

Obesity and Overweight in Children

If your child is overweight or obese, they have an increased risk of developing various health problems. They are also more likely to become an overweight or obese adult. If overweight and obesity are treated in childhood, some of these health problems may be reversed, or even prevented. Your child is also more likely to grow into an adult with a healthy weight. The main way to treat a child who is overweight or obese is to look at changes that can be made to their lifestyle. Such changes include eating more healthily and doing plenty of physical activity. Changes that involve the whole family are best.

How do you know if your child is overweight or obese?

If your child is overweight or obese, this means that they are carrying excess body fat. If nothing is done about this, the extra weight that they are carrying may cause problems for their health.

Doctors, nurses and other healthcare professionals can look to see whether your child is overweight or obese by calculating their body mass index (BMI). BMI is a measurement of your child's weight in relation to their height. BMI is calculated by dividing your child's weight in kg by their height in metres squared (weight (kg)/ height m²). However, it is important to know that a child's BMI is not interpreted in the same way as an adult's BMI. Instead, their BMI is charted on special growth charts. These charts can show how your child's BMI compares with the normal range for children of a similar age, sex and ethnic background.

Your child's doctor, nurse or other healthcare professional can check your child's BMI against these standardised charts to determine if they are overweight or obese. You can also go to www.mendcentral.org/aboutobesity/bmicalculator for a calculator specifically designed for children. You can see the charts that are used (WHO-UK BMI charts) by following the link in the references section at the end.

What are the health risks for your child of being overweight or obese?

Children who are overweight or obese can develop health problems during childhood because of their weight. Health problems can include type 2 diabetes, high blood pressure, high cholesterol levels, fatty liver disease, gallstones and risk factors for heart disease. These health problems have traditionally been problems just affecting adults, with overweight and obese adults having an increased risk of developing them. But because of the rises in the levels of childhood obesity, these obesity-related health problems are now affecting younger people.

A child who is overweight or obese also has an increased risk of:

- Joint problems, including wear and tear (osteoarthritis) and separation of the ball of the hip joint from the upper end of the thigh bone (slipped capital femoral epiphysis). Obese children are also more likely to develop bow legs and are more likely to have fractures of bones.
- Going through puberty early.
- Breathing problems, including worsening of asthma, difficulties with your child's breathing whilst they are asleep (obstructive sleep apnoea) and feeling out of breath easily when they are exercising.
- Developing iron deficiency and vitamin D deficiency.
- Being overweight or obese as an adult (more than half of children who are obese will grow up to be obese as adults).
- Developing heart problems as an adult.

Being overweight or obese as a child or teenager can also have psychological effects for some. It can lead to low self-esteem and a lack of confidence. A child may be subject to bullying because of their weight. They may become withdrawn and avoid social contact. It may lead to low mood and, in severe cases, depression.

If overweight and obesity are recognised and treated in childhood and the teenage years, some of these health problems may be reversed, or even prevented. The child is also more likely to grow into an adult who has a healthy weight.

How common is overweight and obesity in children?

The most recent figures show that about 1 in 3 children in the UK are overweight or obese.

The rapid rise in obesity seen since the 1970s has been called the obesity epidemic. The increase in obesity seems to be flattening out in the UK, but the UK still has one of the highest rates of childhood obesity in Europe.

What is the cause of being overweight or obese in children?

For anyone (including children), your weight depends on how much energy you take in (the calories in food and drink) and how much energy your body uses (burns) up:

- If the amount of calories that you eat equals the amount of energy that your body uses up, then your weight remains stable.
- If you eat more calories than you burn up, you put on weight. The excess energy is converted into fat and stored in your body.
- If you eat fewer calories than you burn up, you lose weight. Your body has to tap into its fat stores to get the extra energy it needs.

The reasons why energy taken in may not balance energy used up and may lead to weight gain in children, include the following:

How much a child eats and drinks

Many children are overweight or obese simply because they eat and drink more than their body needs. Having too many foods that are sugary or fatty is a common problem. Sugary drinks also are often part of the problem.

Lack of physical activity

A child may be eating the right type and the right amount of food but, if they are not doing enough physical activity, they may put on weight. Long periods without exercise also contribute - for example, spending many hours watching television or playing video games. Having parents who are inactive can also increase a child's risk of being overweight or obese.

Your parents

Being overweight or obese does run in families. It is thought that 5 out of 10 children who have one parent who is obese will become obese themselves. And 8 out of 10 children who have two parents who are obese will also become obese themselves.

This may partly be due to learning bad eating habits from your parents as a child. But, some people actually inherit a tendency in their genes that makes them prone to overeating. It is not fully understood how this genetic factor works. It has something to do with the control of appetite. When you eat, certain hormones and brain chemicals send messages to parts of your brain to say that you have had enough and to stop eating. In some people, this control of appetite and the feeling of fullness (satiety) may be faulty, or not as good as it is in others.

