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Heart UK has information about inherited high cholesterol that starts at a young age (familial hypercholesterolaemia). Find out about familial hypercholesterolaemia on the Heart UK website

Foods high in saturated fat and sugar can cause high cholesterol. The top sources of saturated fat in our diet are: fatty meats full fat dairy products like butter, cream, and ghee palm and coconut oil processed foods like biscuits, cakes, pastries and chocolate. Eating too many sugary foods and drinks and refined carbohydrates can also affect your cholesterol levels. Refined carbohydrates have been processed and stripped of their natural fibre, minerals and vitamins. The main dietary sources of refined carbohydrates and sugar are: white flour white bread low-fibre cereals white rice and pasta pastries sugary drinks crisps and sweets. Some foods contain dietary cholesterol, but they do not make a big difference to the cholesterol in your blood. These are foods like eggs, some shellfish like prawns and crab and offal such as liver, liver pate and kidney. They are low in saturated and fine to eat as part of a healthy diet. It is more important to limit the amount of saturated fat you eat. Take our fun quiz to find out how much you know about eggs and cholesterol. 2. What foods should I eat to lower my cholesterol? Too much saturated fat in your diet can raise your cholesterol levels, but a healthy balanced diet can help to lower them. Swapping saturated fats for unsaturated fats and eating more fibre can make a big difference to your cholesterol level. Unsaturated fats in foods like vegetable oils, nuts, seeds, avocado and oily fish are healthy fats that can help maintain healthy blood cholesterol levels. Try these swaps to help you reduce your saturated fat intake: swapping butter to vegetable oil spreads like sunflower, olive or rapeseed oil spreads switching whole milk to skimmed milk using natural yogurt instead of sour cream or double cream replacing regular mince with leaner, lower fat options swapping red or processed meat for fish, turkey or chicken without the skin, or plant-based proteins such as lentils, soya or Quorn switching your crisps for unsalted nuts or seeds using reduced fat cheese instead of regular cheese ordering less takeaways. Instead try our healthy faveaway recipes for delicious heart-healthy options. Fibre Eating high-fibre food can also help to lower your cholesterol. Fibre helps reduce the amount of cholesterol that is absorbed into the blood stream from your digestive system (also known as the intestine). Some ways you can eat more fibre include; eating at least five portions of fruit and vegetables a day eating pulses such as lentils, beans and chickpeas snacking on nuts and seeds choosing more wholegrain foods, such as brown or granary bread over white bread and brown rice over white rice replacing sugary cereals with wholegrain options or oats. Read more of our tips to eat more fibre 3. Can exercise lower cholesterol? Yes, it can. Being active helps your body move the bad cholesterol (also known as non-HDL cholesterol) to your liver where it can be removed out of your system. You do not have to join a gym or go on long runs if you do not enjoy it, just start by moving more every day. Many people find that being active improves their mood, gives them more energy and better sleep. You could try: taking the stairs instead of the lift a brisk walk instead of a slow walk doing two-minute bursts of jumping jacks several times a day yoga or pilates. Get inspiration to stay active with 7 exercises you can do from home. 4. Does smoking increase cholesterol? Smoking increases 'bad cholesterol' (or non-HDL cholesterol) and lowers 'good cholesterol' (or HDL cholesterol). This increases your risk of heart attacks and stroke. Stopping smoking is one of the best things you can do for your cholesterol, your heart and your health. Within days, your health will begin to improve and within a year, your risk of heart disease will be halved. If you're struggling to stop smoking, talking to your GP is a great first step. If you're in England you can call the NHS Stop Smoking Service on 0300 123 1044. There are also free services in Scotland, Wales and Northern Ireland. These services will be able to give you support including how to deal with nicotine cravings. Read more about what smoking does to your body. 5. Should I stop drinking if I have high cholesterol? Cutting down on alcohol will help your liver to work better at removing bad cholesterol. It may also improve your heart health in other ways by helping you lose weight and lower your blood pressure. Our top tips for drinking less alcohol are to: try alcohol-free drinks like mocktails and alcohol-free beer set a weekly drink limit have a few days each week where you do not drink at all avoid rounds when you go out drink water or soft drinks (opt for sugar-free or diet drinks where possible) between alcoholic drinks to slow you down order a small glass of wine or half a pint of beer. Read more about alcohol and your heart. Our cholesterol hub answers all your questions about cholesterol including what it is, when to get checks and more about statins. More