

Treating MASLD with a healthy diet and physical activity

A guide for adults



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Speak to your doctor before making any changes to your diet or starting to lose weight. This is even more important if you have also been diagnosed with diabetes.

Welcome

Welcome to your guide to using diet and physical activity to treat and manage MASLD.

This information has been written for: **adults with MASLD**

Others who may also find this information useful:

- family, friends and carers of adults with MASLD
- healthcare professionals

MASLD can also happen in children and young people. See our information for parents and families: liveruk.org/MASLD

This booklet is not designed for people diagnosed with cirrhosis or advanced liver disease. Please read our 'Diet and Liver Disease' booklet.

Visit our website to read and download all our information on MASLD:

- MASLD booklet
- Physical activity factsheet
- Diet factsheet
- MASLD and diabetes
- Questions to ask your doctor

Use this QR code to view our resources or visit liveruk.org/MASLD



How to say it:
Metabolic = met-uh-BOL-ik
Dysfunction = dis-func-tion
Steatotic = Stee-uh-TOT-ik
Steatohepatitis =
Stee-uh-toh-heh-puh-TYE-tis

People say MASLD as one word that rhymes with 'dazzled'



What is MASLD?

Metabolic dysfunction-associated steatotic liver disease (MASLD) happens when too much fat builds up in the liver.

It is a common, long-term (chronic) condition that affects about 1 in 4 people in the UK. MASLD is often linked to conditions like obesity, type 2 diabetes and heart disease. What we eat and how active we are also plays a big part in how much fat ends up in the liver.

Most people with MASLD don't have any symptoms in the early stages. Some people only find out they have MASLD during health checks or tests for another health problem. There also isn't one simple test that can diagnose MASLD.

If your doctor thinks you might have MASLD, they will use a range of examinations and tests to check your liver health and look for liver scarring (fibrosis).

MASLD has several different stages. Doctors check for liver scarring (fibrosis) to work out the stage of the disease. Having one stage does not mean you will always move to the next one. It is possible to slow or even reverse the damage, especially if it is at an early stage.

"The good news is that the liver can repair itself to some degree even if there is significant damage."

Prof William Alazawi, University of London



The main treatments for MASLD are healthy eating, physical activity, and keeping a healthy weight. These changes reduce the amount of fat in the liver and tackle the root cause of MASLD. For many people, they can stop the disease from getting worse and reverse MASLD.

In some people, MASLD can progress to liver scarring (fibrosis). Over time, this can cause damage to the liver and how it works. In a small number of people, MASLD can lead to cirrhosis, liver failure or liver cancer.

Find out more about MASLD: liveruk.org/MASLD



How can diet and physical activity help people with MASLD?

For most people with MASLD, the main treatments are:

- keeping a healthy weight or losing weight (if needed)
- eating a healthy, well-balanced diet
- being more physically active and reducing time spent sitting

These all help lower the amount of fat in your liver. This tackles the root cause of MASLD. It also lowers the strain on your liver and gives it a chance to heal.

If you are overweight, losing weight is one of the best ways to improve MASLD. Losing 5% -10% of your body weight can control and, in some cases, reverse MASLD. Aim to lose weight steadily. Losing 0.5 to 2lb (0.25 to 1kg) a week is a safe and realistic goal.

A healthy, well-balanced diet and more physical activity can help you lose weight. They can also reduce blood pressure, reduce cholesterol and improve diabetes control. Better overall health lowers your risk of conditions linked to MASLD. This includes type 2 diabetes and heart disease.

Aim for small changes you can stick with in the long term. Liver UK has information and support to help you every step of the way.



Cutting back on alcohol and quitting smoking can also support your overall health.

“The good news is that MASLD can be treated and even reversed with changes to your daily life – especially in the early stages when your liver is less damaged. Diet and physical activity can even help to repair some of the damage in the more advanced stages of disease.”

Professor William Alazawi, Consultant Hepatologist,
Queen Mary University of London



Your BMI explained

Doctors use a tool called the body mass index (BMI). It helps them decide if a person has a healthy weight for their height. It's not perfect but is a useful guide for most people.

BMI divides an adult's weight in kilograms by their height in metres squared. You can find a BMI calculator on the NHS website. Or ask your doctor to work it out for you if you're not sure.

