

Malnutrition

Introduction

Malnutrition is a serious condition that occurs when a person's diet does not contain the right amount of nutrients.

It means "poor nutrition" and can refer to:

undernutrition – when you don't get enough nutrients

overnutrition – when you get more nutrients than you need

This information focuses on undernutrition. See obesity for more information about the main problems associated with overnutrition.

Who is affected?

Malnutrition is a common health problem. It is estimated there are about 3 million people who are malnourished in the UK at any time and many more at risk of becoming malnourished.

Malnutrition is caused by either an inadequate diet or a problem absorbing nutrients from food. There are many reasons why this might happen, including having reduced mobility, a long-term health condition or a low income.

Read more about the causes of malnutrition.

What are the signs of malnutrition?

The most common symptom of undernutrition is unplanned weight loss (usually losing more than 5-10% of your body weight within three to six months), although other signs can include:

weak muscles

feeling tired all the time

low mood

an increase in illnesses or infections

The main sign of overnutrition is being overweight or obese. However, people with undernutrition can also be overweight if they eat a diet high in energy (calories), but low in other nutrients.

Signs of malnutrition in children can include:

failure to grow at the expected rate

changes in behaviour such as appearing unusually irritable, sluggish or anxious

Your child's weight and physical development should be regularly assessed by your DOCTOR or a health visitor in their first few years of life. Speak to them if you have any concerns about your child's development or health.

[Read more about the symptoms of malnutrition.](#)

When to see your DOCTOR

See your DOCTOR if your body mass index (BMI) is lower than 18.5 or you experience the symptoms listed above.

BMI is a measure of whether you're a healthy weight for your height. You can use the BMI healthy weight calculator to work out your BMI.

If you believe you or someone you care for is at risk of malnutrition you should visit your DOCTOR. They can check for signs of malnourishment and for any conditions that may cause malnutrition.

[Read more about diagnosing malnutrition.](#)

How is malnutrition treated?

Depending on the cause and severity of your malnutrition, treatment may be carried out at home or in hospital.

The main treatment for people diagnosed with malnutrition is dietary changes. If you are undernourished, this may involve increasing the nutritional content of your food, with or without taking nutritional supplements.

If you are unable to eat enough to meet your nutritional needs, there are two main treatment options:

a feeding tube can be used to provide nutrients directly into the digestive system
a drip can be used to provide nutrients and fluids directly into a vein
Read more about treating malnutrition.

Symptoms of malnutrition

The most common symptom of malnutrition is unplanned and unexplained weight loss.

Adults

If you lose 5 -10% of your body weight in the course of three to six months and are not dieting, it could be a sign that you are at risk of being malnourished.

Sometimes weight loss is not obvious, as it occurs slowly over time. You may notice that your clothes, belts and jewellery gradually feel looser.

Other signs of malnutrition may include:

feeling tired all the time and lacking energy

taking a long time to recover from infections

delayed wound healing

irritability

poor concentration

finding it hard to keep warm

persistent diarrhoea

depression

A useful method of assessing whether you are malnourished is to measure your body mass index (BMI). This is a measurement that can determine if you are a healthy weight for your height.

For most adults a healthy BMI is between 18.5 and 24.9. Having a BMI under 18.5 could suggest you are at a high risk of being malnourished, although you may also be considered at risk if you have a BMI between 18.5 and 20.

You can check your BMI using the BMI healthy weight calculator.

However, it is important to note that BMI and weight loss are not the only indicators of malnutrition. A person can be overweight or obese and still be malnourished. This can be the result of dietary consumption of foods and drinks which are high in fat and sugar but low in vitamins and minerals.

When to see your DOCTOR

See your DOCTOR if your BMI is lower than 18.5, you have lost more than 5-10% of your body weight over the last three to six months, or you experience the symptoms listed above.

Children

Symptoms of malnutrition in children can include:

failure to grow at the expected rate, both in terms of weight and height (known as "failure to thrive")

changes in behaviour such as appearing unusually irritable, sluggish or anxious

changes in hair and skin colour

When to see your DOCTOR

Your child's weight and physical development should be regularly assessed by your DOCTOR or a health visitor in their first few years of life. As part of the National Child Measurement Programme, children in Reception and Year 6 are weighed and measured during the school year.

If you have any concerns about your child's development or health, contact your DOCTOR.

Causes of malnutrition

Malnutrition is caused by a lack of nutrients in your diet.

This is either due to an inadequate diet or problems absorbing nutrients from food. Some reasons why this might occur are listed below.

Medical conditions

Medical conditions that can contribute to malnutrition include:

a condition that causes a lack of appetite, such as cancer, liver disease, persistent pain or nausea

a mental health condition, such as depression or schizophrenia, which may affect your ability to look after yourself

a health condition that requires frequent hospital admissions

a health condition that disrupts your body's ability to digest food or absorb nutrients, such as Crohn's disease or ulcerative colitis

dementia – people with dementia may be unable to communicate their needs when it comes to eating

a health condition that makes swallowing painful or difficult (known as dysphagia)

persistent diarrhoea

persistent vomiting

taking many different types of medication at the same time – there are more than 250 types of medicine known to disrupt the body's ability to absorb and then break down nutrients

your body has an increased demand for energy, for example if it is trying to heal itself after major surgery or a serious injury such as a burn – or if you experience involuntary movements, such as a tremor

an eating disorder, such as anorexia nervosa

Physical factors

Physical factors can contribute to malnutrition. For example:

If your teeth are in a poor condition, or if dentures don't fit properly, eating can be difficult or painful.

You may lose your appetite as a result of losing your sense of smell and taste.

You may have a physical disability or other impairment that makes it difficult for you to cook or shop for food yourself.