about cholesterol If you have high cholesterol it's a good idea to get your cholesterol levels tested at least once a year to track your progress. A check every 5 years is advised if your cholesterol levels are borderline or normal. Have a look at our short two minute video to see how Sulakhan successfully lowered his cholesterol: Your cholesterol levels are important because they help you know your risk for heart disease. Cholesterol is a type of lipid (fat) that helps your body perform many important functions. But too much cholesterol in your blood is harmful. It can enter your artery wall, damage its integrity and lead to atherosclerotic plaque (hardened deposits) forming. This process of plaque buildup is called atherosclerosis. It can lead to serious problems like: Coronary artery disease: Blocked blood flow to your heart. Peripheral artery disease: Blocked blood flow to your legs and arms. Carotid artery disease: Blocked blood flow to your brain. Cholesterol travels through your blood silently. And it turns into plaque silently. Plaque buildup is like someone tiptoeing on a carpet. You might not see or notice its presence for a long time. You may have no symptoms until you have a heart attack or stroke. At that point, the plaque is like high heels on a hardwood floor. And it's already caused serious damage to your body. You can live for many years with high cholesterol and not even know it. That's why it's essential to get your cholesterol numbers checked on a regular basis. If your cholesterol numbers are too high (hyperlipidemia), that's a red flag for you and your healthcare provider. Many people have high cholesterol, which is a major risk factor for heart disease. But you're not stuck with the cholesterol numbers you have. It's possible to change them. Catching high cholesterol early gives you a chance to make changes and achieve good cholesterol numbers. Cholesterol numbers in the heart-healthy range can help lower your risk of heart disease. The main cholesterol levels your provider checks are: Total cholesterol. This is the total amount of cholesterol that's circulating in your blood. LDL or low-density lipoprotein. This is the "bad" cholesterol that contributes to plaque buildup in your arteries, leading to heart attacks and strokes. HDL or high-density lipoprotein. This is the "good" cholesterol that helps clear out the cholesterol your body doesn't need. Triglycerides. This is a type of fat that can raise your heart attack and stroke risks. Your provider checks your cholesterol levels with a blood test they call a lipid panel (or lipid profile). A provider will draw blood from a vein in your arm and send the blood to a lab for analysis. Be sure to closely follow your provider's instructions on how to prepare for the test. You'll likely need to fast for 12 hours beforehand. This means avoiding all foods and drinks except water. When your results come in, your provider will let you know. You may also be able to access your results through your electronic medical record. What is the unit of measurement for cholesterol? Healthcare providers measure cholesterol levels as milligrams of cholesterol per deciliter of blood. The abbreviation is mg/dL. Providers use these same units to measure your triglycerides. What are normal cholesterol levels? Normal cholesterol levels vary based on your age, ethnicity and sex. Normal cholesterol levels by age chart The chart below shows normal cholesterol levels. Healthcare providers consider these good cholesterol numbers for most people. If you have heart disease or many risk factors, your LDL target may be different. Your healthcare provider may want your LDL level to be below 70 mg/dL. So, it's important to talk with your provider about your test results and what they mean for you. All units in the chart below are mg/dL. As you review your results, remember that you want your LDL to be low and your HDL to be high. Ideally, your HDL should be above 60 to offer you protection against heart disease. Sex-based differences Most normal cholesterol levels are the same regardless of your sex. But there's one key difference among adults. That's your HDL number. As the chart above shows, females need a higher HDL level (at least 50) compared to males (at least 40). What's considered high cholesterol? High cholesterol generally means your total cholesterol is 200 mg/dL or higher. But providers use additional categories like "borderline high" and "near optimal" to break down your results. If your numbers are close to normal levels, they may be easier to manage through lifestyle and dietary changes. High cholesterol levels by age chart The chart below shows cholesterol levels that are higher than normal. All units are mg/dL. Can cholesterol levels be too low or too high? There are upper limits for your total cholesterol. Lower is better — as low as you can go. Researchers have found that a lower LDL is better. They haven't set a lower limit for it. The higher your HDL number is, the better it is for you. So your LDL can't be too low and your HDL can't be too high. How often should I get my cholesterol checked? Your provider will tell you how often you need your cholesterol checked. It depends on your: Age: The