BMI	Weight range
Below 18.5	Underweight
Between 18.5 and 24.9	Healthy weight
Between 25 and 29.9	Overweight
30 or more	Obese

The guidance varies a bit for people who are Black, Asian, or from other ethnic minority backgrounds. For these groups, the risk of type 2 diabetes and other long-term conditions starts to rise at a BMI of 23. Although this is still within the healthy range, it's a good idea to keep an eye on your weight if your BMI is 23 or above.



Energy balance, calories and weight loss

To reach and keep a healthy weight, balance the energy you get from food and drinks with the energy your body uses. We measure this energy in calories.

- If you eat and drink fewer calories than your body uses, you will lose weight.
- If you eat and drink more calories than your body uses, you will gain weight.

The number of calories your body needs each day depends on several things, including:

- whether you are male or female
- your age
- your body weight
- how much muscle you have
- how physically active you are

As a general guide, an average man needs about 2,500 calories a day. An average woman needs about 2,000 calories a day. If you're trying to lose weight, it helps to reduce your daily calorie intake by about 600 calories. This can help support gradual, steady weight loss.

Remember that weight-loss goals vary from person to person. Your doctor or healthcare team can help you set goals that are realistic, safe, and right for you.



For most people, it's healthier to lose weight slowly over time. It will also make you less likely to put the weight back on. Diets that are very low in calories do exist, but they are not suitable for everyone. It's important to speak to your doctor before starting a very low-calorie diet or a diet that cuts out food groups.

If your BMI is 35 or higher and you're finding it hard to lose weight, talk to your doctor about extra support. They may be able to refer you to a specialist weight management service. These services offer more support and may use a range of treatments, such as medicines or surgery.



Losing weight isn't always easy. Sometimes it can feel overwhelming.



Low energy, health issues, or medications can make it tough to eat well or stay active. But remember - you don't have to do this alone.



Ask your doctor for help if you need to. They can give you information and advice. And if you need more support, ask your doctor about referring you to a weight loss programme or a dietitian.

For more information on losing weight safely, plus support tools, see the NHS website:

www.nhs.uk/better-health/lose-weight

How can I improve my diet?

There isn't a special diet that cures MASLD. Most people benefit from eating a healthy, well-balanced diet. Aim to eat and drink healthily most of the time, without having too much or too little of any one thing. The overall picture is more important than any one small detail.

You can ask to be referred to a registered NHS dietitian. They can help you make realistic, long-term changes. Your GP can also offer help and guidance if needed.

A healthy, well-balanced diet

To keep your body healthy and working well, it's important to eat and drink a good balance of different foods. For most people, this means eating a well-balanced diet. This can also lower your risk of health issues like type 2 diabetes, heart disease, and some cancers.

Foods and drinks contain nutrients. Nutrients include things like vitamins, fats and proteins. Your body needs these things to do all the jobs that keep you healthy. It's important to get the right amount of nutrients - not too little and not too much.

A healthy, balanced diet means thinking about everything you eat and drink. What you eat most of the time matters more than any single meal or food. A balanced diet can work for everyone and can be adapted to suit vegan, vegetarian, and other special dietary needs.

There are different guides that can help you eat a balanced diet. Your doctor or dietitian may have told you about the NHS Eatwell Guide. Or you may have been given a guide by your doctor or hospital. The advice in this leaflet is similar and includes practical tips to help you get started.



Research shows that a Mediterranean-style diet can help people with MASLD lose weight.

The Mediterranean diet is a popular example of a healthy, balanced way of eating. It focuses on plant foods and includes smaller amounts of meat and dairy products. It also includes plenty of vegetables, fruits, pulses, nuts and fish.



What to eat and drink

There are no special diet plans or recipes for people with MASLD. The best approach is to follow a healthy, well-balanced diet. This means eating a variety of foods from the main food groups and limiting foods high in fat, sugar and salt.



Eat at least 5 portions of different fruits and vegetables each day. They should make up about one-third of the food you eat. Fresh, frozen and tinned options all count, but watch out for added salt and sugar.



Eat healthy protein such as beans, pulses, lentils, eggs, fish, nuts or lean meats. If you eat fish, try to have two portions each week, including one oily fish such as salmon or mackerel.



