



Taking Care of Your Liver

Food, movement, and daily habits

A nutrition guide for people with metabolic dysfunction-associated steatotic liver disease (MASLD)



Mount Sinai MASLD/MASH Center of Excellence

Division of Liver Diseases, Department of Medicine

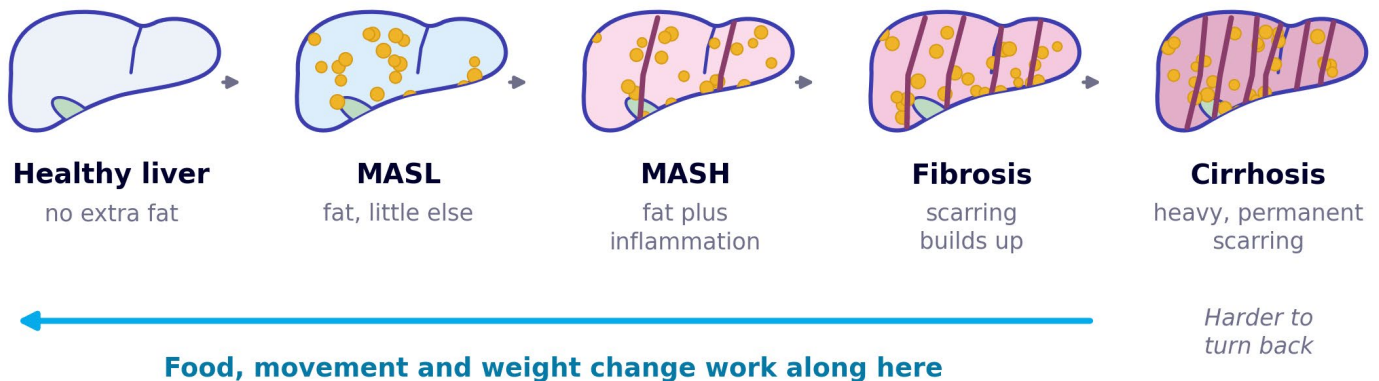
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This booklet supports your care plan. It does not replace it. Talk with your care team before making changes.

What is MASLD?

MASLD stands for metabolic dysfunction-associated steatotic liver disease. It means extra fat has built up in your liver. Most people who have it feel nothing at all.

What happens inside the liver



MASLD is the umbrella name for all of this: metabolic dysfunction-associated steatotic liver disease. **MASL** is fat alone. **MASH** is fat plus inflammation. MASLD and MASH replaced the older names NAFLD and NASH in 2023, so older reports and websites may still use those words for the same conditions.

Most people are here

Fat in the liver, with little or no inflammation. This is the milder and more common form.

The one we watch for

MASH adds inflammation. Left alone it can build scarring over years, which is far harder to undo.

Four things worth knowing



MASLD is not caused by alcohol.

That is what separates it from alcohol-related liver disease. But alcohol can still make any liver disease worse.



It travels with other conditions.

It is more common alongside overweight or obesity, type 2 diabetes, high blood pressure, or high cholesterol.



Your heart is involved too.

People with liver fat have a higher risk of heart disease and stroke. What helps your liver also helps your heart.



It responds to what you do.

Liver fat changes with what you eat and how you move. Many people bring it down without any medication.

What helps your liver most

Losing a modest amount of weight is the single most effective thing most people can do about liver fat. You do not need to lose a lot for it to count.

3-5%

of your body weight

Enough, for most people, to bring down the amount of fat stored in the liver.

7-10%

of your body weight

Linked to less inflammation and, in some people, less scarring.

A steady pace beats a fast one

Aim for 1/2 to 1 lb (0.25 to 0.5 kg) per week. Very rapid weight loss can make liver inflammation worse, so slower genuinely is better here.

What improves, and how quickly

Weeks

Liver fat starts to fall once added sugar and refined carbohydrates come down.

3 to 6 months

Liver blood tests often improve. This is usually when your team will recheck them.