older you get, the more often you need to have your numbers checked. Family history: If you have a close biological family member with a history of heart disease, you face a higher risk of heart problems, too. You may need cholesterol tests more often if your family member has high cholesterol or a history of heart attack or stroke. Risk factors for heart disease: If you have a heart disease diagnosis or risk factors, you'll need cholesterol tests more often. Sex: Males need more frequent tests starting at a younger age. Children should get their first test between ages 9 and 11. Then, they should receive a test every five years. Your child's provider may recommend starting at a younger age based on family history. Here are general guidelines for adults based on sex and age. Males Females What is high cholesterol? High cholesterol refers to elevated levels of cholesterol in the blood. If your cholesterol levels are high, this can increase the chance of build-up of fatty deposits in your arteries. This increases the risk of heart attack and stroke. Cholesterol is carried in the blood by particles called lipoproteins. When low-density lipoproteins (LDL cholesterol) carry cholesterol this is referred to as 'bad' cholesterol. Higher levels of LDL cholesterol in your blood cause an increased risk of lipoprotein disorders and cardiovascular disease (heart and blood vessel diseases, such as heart attack and stroke). However, some cholesterol in your blood is carried by high-density lipoproteins (HDL cholesterol). HDL cholesterol can be thought of as 'good' cholesterol and higher levels help to prevent cardiovascular disease. Other factors that can reduce your risk of cardiovascular disease include not smoking, choosing healthy foods, a low salt intake, regular physical activity, keeping your weight and waist size down and drinking alcohol in moderation (if at all). Ensuring your blood pressure level is not raised (or taking medication to lower it if it is high) is also important. See the separate leaflet called Cardiovascular disease (Atheroma). Most people with high cholesterol have no symptoms. Very occasionally, some people have fatty, cholesterol-rich deposits which are visible under their skin. These are called xanthelasma or xanthoma. Another rare visible sign is an arcus senilis - a white ring around the cornea (the coloured part of the eye). Everybody has some risk of developing small fatty lumps (atheroma) within the inside lining of blood vessels, which then may cause one or more cardiovascular diseases. However, some situations increase the risk. These include: Fixed risk factors - ones that you cannot change. A strong family history of high cholesterol. This means if you have a father or brother who developed heart disease or a stroke before they were 55, or in a mother or sister before they were 65. Being male. An early menopause in women. Age. You are more likely to develop atheroma as you get older. Ethnic group. For example, people who live in the UK whose family originally came from India, Pakistan, Bangladesh or Sri Lanka have an increased risk. However, if you have a fixed risk factor, you may want to make extra effort to tackle any lifestyle risk factors that can be changed. See the separate leaflet called Cardiovascular disease (Atheroma). Note: risk factors interact. So, if you have two or more risk factors, your health risk is much more increased than if you just have one. For example, a middle-aged male smoker who has high blood pressure and a high cholesterol level has a high risk of developing a cardiovascular disease, such as a heart attack, before the age of 60. Cholesterol levels are tested with a simple blood test. This can be done in two ways. The blood can be taken from your arm with a needle and sent to a lab for analysis. The result will come back in a few days. In some places it is possible to have your cholesterol tested with a finger prick test. This gives the result in a few minutes. It is not usually necessary to fast before cholesterol tests. Cholesterol blood levels are very important but must be considered in an overall assessment of your risk of cardiovascular disease (see below). The following blood cholesterol levels are generally regarded as desirable for people who are otherwise at low risk: Total cholesterol (TCchol): 5.0 mmol/L or less. However, about 2 in 3 adults in the UK have a TCchol level of 5.0 mmol/L or above. LDL cholesterol: 3.0 mmol/L or less. HDL cholesterol: 1.2 mmol/L or more. TCchol/HDL ratio: 4.5 or less. That is, your TCchol divided by your HDL cholesterol. This reflects the fact that for any given TCchol level, the more HDL, the better. If other factors mean you are at a higher risk for cardiovascular disease - eg, you have had a stroke - it is recommended that your target levels for LDL cholesterol should be lower. As a rule, the higher the LDL cholesterol level, the greater the risk to health. A blood test only measuring total cholesterol may be misleading. A high total cholesterol may be caused by a high HDL cholesterol level and is therefore healthy. It is very important to know the separate LDL cholesterol and HDL cholesterol levels. Your level of LDL cholesterol has to be viewed as part of