

Know Obesity

Obesity is a biological, preventable and treatable disease. Obesity is not a condition, a character flaw, a consequence of poor will power, or anyone's fault. Contributing factors to obesity include heredity and one's environment. Obesity is defined as a body mass index (BMI) of 30 or more. The BMI is a ratio of weight to height that is not affected by age, gender, or race.

As a disease, obesity is at the core of many other chronic illnesses – type 2 diabetes, diseases of the heart and cardiovascular system, some types of cancer, depression, arthritis, disordered breathing, deconditioning and gastrointestinal disorders.

Obesity Symptoms

The greatest sign or symptom of obesity is a person's body mass index (BMI). A lean person has a BMI of 18.5 or less. At a BMI of 25, a person is considered to be overweight. The higher the BMI, the higher the health risk. Obesity is further defined as follows:

Class 1 obesity: BMI 30-34.9 kg/m² Class 2 obesity: BMI 35-39.9 kg/m² Class 3 obesity: BMI ≥ 40 kg/m² Class 3 obesity is further broken down into: Class 4 obesity (super-obesity): BMI 50-59.9 kg/m², and Class 5 (super-super-obesity): BMI > 60 kg/m²

Conditions

There are a number of medical conditions that can be associated with obesity. Refer to the list below.

Cancer

A disease characterized by a population of cells that grow and divide without respect to normal limits, invade and destroy adjacent tissues, and may spread to distant anatomic sites through a process called metastasis.

Breast Cancer Cancer of the glandular breast tissue.

Cervical Cancer Malignant cancer of the cervix.

Colon Cancer Colorectal cancer, also called colon cancer or bowel cancer, includes cancerous growths in the colon, rectum and appendix.

Esophageal Cancer Malignancy of the esophagus.

Pancreatic Cancer Malignant tumor within the pancreatic gland.

Prostate Cancer A disease in which cancer develops in the prostate, a gland in the male reproductive system. It occurs when cells of the prostate mutate and begin to multiply out of control.

Renal cell carcinoma Renal cell carcinoma, also known as a gurnistical tumor, is the most common form of kidney cancer arising from the renal tubule.

Uterine Cancer Uterine cancer may refer to one of several different types of cancer which occur in the uterus. These include endometrial cancers, cervical cancer, and sarcomas of the myometrium, or muscular layer of the uterus.

Cataracts A cataract is an opacity that develops in the crystalline lens of the eye or in its envelope. Early on in the development of age-related cataract the power of the crystalline lens may be increased, causing near-sightedness (myopia), and the gradual yellowing and opacification of the lens may reduce the perception of blue colors. Cataracts typically progress slowly to cause vision loss and are potentially blinding if untreated.

Coronary heart disease Coronary heart disease (CHD), also called CAD, ischaemic heart disease, or atherosclerotic heart disease, is the end result of the accumulation of atheromatous plaques within the walls of the arteries that supply the myocardium (the muscle of the heart) with oxygen and nutrients. While the symptoms and signs of coronary heart disease are noted in the advanced state of disease, most individuals with coronary heart disease show no evidence of disease for decades as the disease progresses before the first onset of symptoms, often a "sudden" heart attack, finally arise.

Edema Edema (American English), oedema or œdema (British English), formerly known as dropsy or hydropsy, is the increase of interstitial fluid in any organ — swelling. Generally, the amount of interstitial fluid is in the balance of homeostasis. Increased secretion of fluid into the interstitium or impaired removal of this fluid may cause edema.

GERD Gastroesophageal Reflux Disease (GERD; or GORD when spelling œsophageal, the BrE form) is defined as chronic symptoms or mucosal damage produced by the abnormal reflux of gastric contents into the esophagus. This is commonly due to transient or permanent changes in the barrier between the esophagus and the stomach. This can be due to incompetence of the lower esophageal sphincter (LES), transient LES relaxation, impaired expulsion of gastric reflux from the esophagus, or a hiatal hernia.

Idiopathic intracranial hypertension Idiopathic intracranial hypertension (IIH), sometimes called benign intracranial hypertension (BIH) or pseudotumor cerebri (PTC), is a neurological disorder that is characterized by increased intracranial pressure (ICP) in the absence of a tumor or other intracranial pathology.

Liver and biliary tree

Cirrhosis Cirrhosis of the liver is a consequence of chronic liver disease characterized by replacement of liver tissue by fibrotic scar tissue as well as regenerative nodules, leading to progressive loss of liver function. Cirrhosis is most commonly caused by alcoholism and hepatitis C, but has many other possible causes.

