

OBESITY

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Introduction

Obesity is a medical condition characterized by storage of excess body fat. It is a condition in which excess body fat adversely affects health and increases the risk of other diseases.

Causes of Obesity

A calorie is the unit used to measure the energy value of food and the energy used by the body to maintain normal functions.

- Calories from food intake = Calories of energy the body uses. This makes the body weight to remain constant.
- Calories intake > Calories the body needs = Body stores those additional calories as fat, causing subsequent weight gain. This simply means that any Calories intake greater than what the body needs is stored as fat in the body

Obesity is caused by several factors including the following:

- a. Energy intake exceeding energy expenditure over a long period.
- b. *High fat diet/fat-rich fast meals*: Pre-packaged foods, soft drinks, and fast-food restaurants have become more accessible. While such food choices offer convenience, they also tend to be high in fat, sugar, and calories.
- c. *Sedentary lifestyle*: Changing lifestyles including increased calorie consumption and reduced physical activity have played a key role in the prevalence of obesity seen today.
- d. *Biological factor*: Some people have increased basal metabolic rate than others.
- e. *Genetics*: Obesity is partially determined by a person's genetic makeup. One is likely to be obese if parents are.
- f. *Reduced physical activity*: Both adults and children spend less time devoted to exercise as a result of longer work hours at sedentary jobs.

In addition, many of the labour-saving devices of the modern lifestyle, such as cars, elevators, personal computers and remote control devices promote a sedentary lifestyle. This lack of physical activity has reduced the overall amount of energy expended in the course of a day, contributing to the development of obesity.

HEALTH MASTERS

However, fat is critical for good health because it is a source of energy when the body lacks the energy necessary to sustain life processes, and it provides insulation and protection for internal organs. This notwithstanding, the accumulation of too much fat in the body is associated with a variety of health problems.

Measuring Obesity

The body mass index (BMI) is commonly used to determine desirable body weights.

$$\text{BMI} = \text{Weight (kg)} / \text{Height (m}^2\text{)}$$

People with a BMI of 25.0 to 29.9 are considered overweight and people with a BMI of 30 or above are considered obese. Generally, the higher the BMI, the greater the risk of developing serious medical conditions.

Complications of obesity

Obesity increases the risk of developing disease.

- a. *Heart diseases* are linked to excess body fat.
- b. Obese people are more than twice likely to develop *hypertension*.
Generally, the waist measurement for
Men= 40cm and Women= 35cm
- c. Obese women are at nearly twice the risk for developing *breast cancer*, and all obese people have a 42% higher chance of developing *colorectal cancer*.
- d. Almost 80% of patients with *Type 2 diabetes mellitus*, also known as noninsulin-dependent diabetes mellitus, are obese.
- e. Obese people experience *social* and *psychological* problems.

Treatment/Management of Obesity

Obesity can be prevented or managed with a combination of diet, exercise, behaviour modification, and in severe cases, weight-loss medications and surgery.

a. Diet

The most common and conservative treatment for obesity utilizes a nutritionally balanced, low calorie diet. It is recommended to take foods consisting of 1,200 to 1,500 calories per day, usually in the following proportions: 60 percent carbohydrate, 30 percent fat, and 10 percent protein.

b. Exercise

Caloric restriction alone will not produce long-term weight loss. Regular exercise is the single best predictor for achieving long-term weight control. Regular exercise will also improve some of the medical conditions associated with obesity, including elevated blood cholesterol, hypertension, and diabetes mellitus.

c. Behaviour modification

Many eating and exercise habits combine to promote weight gain. Certain times, places, activities, and emotions may be linked to periods of overeating or inactivity.

d. Weight-loss medication

Weight-loss medications of any type are only appropriate for people with a BMI of 30 or above, or a BMI of 27 or above accompanied by weight-related medical conditions such as diabetes mellitus or hypertension e.g. Dexfenfluramine.

e. Surgery

Surgery may be a weight-loss option for patients who are severely obese (with a BMI of 40 or above) and suffer from serious medical complications due to weight. There are two accepted surgical procedures for reducing body weight: gastroplasty and gastric bypass.

New Directions in weight control

The weight-loss goal of most obese dieters is to achieve an ideal weight. These new weight-loss goals may be difficult for obese people to accept.

It is recommend keeping a food diary that records all food or drink consumed, when and the mood or precipitating events that trigger eating. After one to two weeks, the diary may reveal a pattern of activities or negative emotions that lead to overeating. Once these eating cues are identified, techniques can be developed and practiced to prevent unwanted eating habits.

Reference

Foster, Gary D. (2009) Obesity

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