Social factors

Social factors that can contribute to malnutrition include:

living alone and being socially isolated

limited knowledge about nutrition or cooking

reduced mobility

alcohol or drug dependency

low income or poverty

Children

The most common causes of malnutrition in children are long-term health conditions that either:

cause lack of appetite

disrupt the normal process of digestion

cause the body to have an increased demand for energy

Examples of these types of conditions include childhood cancers, congenital heart disease, cystic fibrosis and cerebral palsy.

Malnutrition due to inadequate food intake in this country is rare, although it may occur if a child is neglected or living in poverty.

Some children become malnourished because they avoid eating due to issues with their body image.

Diagnosing malnutrition

Several things are taken into account to check if you are malnourished or if you are at a high risk of malnutrition.

In adults, these include:

your body mass index (BMI), which is a measure that can determine if you are a healthy weight for your height

whether you have unintentionally lost weight in recent months

whether an illness means you are unable to feed yourself or absorb nutrients from your diet

You would normally be considered malnourished if you have a BMI of less than 18.5 or you have unintentionally lost more than 5-10% of your body weight during the last three to six months. However, in some cases doctors may be concerned about malnutrition if you have a BMI below 20.

You may be considered at a high risk of malnutrition if:

an illness means you have eaten nothing or almost nothing for the last five days or are likely to eat nothing or almost nothing for at least five days

you do not absorb nutrients from food well, for example you have a condition such as Crohn's disease that is causing inflammation inside your digestive system

there is an underlying reason why your body is likely to use up nutrients at a higher rate or have an increased need for nutrients

you have difficulty eating and drinking

A vitamin or mineral deficiency can normally be diagnosed with a blood test.

Diagnosing malnutrition in children

Diagnosing malnutrition in children involves taking a measurement of their weight and height and then comparing it against what would be the expected average height and weight for a child of that age.

Some children will be below average as they are naturally smaller, but a significant drop below the expected level for an individual could indicate a risk of malnutrition.

Blood tests can also be used to measure levels of protein in the blood. Low levels of protein may suggest that a child is malnourished.

Treating malnutrition

Treatment for malnutrition depends on the underlying cause and how severely malnourished you are.

You may be given advice to use at home, or you may be treated at home under the supervision of a dietitian or other qualified health professional. In some cases, hospital admission is necessary.

Treatment at home

If you are treated under supervision at home, the healthcare professional helping you will discuss with you changes you should make to your diet.

Recommended diet plans will depend on your individual circumstances, but it is likely you will be advised to gradually increase your intake of energy (calories), protein, carbohydrates, fluids, minerals and vitamins.

You may also be advised to take special oral nutritional supplements in addition to these dietary changes. These supplements can increase your energy and protein intake, reducing the risk of complications (such as infections) and hospital admission.

You will be helped to set targets and your progress will be regularly monitored.

Depending on the cause of your malnutrition, you may need additional help. For example, you may benefit from help from a carer if poor mobility makes it difficult for you to shop for food or cook. Read more about getting care at home.

If you have problems swallowing food or drink (dysphagia) you may be referred to a speech and language therapist (SLT) who can assess your swallowing and offer advice about a special diet that can help.

If you cannot eat enough to meet your body's needs, an artificial method of feeding may be required, such as a feeding tube. These are fitted in hospital but can be used at home (see below).

Treatment in hospital

If you are admitted to hospital with malnutrition you may be seen by a number of different health professionals who will be involved in your care. This may include:

a doctor who specialises in treating digestive conditions (a gastroenterologist)

a dietitian

a nurse specialising in nutrition

a social worker

If you don't have any problems swallowing food, you may be treated with dietary changes, with or without nutritional supplements.

If you are unable to swallow food, you may require an artificial feeding method, such as a feeding tube. There are two types of feeding tubes:

a nasogastric tube – a tube passed down your nose and into your stomach

a percutaneous endoscopic gastrostomy (PEG) tube – a tube surgically placed directly into your stomach through your abdomen (tummy)

If a feeding tube is not suitable, nutrition directly into your vein (parenteral nutrition) may be necessary. See treating dysphagia for more information about these treatments.

You may also require additional treatment for the underlying cause of your malnutrition.

The amount of time you will spend in hospital depends on your general state of health and the underlying cause of your malnutrition. It is often possible to return home while receiving treatment.

Treating children

Childhood malnutrition can sometimes be treated by giving your child additional nutrients to increase their intake of energy and protein. This may involve taking special supplements and eating foods high in energy and nutrients.

The underlying cause of their malnutrition may also need to be treated.

Severely malnourished children need to be fed and rehydrated with great care and so cannot be given a normal diet straight away.

Once their condition stabilises, they can gradually be introduced to a normal diet.

Malnutrition due to lack of food is a child protection issue, meaning police and social services need to be informed.

Preventing malnutrition

The best way to ensure you get the correct amount of nutrients is to eat a healthy, balanced diet.

A healthy and balanced diet contains foods from all the major food groups.

The four main food groups are:

fruit and vegetables – at least 5 A DAY

bread, rice, potatoes, pasta, cereals and other starchy foods

milk and dairy foods – such as cheese and yoghurt

meat, fish, eggs, beans, nuts, and other non-dairy sources of protein

Foods and drinks high in fat or sugar are not essential for most people and should only be consumed in small amounts.

See the eatwell plate for more information on what constitutes a balanced diet. You can also read more about food and diet, healthy eating and healthy recipes.

If your malnutrition (or risk of malnutrition) is caused by an underlying health condition you, may have more complex dietary needs or you may require additional items in your diet such as nutritional supplements. Your DOCTOR or the doctor in charge of your care will be able to advise you and refer you to a registered dietitian.