Eat some starchy foods like potatoes, yams, bread, plantains, rice, and pasta. They should make up about one-third of the food you eat. These foods provide energy. Choose wholegrain options, as they help you feel full for longer.



Have some dairy foods or dairy alternatives, such as soya drinks and yoghurts. Choose options that are lower in fat and sugar, like semi-skimmed milk or plain low-fat yoghurt.



Choose unsaturated oils and spreads like vegetable, rapeseed, olive and sunflower oil. Use these instead of butter, lard, palm oil, coconut oil, or ghee. Use them only in small amounts.



Drink six to eight cups or glasses of fluid a day. Healthier choices are water, lower-fat milk, and sugar-free drinks like tea and coffee.



Cut down on foods and drinks that are high in fat, salt or sugar. This includes fast food and ultra-processed foods. Try to have them less often and in smaller amounts.



Also try to buy less red meat (such as beef, pork and lamb) and processed meat (such as bacon ham, sausages and hot dogs). Swap them for more fish, poultry, beans or lean meats.



Varieties to try

Try to make your diet as varied as possible. Look for different fruits and vegetables at your local market. Or try the world foods section at your supermarket. Choose low-fat and wholegrain versions wherever possible. Here are some healthy choices for you to try:

Fruits and vegetables

Melon, spinach, okra, squash, turnips, apples, cabbage, peppers, ackee, aubergine, leeks, mangos, dates, pomegranate, papaya, apricots, pears, pak choi, kale, broccoli, garlic, avocados, raspberries, onions, sweet potatoes

Starchy carbohydrates

Brown rice, bulgur wheat, barley, rye, quinoa, corn, oats, freekeh, sourdough, pitta, chapatis, bagels, roti, yams, cassava, breadfruit, plantain, wild rice, couscous, pitta bread

Beans, pulses, fish, eggs, meat and other proteins

Eggs, tofu, nuts, cannellini beans, seeds, soya mince, chickpeas, lentils, fish, shellfish, chicken, low-sugar baked beans, kidney beans

Dairy and alternatives

Paneer, fromage frais, skimmed or semi-skimmed milk, cream cheese, quark, lactose-free milk, ayran, lassi, cheddar cheese, kefir, cottage cheese

Food supplements

There are no food supplements recommended for people with MASLD.

Talk to your doctor before taking any vitamins, herbal products, or alternative medicines. They can sometimes harm your liver, even if they come from natural ingredients. The risk of this is higher if you already have a liver condition.



“The way out of this is a healthy diet, and plenty of exercise (two things I’ve not typically engaged in for large chunks of my life). Mentally, it has been very hard... The good news is that I listen to the experts. I’ve had therapy for a few years. A clinical dietitian who works with people with my diagnosis has been drawing up diet plans for me that have really made a difference.”

Jackson was diagnosed with MASLD with advanced fibrosis



Shop smart

Eating well can sometimes feel confusing, especially in the supermarket.

There are so many choices, and food labels can be hard to understand. A few simple tips can make shopping easier and help you stay on track:

- Try to plan your meals for the week and write a shopping list. This helps you buy only what you need. You also won't be tempted by unhealthy foods and drinks.
- Don't shop when you're hungry. This makes you more likely to buy extra snacks or unhealthy food. Try having a healthy snack before you go.
- Start your shopping around the edges of the supermarket. This is usually where you'll find vegetables, fruit, dairy, fish, seafood, poultry and lean meats.
- Choose breakfast cereals with less sugar. Wholegrain cereals are usually a healthier choice. Porridge oats are great for a healthy, cheap, nutritious breakfast.



Get smart with food labels

- Check food labels to find healthier products. Most pre-packed foods have a nutrition label on the back or side of the packaging. They include information on calories, fat, sugars and salt.
- Check labels for calorie information. It is displayed under the "energy" heading. We measure energy in calories. You can also write this as cal or kcal. They mean the same thing. Choose lower-calorie options whenever possible.
- Some front-of-pack nutrition labels use red, amber and green colour coding. This tells you at a glance if the food has high, medium or low amounts of fat, saturated fat, sugars and salt.

Red means high

Amber means medium

Green means low

A food or drink that has all or mostly green on the label is generally a healthier choice.

