Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. People are generally considered obese when their body mass index (BMI), a measurement obtained by dividing a person's weight by the square of the person's height, is over 30 kg/m², with the range 25–30 kg/m² defined as overweight. Some East Asian countries use lower values. Obesity increases the likelihood of various diseases and conditions, particularly cardiovascular diseases, type 2 diabetes, obstructive sleep apnea, certain types of cancer, osteoarthritis and depression.
HOW IS OBESITY CAUSED
• Obesity is generally caused by eating too much and moving too little.
• If you consume high amounts of energy, particularly fat and sugars, but don't burn off the energy through exercise and physical activity, much of the surplus energy will be stored by the body as fat.
OBESITY IN ADOLESCENTS

Worldwide, obesity trends are causing serious public health concern and in many countries threatening the viability of basic health care delivery. It is an independent risk factor for cardiovascular diseases and significantly increases the risk of morbidity and mortality. The last two decades have witnessed an increase in health care costs due to obesity and related issues among children and adolescents. Childhood obesity is a global phenomenon affecting all socio-economic groups, irrespective of age, sex or ethnicity. Aetiopathogenesis of childhood obesity is multi-factorial and includes genetic, neuroendocrine, metabolic, psychological, environmental and socio-cultural factors. Many co-morbid conditions like metabolic, cardiovascular, psychological, orthopaedic, neurological, hepatic, pulmonary and renal disorders are seen in association with childhood obesity.
Fatty Layer: Percentage of Men Who Are Overweight

- Brazil: 53%
- Russia: 54%
- South Africa: 39%
- China: 28%
- Philippines: 23%
- Indonesia: 21%
- India: 20%

Made with Chartbuilder
Data: IHME

Only 29% of US adults have a healthy bodyweight.
The energy value of food is measured in units called calories. The average physically active man needs about 2,500 calories a day to maintain a healthy weight, and the average physically active woman needs about 2,000 calories a day.

This amount of calories may sound high, but it can be easy to reach if you eat certain types of food. For example, eating a large takeaway hamburger, fries and a milkshake can total 1,500 calories – and that's just one meal.

Another problem is that many people aren't physically active, so lots of the calories they consume end up being stored in their body as fat.
POOR DIET

- Obesity doesn't happen overnight. It develops gradually over time, as a result of poor diet and lifestyle choices, such as:
  - eating large amounts of processed or fast food – that's high in fat and sugar
  - drinking too much alcohol – alcohol contains a lot of calories, and people who drink heavily are often overweight
  - eating out a lot – you may be tempted to also have a starter or dessert in a restaurant, and the food can be higher in fat and sugar
  - eating larger portions than you need – you may be encouraged to eat too much if your friends or relatives are also eating large portions
  - drinking too many sugary drinks – including soft drinks and fruit juice
  - comfort eating – if you have low self-esteem or feel depressed, you may eat to make yourself feel better

- Unhealthy eating habits tend to run in families. You may learn bad eating habits from your parents when you're young and continue them into adulthood.
Lack of physical activity

- You may need to do more exercise than this. It may help to start off slowly and gradually increase the amount of exercise you do each week.
- Read more about the physical activity. Lack of physical activity is another important factor related to obesity. Many people have jobs that involve sitting at a desk for most of the day. They also rely on their cars, rather than walking or cycling.
- For relaxation, many people tend to watch TV, browse the internet or play computer games, and rarely take regular exercise.
- If you're not active enough, you don't use the energy provided by the food you eat, and the extra energy you consume is stored by the body as fat.
- The Department of Health recommends that adults do at least 150 minutes (two-and-a-half hours) of moderate-intensity aerobic activity, such as cycling or fast walking, every week. This doesn't need to be done all in one go, but can be broken down into smaller periods. For example, you could exercise for 30 minutes a day for five days a week.
• Some people claim there's no point trying to lose weight because "it runs in my family" or "it's in my genes".

• While there are some rare genetic conditions that can cause obesity, such as Prader-Willi syndrome, there's no reason why most people can't lose weight.

• It may be true that certain genetic traits inherited from your parents – such as having a large appetite – may make losing weight more difficult, but it certainly doesn't make it impossible.

• In many cases, obesity is more to do with environmental factors, such as poor eating habits learned during childhood.
In some cases, underlying medical conditions may contribute to weight gain. These include:

- an underactive thyroid gland (hypothyroidism) – where your thyroid gland doesn't produce enough hormones
- Cushing's syndrome – a rare disorder that causes the over-production of steroid hormones
- However, if conditions such as these are properly diagnosed and treated, they should pose less of a barrier to weight loss.
- Certain medicines, including some corticosteroids, medications for epilepsy and diabetes, and some medications used to treat mental illness – including antidepressants and medicines for schizophrenia – can contribute to weight gain.
- Weight gain can sometimes be a side effect of stopping smoking.
DIAGNOSIS
BODY MASS INDEX

• Body mass index (BMI) is widely used as a simple and reliable way of finding out whether a person is a healthy weight for their height.

• For most adults, having a BMI of 18.5 to 24.9 means you're considered to be a healthy weight. A person with a BMI of 25 to 29.9 is considered to be overweight, and someone with a BMI over 30 is considered to be obese.

• While BMI is a useful measurement for most people, it's not accurate for everyone.

• For example, the normal BMI scores may not be accurate if you're very muscular because muscle can add extra pounds, resulting in a high BMI when you're not an unhealthy weight. In such cases, your waist circumference may be a better guide (see below).

• What's considered a healthy BMI is also influenced by your ethnic background. The scores mentioned above generally apply to people with a white Caucasian background. If you have an ethnic minority background, the threshold for being considered overweight or obese may be lower.