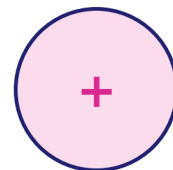
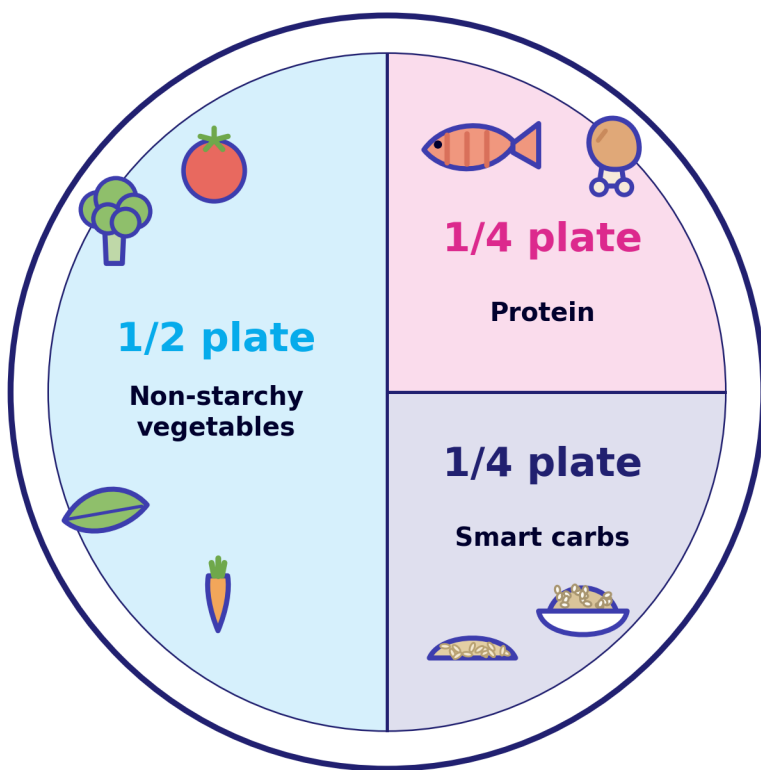
Years

Scarring changes slowly. It can improve, but it is measured over years, not months.

These are general goals. Your care team and dietitian will set the right target with you, especially if you have diabetes, kidney disease, or cirrhosis. If your weight is already healthy, you can still lower liver fat by changing what you eat and moving more.

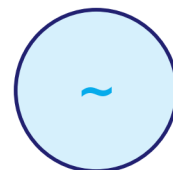
My healthy plate

You do not need to count anything to use this. Picture the plate, then fill it in this order.



A small portion of healthy fat

olive oil, avocado,
nuts, seeds



A drink with no added sugar

water, unsweetened
coffee or tea

Fill vegetables first

Start with the vegetable half. Whatever else goes on the plate then has less room to grow.

Use a smaller plate

A 9-inch plate does more for portion size than any amount of willpower.

Season without sugar

Herbs, garlic, lemon, vinegar, and spice add flavor without added sugar or salt.

Beans and lentils count in two places at once. They can be your protein or your smart carbohydrate, and they bring fiber either way. That makes them one of the easiest single changes to make.

Key diet principles

Four ideas cover most of what matters. Everything else in this booklet is detail on top of these.

1

Build your plate

Half non-starchy vegetables, a quarter protein, a quarter smart carbohydrates, plus a small portion of healthy fat.

2

Eat mostly whole foods

Vegetables, beans and lentils, fruit, whole grains, nuts, seeds, and fish. Close to how they grew.

3

Cut back on a short list

Sugary drinks, sweets, white bread, fried food, and ultra-processed packaged snacks. These drive liver fat the hardest.

4

Get 30 to 40 g of fiber

Beans, lentils, oats, berries, and vegetables get you there. Fiber also steadies blood sugar.

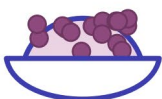
Where 30 to 40 g of fiber comes from



1 cup
navy beans
19 g fiber



1 cup
lentils
16 g fiber



1 cup
raspberries
8 g fiber



1/2 cup dry
oats
8 g fiber



1 cup
broccoli
5 g fiber



1/2
avocado
5 g fiber

Aiming for 30 to 40 g a day. Two of these get you most of the way. USDA FoodData Central.

Keep drinks simple

Water and unsweetened coffee or tea are good all day. Coffee, as it happens, is associated with better liver outcomes.

If weight loss is part of your plan

Eat on a schedule, keep tempting food out of easy reach, and weigh weekly rather than daily. More on making changes stick later on.

Carbohydrates: choose wisely

Carbohydrates are not the enemy. Which kind you choose, and what you eat them with, matters more than the amount.



Best choices

- Oats, quinoa, barley
- Beans and lentils
- Sweet potato
- Whole fruit
- Dense whole-grain bread



Limit

- White rice and white bread
- Pastries and cookies
- Chips and fries
- Fruit juice
- Sweetened breakfast cereal

How much do I need?