Each serving (150g) contains

Energy	Fat	Saturates	Sugars	Salt
1046kJ 250kcal	3.0g	1.3g	34g	0.9g
	LOW	LOW	HIGH	MED
13%	4%	7%	38%	15%

of an adult's reference intake

Preparing and cooking food

How you prepare and cook your food can make a big difference to how healthy it is. Cooking meals from scratch is a good choice because you know exactly what is going into your food.

- Choose cooking methods that use little or no added fat. Grilling, baking, boiling, steaming and slow cooking are healthier than frying or roasting. If you fry food, try using an air fryer, or remove excess oil with kitchen roll.
- Slow cookers can help you make healthy meals and save time on busy days.
- Batch cooking is a great way to make healthy meals. Make double every time you cook, then freeze the other portion for a day you have less time or energy.
- Even healthy oils are high in calories, so use small amounts. Use a spoon to measure oil instead of pouring it into the pan.
- Swap some or all of the meat in dishes like curries, stews, and pasta for vegetables, beans or lentils.
- Use herbs and spices to add flavour instead of using salt.
- Trim visible fat from meat and remove the skin from poultry before cooking.
- Try making your own stock instead of using stock cubes, which are often high in salt. If you do use stock cubes, look for low-salt or low-sodium options.
- When making soups, stews or curries, skim off any fat that rises to the surface.
- Be mindful of how much food you prepare. Using scales, spoons, cups or jugs can help with portion sizes.
- Look for ways to add extra fruits or vegetables to every meal. For example, have crunchy carrots or celery sticks with lunch, or add frozen peas to pasta dishes.
- Add extra vegetables or pulses to stew and soups to make them more filling and nutritious.



Portion sizes

One portion of fruit or vegetables weighs about 80g, which is roughly a handful.

As a quick guide, one portion is about the same as:

- Two or more small fruits, such as plums, apricots or satsumas
- One medium sized piece of fruit, such as an apple, orange or pear
- 4 heaped tablespoons of leafy vegetables, such as spinach or cabbage
- 3 heaped tablespoons of cooked peas, carrots or sweetcorn

Try to keep portions balanced and avoid putting too much food on your plate. Vegetables are the exception, so feel free to have plenty of those. Using smaller plates and bowls can help you reduce portion sizes.



At the table

Try these tips to make mealtimes healthier and more enjoyable:

- Try to eat at regular times each day. This helps your body get into a routine.
- Serve vegetables first so they make up a good part of your meal.
- Always taste your food before adding salt. You could also try adding pepper, lemon or lime juice, or fresh herbs instead.
- Make your plate look good with lots of colours. Eating fruits and vegetables in various colours gives you different vitamins and minerals. So, the more colours you add, the more nutrients you eat.
- Have a glass of water with every meal. Sometimes we feel hungry when we're actually thirsty.
- Avoid eating straight from large sharing bags of crisps, sweets, or popcorn. Put a portion in a bowl so it's easier to see how much you're eating.
- Eat slowly and focus on your meal. Try to avoid distractions like phones or TV.
- Finish your meal with something naturally sweet, such as peaches, pears or berries.
- Wait at least 15 - 20 minutes before you decide that you need more food. It takes time for your brain to realise that your stomach is full.
- Once you're full, stop eating. Even if you haven't cleared your plate. Store leftovers safely in the fridge for another day.
- Most importantly, enjoy your food. Include meals you like and share them with family and friends. It's also ok to have a treat every now and then.

"Don't put pressure on yourself to be perfect. Think about how far you've come, take it one step at a time and keep going! Small changes can add up to a big difference."

Clare McKenzie, Dietitian



Making drinks healthier

Drinks are an important part of a healthy, balanced diet. Water is the best drink to keep you hydrated, but other drinks can also help you reach your daily fluid intake. Aim to drink 6 to 8 cups or glasses each day.

