports that in 2009 in the United States, 33 percent of adults and 16 percent of children were obese, a doubling and tripling of the numbers since 1980, respectively, while in Canada the obesity rate was 24.1 percent for 2007–2009. The health consequences of too much body fat are numerous, including: increased risks for cardiovascular disease, Type 2 diabetes, and some cancers. The medical costs related to obesity are well over one hundred billion dollars and on the individual level, people who are obese spend $1,429 more per year for medical care than people of healthy weight. No one WANTS to become obese, so what are the factors causing rates of obesity to rise so rapidly? What can we do about these factors?
Numerous obesogenic agents contribute to the immense public health problem that has become a part of everyday life in American society. Most agree that the **fast food** industry is playing a role. Fast food has been growing for decades and continues to grow, even when the economy struggles. In America today there are over twelve thousand McDonald’s restaurants, while in 1960 there was one. Another factor is that **food portions have been getting bigger** since the 1960s, and in the 1990s North American society experienced the “super-size” marketing boom, which is still very popular. **Another factor is physical inactivity is getting worse**. Between 1960 and 2000 more than 123 million vehicles were added to the American society. Escalators, elevators, and horizontal walkways now dominate shopping malls and office buildings, factory work has become increasingly mechanized and automated, the typical American watches more than four hours of television daily, and in many work places the only tools required to conduct work are a chair and a computer. **The list of all the societal obesogenic factors goes on and on.** They are the result of modernization, industrialization, and urbanization continuing on without individuals, public health officials, or government adequately addressing the concurrent rise in overweight and obesity.

With obesity at epidemic proportions in America it is critical we make changes that will help to remedy this growing problem. The good news is we can make a difference! Policies are being implemented and reinforced at all levels of society including: education, agriculture, industry, urban planning, health care, and government. Reversing and stopping obesity are two different things. The former will require much more societal change and change on the individual level than the latter. The following are some ideas that are being demonstrated to work for constructing an environment in America that promotes health and confronts the obesity epidemic:
• **Individual Level: What you can do NOW**
  ◦ Purchase less prepared foods and eat more whole foods.
  ◦ Decrease portion sizes when eating or serving food.
  ◦ Eat out less, and when you do eat out choose low-calorie options.
  ◦ Walk or bike to work. If this is not feasible, walk while you are at work.
  ◦ Take the stairs when you come upon them or better yet, seek them out.
  ◦ Walk your neighborhood and know your surroundings. This benefits both health and safety.
  ◦ Watch less television.

• **Community Level: What you and your friends, family and co-workers can do together!**
  ◦ Request that your college/workplace provides more access to healthy low-cost foods.
  ◦ Support changes in school lunch programs—this is happening now but needs vocal parents to continue!
  ◦ Participate in cleaning up local green spaces and then enjoy them during your leisure time, get outside!
  ◦ Patronize local farms and fruit-and-vegetable stands.
  ◦ Talk to your grocer and ask for better whole-food choices and seafood at a decent price.
  ◦ Ask your favorite restaurant to serve more nutritious food and to accurately display calories of menu items.

• **National Level: What we can do as a country!**
  ◦ Support policies that increase the walk-ability of cities.
  ◦ Support national campaigns addressing obesity, such as America on the Move.
  ◦ Support policies that support local farmers and the increased access and affordability of healthy food.

**Interactive**

Watch this video about "Shape up Sommerville" in which a city in Massachusetts was able to make some amazing changes to the health and wellness of its citizens!
**Video**: An interview, with Mayor Joseph Curtatone, about a groundbreaking community health and wellness program in Somerville, MA

You Decide

How can you assist in the American transition from an obesogenic environment to a healthier environment at the individual, community, and national levels?

In this chapter you will learn how to assess body weight and fatness. You will also learn that it is not only society and environment that play a role in body weight and fatness, but also physiology, genetics, and behavior—and that all of them interact. We will also discuss the health risks of being underweight and overweight, learn evidence-based solutions to maintain body weight at the individual level, and assess the current state of affairs of combating the obesity epidemic in the United States.