



What is obesity?

Obesity is a serious medical condition associated with having an excess amount of body fat. Obesity can cause complications such as metabolic syndrome, high blood pressure, heart disease, diabetes, high cholesterol, cancers and sleep disorders. ^{1a}

How is obesity caused?

Energy imbalances, some genetic or hormonal conditions, and certain medicines are known to cause overweight or obesity. ^{1b}

1. Energy imbalance

The fundamental cause of obesity is an energy imbalance between calories consumed and calories used. $^{\rm 2a}\,$

Energy is measured in calories. When you take in more calories than you use, this creates an energy imbalance causing your body to store fat. This means your energy IN (food/drinks) does not equal your energy OUT (exercise). ^{1c,d}

2. Medical conditions and medication

Conditions such as hypothyroidism, Cushing's syndrome or tumours can cause obesity, as well as certain medications.^{1g-j}

Do not stop taking the medicine without consulting your doctor first. $^{\rm 1k}$

Risk factors

- Unhealthy lifestyle habits. Lack of physical activity, unhealthy eating patterns, not enough sleep and high amounts of stress.¹¹
- Unhealthy environments. Easy access to unhealthy fast foods, limited access to safe areas to exercise and play.^{1m}
- Age. Risk increases as you get older, however childhood obesity is also a serious problem.¹ⁿ
- *Race and Sex.* Risk differs between race and between males and females.^{10,p}
- *Genetics.* Obesity can run in families genes associated with obesity/weight gain can be passed down in your DNA.^{1q}

Signs and symptoms

The signs of obesity include a high body mass index (BMI) and an unhealthy body fat distribution.^{1r}

BMI calculation:

BMI is a simple calculation that uses both weight and height to determine your weight category (see table below). ^{2f, 3a}

A person with a BMI greater than or equal to 30 is classified as obese. $^{\rm 2g}$

What weight category are you?	Body Mass Index		
	Children (growth charts)	Adults	
Underweight	< 5%	< 18.5	
Healthy weight	5th percentile to less than 85th percentile	18.5 to 24.9	
Overweight	85th percentile to less than 95th percentile	25 to 29.9	
Obese	95th percentile or above 30 or above		

Table: weight categories¹

Managing Obesity

Treatment depends on the cause and how severe the condition is. Treatments include lifestyle changes, such as healthy eating and increased exercise. There are also weight-loss medicines and surgery may be a treatment option.^{1x,4a}

How can overweight and obesity be reduced?

Following a healthy eating plan with fewer calories taken in is usually the first step in trying to treat overweight and obesity. $^{\rm 4b,c}$

Ways to decrease your risk of obesity:

Change to healthy eating patterns ^{1z, 2h}	Increase physical activity ^{1y, 2h}	Get enough sleep ^{1aa}	Decrease stress ^{1bb}
Eat according to your daily calorie needs and not more!	Exercise more	Lack of sleep can affect hormones that control	Stress can affect the brain and trigger the production of cortisol, a hormone that controls our energy balances and
Eat less saturated and trans fats	Reduce screen time	hunger urges	
Avoid food with added sugars			
Increase consumption of fruit, vegetables, legumes, whole grains and nuts.			hunger urges

Government policies such as 'sugar-tax' on sweetened beverages are a way to help people make healthier dietary choices.^{2i,5a}

What is the big deal with soft drinks?

Sugary drinks have no nutritional value. The average 500 ml fizzy drink contains around 10 spoons of sugar!^{5b}

Added sugar may be the unhealthiest ingredient in the modern diet. $^{\mbox{\tiny Ga}}$

Alternatives to sugar

Sugar-free sweeteners, like xylitol, look and taste like sugar but have fewer calories and don't raise blood sugar levels.^{6b}

• Xylitol has a similar sweetness to sugar but contains 40 % fewer calories!^{6c}

Xylitol is an example of a '**sugar-alcoho**l'. A sugar alcohols chemical structure allows for stimulation of the taste receptors on the tongue which results in a sweet taste. Xylitol is an example of a naturally occurring sugar alcohol found in many fruits and vegetables. It is a common ingredient in sugarfree chewing gums, diabetes-friendly foods and is a weight-loss friendly sweetener.^{6d}

Surgery

Some people who have obesity are unable to lose enough weight to improve their health or are unable to keep from regaining weight. In such cases, a doctor may consider adding other treatments, including weight-loss medicines, weight-loss devices, or bariatric surgery.^{4a}

Please note: This is an informational leaflet only and should not be used for diagnosis. For more information on Obesity, consult your healthcare professional.

References: 1. National Institutes for Health (NIH). Overweight and Obesity. Available at: https://www.nhlbi.nih.gov/health-topics/overweight-and-obesity Last accessed September 2020. 2. World Health Organisation (WHO). Obesity and overweight. Key Facts [April 1, 2020]. Available at: https://www.who.int/en/news-room/factsheets/detail/obesity-and-overweight Last accessed September 2020. 3. Herbst MC. Fact Sheet on Obesity and Cancer. Cancer Association of South Africa (CANSA) January 2019]. 4. National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). National Institutes for Health (NIH). Treatment for Overweight & Obesity [February 2018]. Available at: https://www.niddk.nih.gov/health-information/weightmanagement/adult-overweight-obesity/treatment Last accessed September 2020. 5. National Department of Health. World Obesity Day 2016. Available at: https:// www.gov.za/sites/default/files/gcis_document/201608/policy-paper-and-proposaltaxation-sugar-sweetened-beverages.pdf 6. Gunnars K. Xylito: Everything You Need to Know. Healthline. (October 4, 2018). Available at: https://www.healthline.com/ nutrition/xylitol-101#low-glycemic-index Last accessed September 2020.

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