

LIFESTYLE RISKS

KEY HEALTH RISKS: OBESITY, HEART DISEASE AND DIABETES

Introduction

According to a recent Rand report, "Americans are getting fatter. One in five Americans is obese; three in five are either overweight or obese. The obesity rate has accelerated dramatically in the past 20 years, in conjunction with a national trend toward sedentary lifestyles." In fact, the two RAND researchers responsible for this report, health economist Roland Sturm and psychiatrist Kenneth Wells, examined the comparative effects of obesity, smoking, heavy drinking, and poverty on chronic health conditions and health expenditures. Their finding: Obesity is the most serious problem. It is linked to a big increase in chronic health conditions and significantly higher health expenditures. And it affects more people than smoking, heavy drinking, or poverty.

How serious are the problems of obesity and sedentary lifestyles?

According to the Rand report, "when compared with normal-weight individuals of the same age and sex having similar social demographics, obese people suffer from an increase in chronic conditions of approximately 67 percent. In contrast, the increase for normal-weight daily smokers is only 25 percent; and for normal-weight heavy drinkers, only 12 percent."

OVERWEIGHT

Overweight refers to increased body weight in relation to height, when compared to some standard of acceptable or desirable weight (NRC p.114; Stunkard p.14). **NOTE:** Overweight may or may not be due to increases in body fat. It may also be due to an increase in lean muscle. For example, professional athletes may be very lean and muscular, with very little body fat, yet they may weigh more than others of the same height. While they may qualify as "overweight" due to their large muscle mass, they are not necessarily "over fat," regardless of BMI.

Desirable weight standards are derived in a number of ways:

- By using a mathematical formula known as Body Mass Index (BMI), which represents weight levels associated with the lowest overall risk to health. Desirable BMI levels may vary with age.
- By using actual heights and weights measured and collected on people who are representative of the U.S. population by the National Center for Health Statistics. Other desirable weight tables have been created by the Metropolitan Life Insurance Company, based on their client populations.

These sources are consistent with the U.S. Dietary Guidelines and with the National Heart, Lung, and Blood Institute's [Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults](#).

OBESITY

The recent unexpected increases in obesity in the United States are widely agreed to be the result of changes in life style and environmental conditions. The available data from diverse sources on environmental factors and obesity. Coverage includes descriptive data on temporal trends in the environment, cross-sectional and longitudinal studies of the association between environmental exposures and body weight, and experimental trials that have related environmental factors thought to be potentially important in influencing energy intake and expenditure and body weight.

Over the period covered by the "obesity epidemic," a variety of environmental factors have changed dramatically. Some would seem to favor increased body weight (e.g., increased availability of convenience foods and increased use of automobiles and televised entertainment), and others would seem to favor decreased body weight (e.g., a lower-fat food supply and the increased availability of some forms of physical activity).

Definitive conclusions about the relative contributions of energy intake and expenditure to increasing body weight or about the contribution of specific environmental exposures to increasing body weight are far from clear. Increased sophistication in methods for making valid inferences from existing environmental data would be helpful. Even more important, given the urgency of the problem, is experimental research on the question of what environmental changes would be necessary to reverse the obesity epidemic.

HEART DISEASE

For the majority of the adult population, reduction of heart disease remains a public health priority. The major risk factors include smoking, obesity particularly in men and post-menopausal women, a high intake of saturated fats and lack of physical activity. It is well recognized that blood cholesterol is linked with heart disease and a reduction in saturated fat in particular will help lower cholesterol.

An increase in carbohydrate intake should be from a variety of foods as some cereals; fruit and vegetables all contain protective substances known as antioxidants. Including some sugar in the diet may help to make this type of diet easier to achieve. In addition, research on women has found that those who managed to eat a diet lower in saturated fat had higher intakes of sugar. A consensus statement on nutrition and heart health by organizations in Ireland concerned with public health in 1996, stated that a "mix of starchy foods and some sugar may help make a low fat diet more palatable and sustainable".

Diabetes

There are two types of diabetes:

- Type I or insulin-dependent and
- Type II or non-insulin dependent diabetes.