However, if you do inherit a tendency to overeat, it is not inevitable that you will become overweight or obese. You can learn about the power of your appetite, ways to resist it, be strict on what you eat and do some regular physical activity. But you are likely to struggle more than most people where your weight is concerned. You may find it more difficult to stop yourself from gaining weight or to lose weight.

Research has also shown that children who are born to mothers who are overweight, or mothers who develop diabetes during their pregnancy, are more likely to be overweight or obese themselves.

Lack of sleep

Not getting enough sleep has been suggested as another possible risk factor for obesity in children. There seems to be a trend of children going to bed later but, also, too little physical exercise can lead to poor sleep.

Two hormones called leptin and ghrelin may be important here. Leptin is released by fat cells to tell your brain that fat stores are sufficient. Ghrelin is released by your stomach as a signal of hunger. In someone who does not have enough sleep, leptin levels are low and ghrelin levels are high. These changes in hormone levels may encourage a child to eat more.

Medical problems

Rarely, a child has a medical cause for being overweight or obese. For example, there are some rare genetic diseases that can cause overweight and obesity in children. Conditions such as an underactive thyroid gland (hypothyroidism) or other hormone problems may also be a cause. Some medicines can also make children more likely to put on weight. However, in general, a medical cause for being overweight or obese is unusual.

What should I do if I am worried that my child is overweight or obese?

If you are worried that your child may be overweight or obese, you can discuss this with your doctor, practice

nurse or another healthcare professional that you trust. They may be able to suggest ways in which you can help your child, or refer you to other professionals who may be able to help. There may be some specific schemes or services in your local area specially set up to help prevent or manage overweight and obesity in children. For example, there may be a healthy living programme in your area such as a MEND course (see link under References, below). Your child's healthcare professional should be able to advise about this. National Institute for Health and Care Excellence (NICE) guidelines have recommended more lifestyle-based weight management programmes are developed across the country. These services would offer advice and help using multiple strategies.

Children who are seriously overweight may be referred by their doctor to a special clinic at a hospital. Usually, such clinics have a team of doctors, nurses and other healthcare professionals who are experts in dealing with overweight and obesity in children. However, many overweight children do not need to be referred for specialist care.

How much weight should a child lose if they are overweight or obese?

In general, rapid weight loss or strict dieting is not recommended for children who are still growing, unless this has been specifically advised by a specialist. For most children, the aim is usually to keep the weight at the same level rather than weight loss. As they grow and their height increases, the child should either not gain any weight as well or their weight gain should be slower than their height gain. Sometimes, if teenagers have stopped growing, weight loss of around 0.5 kg per week may be appropriate. Your child's healthcare professional will be able to advise what is best for them.

What is the treatment for a child who is overweight or obese?

The main way to treat a child who is overweight or obese is to look at changes that can be made to their lifestyle. Changes that involve the whole family are best. Other family members who are overweight may also benefit at the same time. Remember that as a parent or carer, you act as an important role model for your child and you can help them to stay healthy.

The two main lifestyle changes that are advised are for your child to eat more healthily and do plenty of physical activity. Small, gradual changes may be best. Your child will then be more likely to stick to these changes in the long term.

As a parent or carer, you should try to be involved as much as possible in helping your child make these changes. However, some older teenagers may prefer to take responsibility for themselves. Think about how your child's progress is going to be monitored. Discuss this with their healthcare professional. At every opportunity, give praise and encourage your child in what they are doing.

See separate leaflet called Weight Reduction - How to Lose Weight for more details.

Eating more healthily

Overweight children should be encouraged to eat more healthily and to reduce the total number of calories that they eat. In most cases, as a parent, you will need to take responsibility for making changes to your child's diet, especially if your child is under the age of 12. However, it is important to involve the child as much as possible and to listen to their ideas and preferences when deciding what changes to make to the food that they eat.

Your healthcare professional may ask you to keep a diary of the food that your child eats. They may then have specific recommendations for changes to make. Sometimes a referral to a dietician may be suggested.

Some suggestions that may be helpful include:

- Aim for a balanced and varied diet for the whole family.
- Encourage your child to eat meals at regular times and to watch how often they are eating. They should avoid snacking as much as possible.
- Try to eat meals in a sociable atmosphere as a family, without distractions. For example, do not eat in front of the television.
- If snacks are eaten, they should be healthy snacks (for example, fruit) instead of sweets, chocolates, crisps, nuts, biscuits and cakes.
- Low-calorie drinks are better than sugary drinks (water is best).
- Snacks or food should not be used as a reward.
- Encourage your child to watch the portion sizes of the food that they are eating.
- Make up a third of most of your child's meals with starch-based foods (such as cereals, bread, potatoes, rice, pasta). Wholegrain starch-based foods should be eaten when possible.