Cholelithiasis, Cholecystitis Cholecystitis is inflammation of the gall bladder. It is commonly due to impaction (sticking) of a gallstone within the neck of the gall bladder, leading to

thickening of bile, bile stasis, and infection by gut organisms. Cholecystitis may be a cause of right upper quadrant pain. The pain may actually manifest in the right flank or scapular region at first. In severe cases, the gall bladder can rupture and form an abscess or it may lead to a life-threatening infection of the liver called ascending cholangitis. In other cases, it may lead to a stable inflammatory state termed chronic cholecystitis.

Steatohepatitis Steatohepatitis is a type of liver disease, characterized by inflammation of the liver with concurrent fat accumulation in the liver ("steato" meaning fat, "hepatitis" meaning inflammation of the liver). Classically seen in alcoholics, steatohepatitis also is frequently found in people with diabetes and obesity. When not associated with excessive alcohol intake, it's referred to as "non-alcoholic steatohepatitis," or NASH. Steatohepatitis of either etiology may progress to cirrhosis, and NASH is now believed to be a frequent cause of unexplained cirrhosis (at least in Western societies). Recent studies suggest that diet, exercise, and especially antiglycemic drugs may alter the course of the disease.

Steatosis In cellular pathology, steatosis (also called fatty change) is the process describing the abnormal retention of lipids within a cell. It reflects an impairment of the normal processes of synthesis and breakdown of triglyceride fat. Excess lipid accumulates in vesicles that displace the cytoplasm. When the vesicles are large enough to distort the nucleus, the condition is known as macrovesicular steatosis, otherwise the condition is known as microvesicular steatosis. While not particularly detrimental to the cell in mild cases, large accumulations can disrupt cell constituents, and in severe cases the cell may even burst.

Phlebitis An inflammation of a vein, usually in the legs.

Polycystic Ovarian Syndrome Polycystic ovary syndrome (PCOS, also known clinically as Stein-Leventhal syndrome), is an endocrine disorder that affects approximately 1 in 10 women. It occurs amongst all races and nationalities, is the most common hormonal disorder among women of reproductive age, and is a leading cause of infertility. The principal features are lack of regular ovulation and excessive amounts or effects of androgenic (masculinizing) hormones. The symptoms and severity of the syndrome vary greatly between women. While the causes are unknown, insulin resistance,

Psychiatric Disease

Depression Clinical depression or major depressive disorder is a state of intense sadness, melancholia or despair, that has advanced to the point of being disruptive to an individual's social functioning and/or activities of daily living.

Pulmonary Disease Chronic obstructive pulmonary disease (COPD), also known as chronic obstructive airway disease (COAD), is a group of diseases characterized by limitation of airflow in the airway that is not fully reversible. COPD is the umbrella term for chronic bronchitis, emphysema and a range of other disorders. It occurs most often due to tobacco smoking, but can be due to other airborne irritants such as coal dust, asbestos or solvents, as well as preserved meats containing nitrites.

Hypoventilation Syndrome Congenital Central Hypoventilation Syndrome or primary alveolar hypoventilation, is a respiratory disorder that is fatal if untreated. Persons afflicted with Ondine's Curse classically suffer from respiratory arrest during sleep.

Obstructive Sleep Apnea Obstructive sleep apnea (OSA) is not only much more frequent than Central Sleep Apnea, it is a common condition in many parts of the world. Approximately 1 in 5 American adults has at least mild OSA. Since the muscle tone of the body ordinarily relaxes during sleep, and since, at the level of the throat, the human airway is composed of walls of soft tissue which can collapse, it is easy to understand why breathing can be obstructed during sleep - particularly in the obese. Although many individuals experience episodes of obstructive sleep apnea at some point in life, a much smaller percentage of people are afflicted with chronic severe obstructive sleep apnea.

Severe Pancreatitis Pancreatitis is defined as inflammation of the pancreas.

Sexual Dysfunction

Abnormal Menses - Infertility Infertility primarily refers to the biological inability of a man or a woman to contribute to conception. Infertility may also refer to the state of a woman who is unable to carry a pregnancy to full term. There are many biological causes of infertility, some which may be bypassed with medical intervention.

Hypogonadism Hypogonadism is a medical term for a defect of the reproductive system which results in lack of function of the gonads (ovaries or testes). The gonads have two functions: to produce hormones (testosterone, estradiol, antimullerian hormone, progesterone, inhibin B, activin) and to produce gametes (eggs or sperm). Deficiency of sex hormones can result in defective primary or secondary sexual development, or withdrawal effects (e.g., premature menopause) in adults. Defective egg or sperm development results in infertility.