Many adults do well with 30 to 60 g of carbohydrate at a meal and 0 to 20 g at a snack. A starting range, not a rule. Your dietitian sets numbers that fit your medications and appetite.

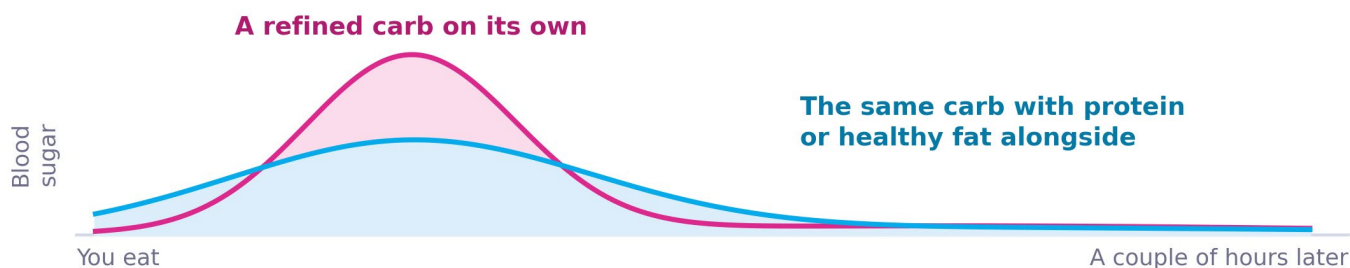
Spread them out

Carbohydrates spread across the day are easier on blood sugar than the same amount saved for one big meal.

Never eat a carb alone

Pair it with protein or healthy fat. Apple with nut butter, not apple by itself. The picture below shows why.

Why you pair a carb with something else



An illustration of the pattern, not measured values. How far your own blood sugar moves depends on you, the food, and your medications.

Protein and fats

Protein at every meal

Protein keeps you full, protects muscle while you lose weight, and steadies blood sugar. Most adults do well with about 1.0 to 1.2 g per kg of body weight per day, which works out to roughly 25 to 35 g at each meal.

Protein at breakfast

Most people get almost none. Eggs, Greek yogurt, cottage cheese, or tofu fix that.

Plant protein counts

Beans, lentils, tofu, and edamame bring protein and fiber together. Excellent for the liver.

One important exception

If you have kidney disease, your protein target may be lower. Ask your team first.

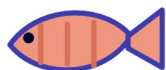
What 25 to 35 g of protein looks like



4 oz

chicken

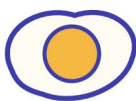
33 g protein



4 oz

salmon

29 g protein



4

eggs

25 g protein



1 cup

Greek yogurt

24 g protein



1 1/2 cups

lentils

27 g protein



4 oz

canned tuna

26 g protein

Any one of these covers a meal. Values from USDA FoodData Central.

Fats: the type matters more than the amount



Choose these

- Olive oil or avocado oil for cooking
- Small portions of nuts, seeds, and avocado
- Fish 1 to 2 times a week: salmon, sardines, trout



Limit saturated fat

- Butter, cream, and whole-milk dairy
- Fatty cuts of meat, processed meat, poultry skin
- Coconut oil, palm oil, and solid shortening
- Fried food and most packaged baked goods

Healthy fats are still calorie dense. A thumb-sized pour of oil, a small handful of nuts.

Foods to choose and foods to limit

A shopping list in two columns. Nothing here is forbidden, but the left column should fill most of your cart.

Foods to choose	Foods to limit
Intact whole grains: oats, barley, quinoa, brown rice	Refined grains and baked goods: white bread, pastries
Beans, lentils, chickpeas, and other legumes	Processed meats: bacon, sausage, deli meat, hot dogs
Nuts and seeds, unsalted	Fried foods of any kind
Fish, especially fatty fish such as salmon and sardines	High-sodium sauces, dressings, and canned soups
Low-fat dairy or fortified soy alternatives	Sweetened drinks: soda, sweet tea, juice, energy drinks
Vegetables and whole fruits	Desserts, candy, and sweetened yogurts
Olive, canola, and peanut oil	Butter, cream, coconut and palm oil, solid shortening

One habit that beats any list

Read the ingredients, not the front of the package. If sugar or a syrup appears in the first three ingredients, put it back. "Natural" and "low fat" on the front mean very little.

Sodium matters too. Aim for under 2,300 mg a day, and lower if you have high blood pressure or any fluid retention.

A sample day of meals

One example of what a liver-friendly day can look like. It is a picture, not a prescription.



Breakfast

Omelet with spinach, mushrooms, and tomato. A quarter of an avocado. One slice of whole-wheat toast.