- Water, lower fat milk, and sugar-free drinks are all healthier drink choices.
- Tea and coffee both count towards your daily total. But be careful with high street versions. They may contain full-fat milk, sugary syrups or flavourings.
- Fruit juice and smoothies are often high in sugar. They only count once towards your 5-a-day target. Stick to no more than one small 150ml glass per day.
- If you drink squash or cordials, dilute them well to reduce the sugar content.
- Some foods contain a lot of water that can help keep you hydrated. Good examples are fruits and vegetables like melon, peaches, oranges, tomatoes, strawberries, cucumber and cabbage.
- Alcoholic drinks are often high in calories. Cutting down on alcohol is a good way to help manage your weight. If you choose to drink alcohol, stay within the national low-risk drinking guidelines.



Cutting down on alcohol

Your liver breaks down alcohol. When it does this, it produces harmful chemicals that can damage liver cells. While the liver is good at repairing itself, it can't keep up with damage from regular heavy drinking.

If you have MASLD, alcohol adds extra strain to the liver when it is already working hard. This can make your liver damage worse.

To help protect your liver, try to cut down on alcohol or avoid drinking if you can. Do not exceed the national low-risk drinking guidelines:

- Do not drink more than 14 units of alcohol a week
- Spread your drinking out over 3 or more days
- Have 2 to 3 alcohol-free days a week, preferably in a row

It's also important not to drink too much in one session. This causes sudden harm to the liver, especially if it is already damaged.

Staying within these guidelines not only protects your liver but can also help with weight loss. This is because alcohol contains lots of "empty" calories.



Coffee and the liver

Did you know that coffee may help protect your liver? Drinking 2 - 3 cups a day could lower the risk of liver cancer, cirrhosis and fibrosis. It could also slow down the progression of liver disease.



How can I get more active?

Being more physically active is one of the best ways to reduce liver fat and improve MASLD. It also lowers your risk of conditions like type 2 diabetes and heart disease. If you lose weight, it will help you to keep it off. And it's good for your mental health too.

Getting started

Becoming more active can feel challenging, especially if you haven't exercised much before. But you don't need to start with big changes. Small steps can make a big difference.

Begin by looking for simple ways to move more in your daily routine and gradually build from there. If you can't reach the recommended targets straight away, don't worry. Every bit of movement counts and doing something is always better than doing nothing.

Try to set realistic and achievable goals each week. You can gradually increase how long you're active for or how far you go. It can also be helpful to plan ahead - think about when you'll be active and note it in your diary or calendar as a reminder.

You could start by:

- getting up and stretching if you've been sitting for a while
- walking to the shops instead of driving, or parking a bit further away
- taking the stairs instead of lifts or escalators
- spending a few minutes gardening each day

For more ideas visit www.sportengland.org/get-moving

If you have health issues, or haven't been active for a while, talk to your GP before starting a new exercise routine.

Your GP may be able to refer you to local exercise programmes, community gyms or walking groups. They can also recommend digital apps or tools that can support you to become more active.



How much exercise do I need?

Aim for at least 2½ hours (150 minutes) of moderate intensity exercise each week. If 150 minutes sounds like a lot, don't worry. Break it down into shorter 10-minute sessions throughout the week. Every bit of activity counts, and it all adds up.

It is also important to do activities that strengthen your muscles twice a week.



What type of exercise is best?

The best results come from doing a mix of aerobic exercise and strength exercises.

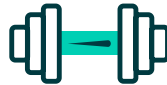


Aerobic (cardio) exercise

Aerobic activities get your heart and lungs working harder. They should make you feel warmer and slightly out of breath. Try to do at least 150 minutes (2½ hours) of this each week.

Examples include:

- brisk walking
- swimming
- dancing
- cycling
- tennis
- team sports
- aerobics
- running
- skipping
- rowing



Strength or resistance exercise

Strength exercises keep your muscles strong. This helps with balance, movement, and daily activities. Try to do these twice a week.

Examples include:

- lifting weights
- using resistance bands
- carrying heavy shopping bags



Useful resources:

Sport England

www.sportengland.org

A national organisation that helps people and communities get involved in sport and physical activity.

NHS Better Health

www.nhs.uk/better-health

An NHS campaign offering free tools, apps, advice, and tips to help people improve their physical and mental health.

This Girl Can

www.thisgirlcan.co.uk

A campaign encouraging women and girls of all shapes, sizes, and abilities to get active and enjoy exercise without judgement.