your overall cardiovascular health risk. The cardiovascular health risk from any given level of LDL cholesterol can vary, depending on the level of your HDL cholesterol and on any other health risk factors that you may have. Therefore, a cardiovascular risk assessment considers all your risk factors together. To an extent your blood cholesterol level can vary depending on your diet. However, different people who eat the same diet can have different blood cholesterol levels. In general, however, if you eat less fatty food in your diet your cholesterol level is likely to go down. In some people a high cholesterol level is due to another condition. For example, an underactive thyroid gland, obesity, drinking a lot of alcohol and some rare kidney and liver disorders can raise the cholesterol level. Hyperlipidaemia means too much lipid (particularly cholesterol) in your bloodstream. See the separate leaflet called Hyperlipidaemia. In some people a very high level of cholesterol runs in the family, due to a genetic problem with the way cholesterol is made by the cells in the body. One example is called familial hypercholesterolaemia. See the separate leaflet called Familial hypercholesterolaemia. If you have a high risk of developing a cardiovascular disease, or you already have a cardiovascular disease, lowering your LDL cholesterol level reduces your risk of developing future cardiovascular problems. For details on exactly how much risk is reduced by lowering and treating risk factors, find out more about the National Institute for Health and Care Excellence Clinical Knowledge Summary (NICE CKS), 'Cardiovascular risk assessment and management' (note UK access only). Changing your diet Changing from an unhealthy diet to a healthy diet can reduce your LDL cholesterol level. It is advisable to reduce the saturated fat and trans fat in your diet. However, dietary changes alone rarely lower an LDL cholesterol level enough to change a person's risk of cardiovascular disease from a high-risk category to a lower-risk category. Statins A medicine (usually a medicine called a statin) is often used if you are at increased risk of cardiovascular disease. Read about cholesterol-lowering treatments in the separate leaflet called Hyperlipidaemia. Even if you have a low risk of cardiovascular disease it is still very important to follow the healthy lifestyle advice. This advice, including healthy eating, regular exercise, not smoking and drinking alcohol only in moderation (if at all), will help to keep your risk of cardiovascular disease as low as possible. Recommended total cholesterol levels are under 200 milligrams per deciliter (mg/dL) for adults and under 170 mg/dL for children. Females typically need more HDL (good) cholesterol than males. Cholesterol is a fatty substance your liver makes. Your body produces all of the cholesterol that it needs to function. However, cholesterol is also found in certain foods. Keep reading to learn more about the recommended cholesterol levels by age. A healthcare professional will use a lipid panel blood test to measure the overall amount of cholesterol in your blood. This is known as total cholesterol, which consists of three lipids: Low-density lipoproteins (LDLs) carry cholesterol through your bloodstream. LDL is called "bad" cholesterol because high amounts can form plaques in your blood vessels, increasing your risk for heart disease. High-density lipoproteins (HDLs) help protect you from heart disease. HDL is called "good" cholesterol because it carries cholesterol back to your liver, which is then excreted from your body. Triglycerides are another type of fat that could build up in your body. They're the "building blocks" of cholesterol. High levels of triglycerides and low levels of HDL raise your risk for heart disease. The American Heart Association (AHA) recommends that adults have their cholesterol checked every 4-6 years, starting at age 20 years. This is when cholesterol levels can start to rise. All values are in mg/dL (milligrams per deciliter) and are based on fasting measurements. Guidelines are similar for males and females over the age of 20 years. However, they may differ when it comes to HDL cholesterol, as seen above. Females should aim for higher levels of HDL cholesterol. Several factors may affect a child's risk of having high cholesterol, including: The CDC recommends children have their cholesterol checked between ages 9-11 years, and again between ages 17-21 years. Children with more risk factors, such as diabetes or obesity, may need to be checked more often. According to the JACC, the following are the recommended cholesterol levels for children, with all values in mg/dL. A healthcare professional may recommend a treatment plan for high cholesterol. This will vary based on factors like other medications you may be taking, your age, sex, and general health. Your treatment plan may include lifestyle and dietary changes, as well as medication. Some medications commonly prescribed for high cholesterol include: Medications can also be used to treat contributing factors to cholesterol like triglycerides. These may be used in addition to some of the medications above. Adults should keep their total cholesterol