Lunch

Lentil soup, 1.5 to 2 cups. One piece of fruit, such as an orange or a cup of berries.



Snack

One apple with 1 tbsp of almond or peanut butter.



Dinner

4 oz grilled salmon. 2 cups broccoli rabe. 1/2 to 1 cup brown rice.



All day

Water or sparkling water. Unsweetened coffee or tea.

How to use this page

Portions depend on your size, your activity, and your medications. Bring this page to your dietitian and adjust it together rather than following it as written.

Snack ideas

A good snack has protein or fiber in it, ideally both. That is what makes it hold you until the next meal instead of leaving you hungrier.

1 Plain Greek yogurt + berries + 1 tsp chia seeds

2 Apple or pear + 1 to 2 tbsp nut butter

3 Hummus + carrots, cucumber, or bell pepper

4 Cottage cheese + cherry tomatoes + a drizzle of olive oil

5 Edamame, 3/4 to 1 cup

6 A small handful of nuts, about 1/4 cup

7 Whole-grain crackers + tuna or salmon + mustard

The snack that is not really a snack

Chips, crackers, granola bars, and flavored yogurt eaten straight from the package are meals in disguise. Portion them into a bowl first, and you will eat noticeably less without trying.

If you are not hungry between meals, you do not need to snack. This page is for when you are.

Drinks and alcohol

Sugary drinks raise liver fat faster than almost anything else you can consume. For many people this single page does more than the rest of the booklet.

SUGAR IN A 12 OZ DRINK, IN TEASPOONS



A 12 oz can of regular soda carries over 10 teaspoons of added sugar (CDC). The sugar in 100% juice is natural rather than added, but without the fiber of whole fruit it reaches your liver much the same way.



Good choices

- Water, still or sparkling, with lemon, lime, or mint
- Unsweetened coffee or tea
- Sparkling water with a splash of citrus



Limit or avoid

- Soda and sweet tea
- Fruit juice by the glass
- Sports and energy drinks
- Sweetened coffee drinks

Alcohol and your liver

- If you have MASH or any liver scarring, the safest amount of alcohol is none.
- If you do not have scarring, limit it as much as you can. It raises liver fat and adds calories without filling you up.
- Alcohol-free options that still feel like something: sparkling water with citrus and bitters, alcohol-free beer or wine.
- If cutting back is hard, tell your care team. It is a common conversation and real help is available.

Move your body

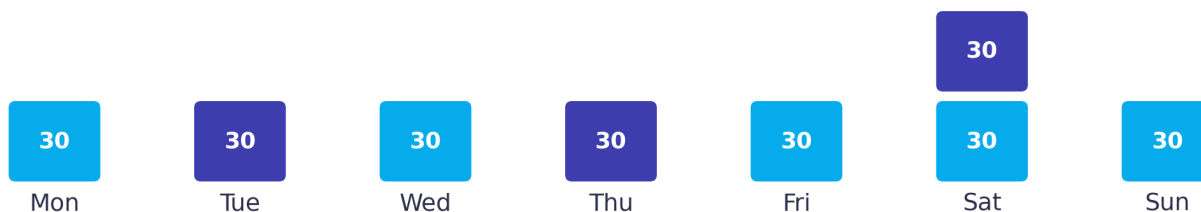
Exercise lowers liver fat even when your weight does not change. Working muscle pulls sugar out of your blood, which takes pressure off the liver.

The weekly goal

150 to 300 minutes of moderate activity a week, plus resistance training 3 times a week, about 30 minutes a session. Broken up, that is about 30 minutes on most days.

■ Brisk walking, 150 minutes

■ Resistance training, 3 x 30 minutes



One way to reach the weekly goal. Any pattern that adds up works.



Easy wins

- A 10 minute walk after meals
- Stand and stretch every 30 to 60 minutes
- Get off the bus or train one stop early
- Build toward 7,000 to 10,000 steps a day if that feels comfortable



Resistance training

- Three sessions a week, about 30 minutes each
- Work the big muscles: legs, hips, back, chest, arms
- Body weight to start, then bands or dumbbells
- Muscle protects your strength and blood sugar while you lose weight

Start where you are

Any movement counts, and something is enormously better than nothing. If you have heart disease, joint problems, or advanced liver disease, check with your care team before starting something new.

Moderate means you can talk but not sing. That is the whole test.

Habits that make it stick

Knowing what to eat is the easy part. These are the things that decide whether the change lasts past week three.