Physical activity top tips



There are lots of different ways to become more physically active. Here are some simple tips to get you started:

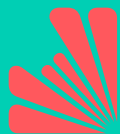
- Plan your activity. Decide when you will exercise and add it to your diary or calendar.
- Try something new. Many organisations offer free taster sessions.
- Walk or cycle for shorter journeys instead of using the car or public transport.
- Get off the bus one stop earlier and walk the rest of the way.
- Take the stairs instead of the lift whenever possible.
- Join an active local group, like a gardening club, walking group, or a community litter pick.
- Look out for local exercise classes. Most leisure centres and gyms run regular sessions for different fitness levels.
- Consider a women-only gym or class if that would make you feel more comfortable.
- Use online home workout videos. There are many videos freely available online for different levels and abilities. www.nhs.uk/better-health/get-active/home-workout-videos/
- Get children involved by walking or cycling to school together.
- You don't need special clothes or equipment to get started. Just wear something comfortable that allows you to move easily.
- Find an exercise "buddy" so you can support and motivate each other.
- Use digital apps to track your progress and stay motivated. Good examples include:
NHS Active 10
Couch to Fitness
Couch to 5k
- Use a pedometer or activity tracker to monitor your daily step count and track your progress.
- Pack your exercise kit the night before then leave it by the front door. If you are going to exercise later, put your exercise clothes on when you get up.

Advice for people who find exercise difficult

Living with a health condition can make it harder to stay active. Medication, fatigue, or a physical disability can also make exercise feel more challenging.

If you're not sure where to begin, talk to your GP or healthcare professional. They can help you find types of exercise and physical activity that are suitable for you. They can also make sure that you exercise safely. You may find that gentle, low-impact activities work best.

Remember: the best exercise is something you enjoy and will stick with!



Useful resources



Useful resources:

We Are Undefeatable

www.weareundefeatable.co.uk

A campaign offering practical advice, inspiration, and resources to help people with long-term health conditions get active and stay active.

Every Body Moves

www.everybodymoves.org.uk

A national campaign designed to help disabled people discover sports and physical activities that suit their needs and interests.

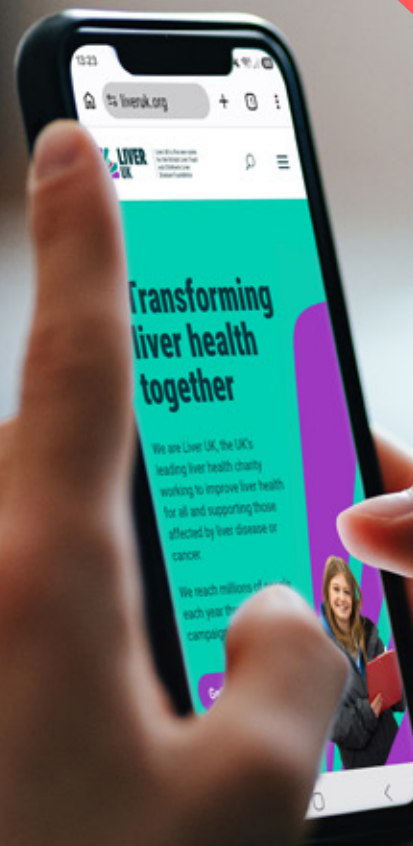
British Dietetic Association (BDA)

www.bda.uk.com

A professional body representing dietitians in the UK. Their website provides a wide range of information on food and nutrition.

NHS Eat Well guide

www.nhs.uk/live-well/eat-well



How Liver UK can help

A diagnosis of liver disease can be worrying, and you may have a lot of questions. The Liver UK support team are here for you and for your family and friends.

Whether you have questions or just need someone to listen, we can help.

Find out more about our support options: **liveruk.org/support**

Call our nurse-led helpline **0800 652 7330**



How we produce information

Feedback and information services

Your feedback is important to us and will help us improve our information. To provide feedback, email **patient-info@liveruk.org**

For more information on how our information was developed, visit our website: **www.liveruk.org**



We have gained PIF TICK accreditation for our information production process.



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Disclaimer

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Liver UK is the UK's leading charity dedicated to supporting adults, children and young people affected by liver disease or liver cancer. Our mission is to transform liver health by raising awareness, promoting prevention, and improving care and support for everyone affected.



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