The latter usually occurs later in life although it is increasingly seen in younger people. The causes of Type II diabetes are better understood than Type I. It has been well established that the most important lifestyle factors which can lead to Type II diabetes are obesity and lack of physical activity and that sugar consumption is not directly involved in its' development.

Dietary management of both forms of diabetes has changed radically over the last 30 years, so that recommendations are now very similar to those for people without diabetes, i.e. a relatively low-fat, high carbohydrate diet. This type of diet remains important for the prevention of cardiovascular disease, which is even more common amongst people with diabetes than the rest of the population. However, for many people with Type II diabetes, it may be beneficial to replace some carbohydrate with mono-unsaturated fats from for example, olive oil. The benefits of physical activity have also been demonstrated in both the prevention and the treatment of diabetes.

GLYCEMIC INDEX (GI)

The glycemic index ranks foods on how they affect our blood glucose levels. This index measures how much your blood glucose increases in the two or three hours after eating. The glycemic index is about foods high in carbohydrates. Foods high in fat or protein don't cause your blood glucose level to rise much.

The glycemic index is about the quality of the carbohydrates, not the quantity. A lot of people still think that it is plain table sugar that people with diabetes need to avoid. The experts used to say that, but the glycemic index shows that complex carbohydrates, like baked potatoes, can be even worse.

When you make use of the glycemic index to prepare healthy meals, it helps to keep your blood glucose levels under control. This is especially important for people with diabetes, although athletes and people who are overweight also stand to benefit from knowing about this concept in good nutrition.

Recent studies of large numbers of people, especially those with diabetes, shows that those who keep their blood glucose under control are at less risk for heart disease. The recommendations to exercise and eat more fiber and less saturated and trans fats is excellent advice—as far as it goes. The real problem is carbohydrates.

Not all carbohydrates act the same. Some are quickly broken down in the intestine, causing the blood glucose level to rise rapidly. These carbohydrates have a high glycemic index. [Click here to go to the GI chart.](#)

BODY MASS INDEX (BMI)

BMI is a common measure expressing the relationship (or ratio) of weight-to-height. It is a mathematical formula in which a person's body weight in kilograms is divided by the square of his or her height in meters. Example: $wt/(ht)^2$. The BMI is more highly correlated with body fat than any other indicator of height and weight.

Individuals with a BMI of 25 to 29.9 are considered **overweight**, while individuals with a BMI of 30 or more are considered **obese**. [Click here to go to the BMI chart.](#)

HEIGHT WEIGHT CHARTS

Weight Chart for Women

Weight in pounds, based on ages 25-59 with the lowest mortality rate
(indoor clothing weighing 3 pounds and shoes with 1" heels)

Height	Small Frame	Medium Frame	Large Frame
4'10"	102-111	109-121	118-131
4'11"	103-113	111-123	120-134
5'0"	104-115	113-126	122-137
5'1"	106-118	115-129	125-140
5'2"	108-121	118-132	128-143
5'3"	111-124	121-135	131-147
5'4"	114-127	124-138	134-151
5'5"	117-130	127-141	137-155
5'6"	120-133	130-144	140-159
5'7"	123-136	133-147	143-163
5'8"	126-139	136-150	146-167
5'9"	129-142	139-153	149-170
5'10"	132-145	142-156	152-173
5'11"	135-148	145-159	155-176
6'0"	138-151	148-162	158-179

Weight Chart for Men

Weight in pounds, based on ages 25-59 with the lowest mortality rate
(indoor clothing weighing 5 pounds and shoes with 1" heels)

Height	Small Frame	Medium Frame	Large Frame
5'2"	128-134	131-141	138-150
5'3"	130-136	133-143	140-153
5'4"	132-138	135-145	142-156
5'5"	134-140	137-148	144-160
5'6"	136-142	139-151	146-164
5'7"	138-145	142-154	149-168
5'8"	140-148	145-157	152-172
5'9"	142-151	148-160	155-176
5'10"	144-154	151-163	158-180
5'11"	146-157	154-166	161-184
6'0"	149-160	157-170	164-188
6'1"	152-164	160-174	168-192
6'2"	155-168	164-178	172-197
6'3"	158-172	167-182	176-202
6'4"	162-176	171-187	181-207

*Ideal Weights according to the Metropolitan Life Insurance Company tables