Skin Disease

Acanthosis Acanthosis is increased thickness of the prickle cell layer of the skin.

Skin tags Skin tags are small benign tumors that form primarily in areas where the skin forms creases, such as the neck, armpits and groin. They may also occur on the face, usually on the eyelids. They range in size from rice to golf ball size, although larger ones have been seen. Skin tags are harmless, although they are sometimes irritated by clothing or jewelry and can interfere with shaving and other routine grooming. Why and how skin tags form is not entirely known, but there are correlations with age and obesity.

Stroke Stroke (or cerebrovascular accident or CVA) is the clinical designation for a rapidly developing loss of brain function due to an interruption in the blood supply to all or part of the brain. This phenomenon can be caused by thrombosis, embolism, or hemorrhage (haemorrhage).

Urinary Incontinence Urinary incontinence is an unintentional loss of urine control. Those with this condition are not able to hold urine in the bladder due to loss of voluntary control over the urinary sphincters, resulting in the involuntary passage of urine. It is often temporary and almost always results from an underlying medical condition.

Venostasis The trapping of blood in an extremity by compression of veins, a method sometimes employed for reducing the amount of blood being returned to the heart.

Prevention

Healthy eating combined with an active lifestyle is the best way to prevent obesity. This means eating more fresh fruits and vegetables, and whole grains. It also means finding physical activities that you enjoy. Note that “diet” and “exercise” are not needed. Rather, good nutrition and physical activity throughout the day, every day, work best.

The key word for healthy eating is moderation. And it's important to know portion sizes. A convenient way to balance your nutrition properly is to fill half of your plate with fruits and vegetables. In the other two quarters, put a source of protein and a carbohydrate. In addition, try using a salad plate rather than a full-size dinner plate.

Here are some other examples of portion equivalents:

- 3 oz. of lean meat = a deck of cards
- 1 oz. of cheese = 4 stacked dice
- 1 medium apple = a tennis ball
- 1 cup of pasta or rice = a clenched fist
- 1 serving of pie = 1/8 of the pie

Be sure to eat three well-balanced meals every day, with breakfast being the biggest. Skipping meals actually lowers your metabolism because your body thinks you're trying to starve it.

Developing a healthy lifestyle is something you and your family can and should do together. Prepare favorite recipes using more healthful ingredients. Try fruits and vegetables you've never eaten before. Follow some of the physical activities that you and your family enjoy. Ask for more healthy eating ideas the next time you see your endocrinologist or personal physician. Remember, each meal is an opportunity to eat better and each day is an opportunity to be more physically active.

Treatment

Developing a healthier lifestyle will be part of any treatment program for overweight, obesity, and for any long-term complications from the conditions. Success is based on meeting three treatment goals:

- You do not gain any more weight – we are happy.
- You lose 1 percent of your body weight per year – we are happier.
- You lose 5 to 10 percent of your body weight in 6-12 months – we are happiest!

Consider that losing 1 percent of your body weight can reduce your risk of developing complications, such as Type 2 diabetes, by 11 percent.

Improving your lifestyle, focusing on better nutrition and increasing physical activity alone is appropriate if your BMI is 25 to 29 and you have no complications from the excess weight (co-morbidities). Nutrition and increased physical activity should always be a part of your management because they improve cardiovascular conditioning and lower cardiovascular risk.

Medications, in addition to improving lifestyle, are indicated for a BMI of 27 or more, with two or more complications from obesity. Medications are also indicated if your BMI is 30 or more, regardless of whether complications are present or not.

In addition to improving lifestyle and using medications, surgery is indicated for a BMI of 35 or more, with two or more complications from obesity. Surgery is also indicated for a BMI of 40 or more regardless of whether complications are present or not.

The table below is a useful guideline for these interventions.

BMI	18.5-24.9	25-29.9	30-34.9	35-39.9	≥40
Risk of complications	Very low	Mild	Moderate	High	Extreme
Nutrition	X	X	X	X	X
Physical Activity	X	X	X	X	X
Behavioral Management	X	X	X	X	X
Medication		X	X	X	X
Surgery				X	X

What You Need to Know These are some numbers for you to track as you take charge of your health:

- BMI
- Weight
- Minutes spent engaged in physical activity/day
- Daily servings of fruits/vegetables, proteins, and carbohydrates
- Nutritional content of what you eat (read all food labels)
- Step count (get a pedometer, or step counter)