- Make sure that your child eats plenty of foods high in fibre. Foods rich in fibre include wholegrain bread, brown rice and pasta, oats, peas, lentils, grain, beans, fruit, vegetables and seeds. Amongst other things, foods high in fibre will help to fill your child up.
- Aim for at least five portions, or ideally 7-9 portions, of a variety of fruit and vegetables per day for your child.
- Children need some fat in their diet but aim to grill, boil or bake rather than fry foods.

Doing plenty of physical activity

It is recommended that all children should do at least 60 minutes of moderate physical activity every day. Some suggest that children who are overweight or obese should even do more than this. This 60 minutes does not have to be done all at once and can be broken up into 10- or 15-minute blocks. Try to find activities that your child enjoys, rather than something they don't want to do. This way they are more likely to continue with it. Also, you should encourage your child to become generally less inactive (sedentary). The amount of time that they spend doing sedentary activities, such as watching television, using a computer, or playing video games, should be less than two hours each day.

As parents and carers, there are some ways that you can encourage your child to become more physically active. For example:

- Encourage active play for your child, including games that involve moving around a lot, such as skipping, dancing, running or ball games.
- Encourage your child to spend less time sitting doing sedentary activities.
- Build physical activity into your child's life in general. Try to be more active as a family. For example, walking or cycling to school and the shops, going swimming or to the park together. Again, remember that as a parent or carer, you act as a role model.
- Help children to take part regularly in structured physical activities that they enjoy. This may include dancing, football or other sports or swimming.

Treatment with medicines

As a rule, treatment with medicines is not usually used to help children and teenagers lose weight. However, in rare cases, the medicine orlistat may be prescribed to help children aged 12 or over who are severely obese; in particular, if they have started to develop health problems because of their obesity. Orlistat works by interfering with the way that fat is digested and absorbed into the body. If a teenager is prescribed orlistat, this should be under the guidance of a specialist weight loss clinic where overweight and obese children are seen regularly. If prescribed this medicine, the child or teenager will need regular follow-up.

Weight loss surgery

Surgery to help weight loss, also called bariatric surgery, is not usually carried out in children. However, in exceptional circumstances, it may be considered as an option for teenagers who have already gone through puberty and who are severely obese with severe health problems caused by their obesity.

Psychological support

As mentioned above, being overweight or obese as a child may lead to psychological problems for some children. As a parent or carer, you may feel able to discuss with your child how they are feeling. Or, you may wish to involve your child's healthcare professional. Counselling or specialist help to increase confidence and self-esteem and to help develop coping strategies for teasing or bullying is sometimes needed.

Can overweight and obesity in children be prevented?

Yes. As a parent or carer, you can help to prevent your child becoming overweight or obese by:

- Aiming for a healthy, balanced and varied diet for your whole family.
- Ensuring that your child is getting the recommended amount of physical activity (at least 60 minutes of moderate physical activity a day).
- Limiting the amount of time that your child spends being inactive (sedentary) - for example, less time in front of the computer or watching TV.
- Building physical activity into your family's life in general.
- Encouraging a healthy lifestyle for your whole family.

If your child is in reception or Year 6, their BMI will be checked as part of the National Child Measurement Programme. If it falls outside the normal range, you may get a letter from the school. Some parents see this as an intrusion but it is meant to be a helpful warning that you need to take some action for the sake of your child's health.

Further help & information

MEND (Mind, Exercise, Nutrition ... Do it!)

Mytime Active, Linden House, 153-155 Masons Hill, Bromley, BR2 9HY

Tel: 0800 2300 263

Web: www.mendcentral.org

Change4Life

Web: www.nhs.uk/change4life/Pages/change-for-life.aspx

Weightwise

Web: www.bdaweightwise.com

Weight Concern

1-19 Torrington Place, London, WC1E 6BT

Tel: 020 7679 1853

Web: www.weightconcern.org.uk

British Nutrition Foundation

Imperial House 6th Floor, 15-19 Kingsway, London, WC2B 6UN

Tel: 020 7557 7930

Web: www.nutrition.org.uk

Further reading & references

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- Weight management: lifestyle services for overweight or obese children and young people; NICE Public Health Guidance, Oct 2013
- Management of obesity; Scottish Intercollegiate Guidelines Network - SIGN (February 2010)
- Healthy lives, healthy people. A call to action on obesity in England; Dept of Health, 13 October 2011
- UK-WHO growth charts; Royal College of Paediatrics and Child Health
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- Bauer KW, Berge JM, Neumark-Sztainer D; The importance of families to adolescents' physical activity and dietary intake. *Adolesc Med State Art Rev*. 2011 Dec;22(3):601-13, xiii.
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Peer Reviewer: Dr John Cox

Last Checked: 09/01/2015

Document ID: 13466 Version: 3

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