• BMI shouldn’t be used to work out whether a child is a healthy weight, because their bodies are still developing. Speak to your GP if you want to find out whether your child is overweight.
VISITING YOUR GP

• If you're overweight or obese, visit your GP for advice about losing weight safely and to find out whether you have an increased risk of health problems.

• Your GP may ask about:
  • your lifestyle – particularly your diet and how much physical activity you do; they'll also ask you whether you smoke and how much alcohol you drink
  • any possible underlying causes for your obesity – for example, if you're taking medication or have a medical condition that may contribute to weight gain
  • how you feel about being overweight – for example, if it makes you feel depressed
  • how motivated you are to lose weight
  • your family history – as obesity and other health conditions, such as diabetes, are often more common in families
As well as calculating your BMI, your GP may also carry out tests to determine whether you're at increased risk of developing health complications because of your weight.

These could include measuring your:

- blood pressure
- glucose (sugar) and cholesterol levels in a blood sample
- waist circumference (the distance around your waist)

- People with very large waists – generally, 94cm (37in) or more in men and 80cm (about 31.5in) or more in women – are more likely to develop obesity-related health problems.

- Your GP may also take your ethnicity into account because it can affect your risk of developing certain conditions. For example, some people of Asian, African or Afro-Caribbean ethnicity may be at increased risk of high blood pressure (hypertension). Healthy waist measurements can also be different for people from different ethnic backgrounds.

- After your assessment, you'll be offered an appointment to discuss the results in more detail, ask any questions that you have, and fully explore the treatment options available to you.
TREATMENT

The treatment of overweight and obesity in children and adolescents requires a multidisciplinary, multi-phase approach, which includes dietary management, physical activity enhancement, restriction of sedentary behaviour, pharmacotherapy and bariatric surgery. A holistic approach to tackle the childhood obesity epidemic needs a collection of activities including influencing policy makers and legislation, mobilizing communities, restructuring organizational practices, establishing coalitions and networks, empowering providers, imparting community education as well as enriching and reinforcing individual awareness and skills. The implications of this global phenomenon on future generations will be serious unless appropriate action is taken.
DIET

• There's no single rule that applies to everyone, but to lose weight at a safe and sustainable rate of 0.5 to 1kg (1lb to 2lbs) a week, most people are advised to reduce their energy intake by 600 calories a day.

• For most men, this will mean consuming no more than 1,900 calories a day, and for most women, no more than 1,400 calories a day.

• The best way to achieve this is to swap unhealthy and high-energy food choices – such as fast food, processed food and sugary drinks (including alcohol) – for healthier choices.

• A healthy diet should consist of:
  • plenty of fruit and vegetables
  • plenty of potatoes, bread, rice, pasta and other starchy foods (ideally you should choose wholegrain varieties)
  • some milk and dairy foods
  • some meat, fish, eggs, beans and other non-dairy sources of protein
  • just small amounts of food and drinks that are high in fat and sugar

• Try to avoid foods containing high levels of salt because they can raise your blood pressure, which can be dangerous for people who are already obese.
Diet Chart for Obesity & Weight Management
DIET PROGRAMMES AND FAD DIETS

- Avoid fad diets that recommend unsafe practices, such as fasting (going without food for long periods of time) or cutting out entire food groups. These types of diets don’t work, can make you feel ill, and aren't sustainable because they don’t teach you long-term healthy eating habits.
- This isn’t to say that all commercial diet programmes are unsafe. Many are based on sound medical and scientific principles and can work well for some people.
- A responsible diet programme should:
  - educate you about issues such as portion size, making behavioural changes and healthy eating
  - not be overly restrictive in terms of the type of foods you can eat
  - be based on achieving gradual, sustainable weight loss rather than short-term rapid weight loss, which is unlikely to last
  - Read about the pros and cons of different diets.

VERY LOW CALORIE DIETS

- A very low calorie diet (VLCD) is where you consume less than 800 calories a day.
- These diets can lead to rapid weight loss, but they aren't a suitable or safe method for everyone, and they aren't routinely recommended for managing obesity.
- VLCDs are usually only recommended if you have an obesity-related complication that would benefit from rapid weight loss.
- VLCDs shouldn't usually be followed for longer than 12 weeks at a time, and they should only be used under the supervision of a suitably qualified healthcare professional.
Reducing the amount of calories in your diet will help you lose weight, but maintaining a healthy weight requires physical activity to burn energy.

Performing any kind of physical activity also has wider health benefits. For example, it can help prevent and manage more than 20 conditions, such as reducing the risk of type 2 diabetes by 40%.

The Chief Medical Officers recommend that adults should do at least 150 minutes (two-and-a-half hours) of at least moderate-intensity activity a week – for example, five 30-minute bouts a week. Something is better than nothing, and doing just 10 minutes of exercise at a time is beneficial.

Moderate-intensity activity is any activity that increases your heart and breathing rate, such as:

- brisk walking
- dancing
- cycling
- recreational swimming
• Alternatively, you could do 75 minutes (one hour, fifteen minutes) of vigorous-intensity activity a week, or a combination of moderate and vigorous activity.

• During vigorous activity, breathing is very hard, your heart beats rapidly and you may be unable to hold a conversation. Examples include:
  • running
  • most competitive sports
  • circuit training

• You should also do strength exercises and balance training two days a week. This could be in the form of a gym workout, carrying shopping bags, or doing an activity such as tai chi. It's also critical that you break up sitting (sedentary) time by getting up and moving around.
THE
END