levels below 200 mg/dL and their LDL levels below 100 mg/dL. A healthy LDL range for adults is 100 mg/dL or lower. A healthy HDL range for adult males is 40 mg/dL and for adult females 50 mg/dL. Cholesterol is a fatty, waxy substance that is created by your liver. It's essential for bodily functions. However, high levels of cholesterol may increase your risk of developing certain health conditions. People ages 19 or younger should aim to have a total cholesterol of 170 mg/dL or less, while adults should aim for 200 mg/dL or less. Speak with a healthcare professional if you need help lowering your cholesterol levels. They can help develop a treatment plan that's right for you. Read this article in Spanish. Cholesterol is a fatty substance that's produced in the liver. It's also in some foods that we eat. The body needs a certain amount of cholesterol to function normally. Cholesterol combines with proteins to be carried around the blood. This combination is known as lipoproteins. There are 2 main types of lipoprotein. High-density lipoprotein (HDL) carries cholesterol away from the cells and back to the liver to be removed. For this reason, HDL is referred to as 'good cholesterol' and higher levels of this type are better. Non-HDL lipoproteins are known as 'bad cholesterol'. This is because it can build up in blood vessel walls if there's too much. Non-HDL lipoproteins can build up in blood vessel walls and cause atherosclerosis. This is a gradual build up of fatty substances that causes a narrowing of the arteries. This affects blood flow and can lead to: heart disease strokes peripheral arterial disease (PAD) Other risk factors for cardiovascular disease include high blood pressure. This information is just a guide to healthy cholesterol levels. What matters is your overall risk of cardiovascular disease. This is assessed by considering your cholesterol levels alongside other things like: Blood cholesterol is measured in units called millimoles per litre of blood. This is often shortened to mmol/L. You should speak to your healthcare professional if you're worried about your cholesterol level. There are many things that can influence your chance of developing high cholesterol. Some of these you have control over and some of these you don't. For example, the chance of developing high cholesterol is increased by certain lifestyle factors. These are sometimes called controllable risk factors. This includes your diet, level of physical activity and smoking habits. Things that influence high cholesterol that you can't change include: There's also an inherited condition called familial hypercholesterolaemia (FH). An inherited condition means that it can be passed through families by faulty genes. This can cause high cholesterol even in people who follow a healthy lifestyle. High cholesterol doesn't usually cause any symptoms on its own. You can have your cholesterol levels checked. Your healthcare professional may recommend that you get your cholesterol levels tested if they think you're at risk of cardiovascular disease. If you have high cholesterol, your healthcare professional will talk to you about how you can lower it. This might include things like changing your diet or taking medicine. Lifestyle changes can help to lower your cholesterol level, including: The most common medications for high cholesterol are statins. But, there are some other types of medications available. Your healthcare professional will advise if you need these. The British Heart Foundation has some top tips on how to lower your cholesterol. To reduce your cholesterol, try to cut down on fatty food, especially food that contains a type of fat called saturated fat. You can still have foods that contain a healthier type of fat called unsaturated fat. Check labels on food to see what type of fat it has in it. Try to eat more: oily fish, like mackerel and salmon olive oil, rapeseed oil and spreads made from these oils brown rice, wholegrain bread and wholewheat pastas nuts and seeds fruits and vegetables Try to eat less: meat pies, sausages and fatty meat butter, lard and ghee cream and hard cheese, like cheddar cakes and biscuits food that contains coconut oil or palm oil Exercise more Aim to do at least 150 minutes (2.5 hours) of exercise a week. Some good things to try when starting out include: walking - try to walk fast enough so your heart starts beating faster swimming cycling Try a few different exercises to find something you like doing. You're more likely to keep doing it if you enjoy it. Stop smoking Smoking can raise your cholesterol and make you more likely to have serious problems like heart attacks, strokes and cancer. If you want to stop smoking, you can get help and support from your GP. The NHS Stop Smoking Service - your GP can refer you or you can ring the helpline on 0300 123 1044 (England only) They can give you useful tips and advice about ways to stop cravings. Cut down on alcohol Try to avoid drinking more than 14 units of alcohol a week have several drink-free days each week avoid drinking lots of alcohol in a short time (binge drinking) Ask your GP for help and advice if you're struggling to cut down. Page last reviewed: 13 July 2025 Next review due: 13 July 2025