1

Set goals small enough to keep

"Walk 10 minutes after dinner, 5 days this week" works. "Exercise more" does not. Make it specific enough that at the end of the week you know whether you did it.

2

Track lightly, not obsessively

A simple food or photo log for a couple of weeks. Weight once a week. Waist once a month. That is enough information to steer by.

3

Shape your kitchen

Put fruit and nuts where you can see them, and treats somewhere inconvenient. Most eating decisions are made by what is within reach.

4

Protect your sleep

Aim for 7 to 9 hours. Short sleep raises appetite, drives cravings for sugar, and worsens blood sugar the next day.

5

Have a plan for stress

Try a 3 minute breathing break when you feel the pull to snack. Stress eating is a habit loop, and habit loops respond to a substitute.

6

Expect to slip

You will have an off meal, an off day, an off week. Start again at the next meal. Nothing is undone.

Pick one of these six to start. Not all six.

Smart swaps in the city

Eating well in New York is easier than it sounds. These four swaps cover most of what a busy week is likely to throw at you, whether you are at a bodega, a deli counter, or ordering in.

SWAP 1

~~Soda or juice~~



Seltzer with lemon or lime

Removes the single fastest source of liver fat in most people's diets.

SWAP 2

~~A white bagel~~



Whole-grain slice with nut butter

More fiber, more protein, and it holds you until lunch.

SWAP 3

~~Fried takeout~~



Grilled or roasted, with a side of vegetables

Same restaurant, same order window, a very different plate.

SWAP 4

~~Chips or packaged snacks~~



Nuts, fruit, or veggie sticks with hummus

Every bodega sells all three. It mostly takes asking.

Ordering in? Ask for the sauce on the side, swap fries for a side salad or vegetables, and order a size down. Most kitchens will do all three without comment.

Your first two weeks

Do not try to change everything at once. Two weeks, three changes each. That is the whole plan.

Week 1

Start simple

- ☐ Swap every sugary drink for water or sparkling water.
- ☐ Add one fist of vegetables at lunch and at dinner.
- ☐ Walk 10 minutes after your largest meal, every day.

Week 2

Build on it

- ☐ Add 25 to 35 g of protein at breakfast.
- ☐ Plan three protein-rich snacks for the week ahead.
- ☐ Do two 30 minute resistance sessions, building toward three a week.

Then what?

At the end of two weeks, look at which changes felt easiest and keep those going. Add one new change every couple of weeks after that. A habit you keep for a year beats a perfect plan you abandon in March.

Bring this page to your next visit

Circle what worked and what did not. That conversation is far more useful to your care team than a general question about diet.

When to call your care team

Most of this booklet is safe for most people. These are the exceptions, and each one is worth a phone call before you change anything.



You take insulin or other diabetes medicine

Eating fewer carbohydrates can drop your blood sugar too low. Your doses may need adjusting first.



You have kidney disease

A higher protein target may not be right for you. This one matters.



You are pregnant or breastfeeding

Weight loss and calorie restriction are not appropriate during pregnancy.



You have or may have cirrhosis

Nutrition needs change substantially with advanced scarring, sometimes in the opposite direction from this booklet.



You drink alcohol daily, or cutting back is hard

Tell your team. Stopping suddenly can be dangerous, and there is real help available.



You are losing weight without trying

Or losing more than 2 lb a week. Unplanned weight loss needs to be looked at.



You are starting anything new

Any new medicine, over-the-counter product, herbal supplement, or protein powder. Many are processed by the liver.

How to reach us

212-241-7270 | MASLD-Nutrition@mountsinai.org

If this is an emergency, call 911. For urgent symptoms after hours, go to the nearest emergency department.

Where to learn more

Every link below was checked before this booklet went to print. Sources like these are reliable. Liver advice on social media, as a rule, is not.

AT MOUNT SINAI

MASLD and fatty liver program

mountsinai.org/care/liver-diseases/services/nonalcoholic-fatty-liver

Clinical Nutrition

mountsinai.org/locations/mount-sinai/care/nutrition

ABOUT LIVER DISEASE

American Association for the Study of Liver Diseases

aasld.org/patient-resources

NIDDK liver disease information

niddk.nih.gov/health-information/liver-disease

FOOD, WEIGHT, AND ACTIVITY

Academy of Nutrition and Dietetics

eatright.org

USDA MyPlate, including eating well on a budget

myplate.gov

NIDDK weight management

niddk.nih.gov/health-information/weight-management

American Heart Association healthy eating

heart.org/en/healthy-living/healthy-eating

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