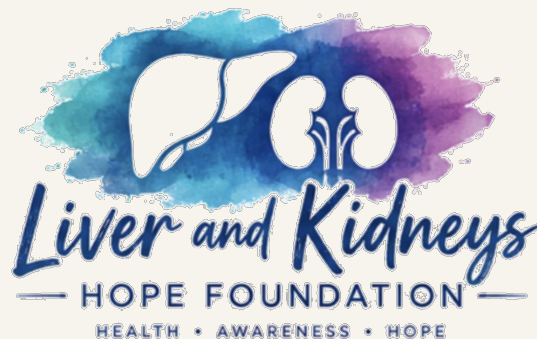




PATIENT & COMMUNITY EDUCATION SERIES

Understanding NAFLD

Non-Alcoholic Fatty Liver Disease — a plain-language, comprehensive guide to the classic name for fatty liver disease, what it means for your health, and how it connects to today's updated terminology.

Now more precisely known as MASLD (Metabolic dysfunction-Associated Steatotic Liver Disease)

Health Education Series · EDU-LIV

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First Edition

Important: This guide is provided for general educational purposes only. The Liver and Kidneys Hope Foundation is a nonprofit focused on liver-health education, community support, and outreach — it is **not a medical provider** and does not offer diagnosis, treatment, or medical advice. Nothing here should replace a conversation with a qualified, licensed healthcare professional who knows your history.

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What's Inside

You may have arrived at this guide because you or someone you love was told, at some point, that they have "fatty liver disease" or "NAFLD." That term is still widely used and recognized — this guide starts there, and gently bridges to the more precise language your clinician may use today.

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A NOTE ON NAMES BEFORE YOU BEGIN

In 2023, an international panel of liver specialists retired the term NAFLD in favor of **MASLD** (Metabolic dysfunction-Associated Steatotic Liver Disease). The underlying condition has not changed — only its name has. This guide uses "NAFLD" throughout, since it remains the term most people know, and explains the newer name fully in Section 2 so you can recognize both in any setting, including at your own doctor's office.

SECTION 1 Your Liver: A Quiet, Hardworking Organ

Before discussing what can go wrong, it helps to appreciate just how much your liver does every day — usually without you noticing at all.

Your liver is the largest solid organ inside your body, weighing roughly 1.4 kg (about 3 pounds) in an adult. It sits just under your rib cage on the right side, tucked below the diaphragm and above the stomach and intestines. Reddish-brown and wedge-shaped, it is divided into a larger right lobe and a smaller left lobe.

What makes the liver remarkable is not its size but its versatility. Scientists have identified more than **500 distinct functions** it performs. Nearly all the blood leaving your stomach and intestines passes through the liver first, where it is filtered, processed, and sent on — making the liver your body's central chemical-processing hub.

What your liver does for you

- **Processes nutrients**, storing glucose as glycogen and releasing it to keep blood sugar steady between meals.
- **Manages fats**, packaging and shipping fats around the body and making bile to help digest dietary fat.
- **Filters and detoxifies**, neutralizing alcohol, medications, and natural waste products such as ammonia.
- **Makes essential proteins**, including albumin and most blood-clotting factors.
- **Stores vitamins and minerals**, such as vitamins A, D, E, K, B12, and iron.
- **Supports the immune system**, trapping and clearing bacteria and toxins arriving from the gut.

DID YOU KNOW?

The liver is one of the only human organs that can **regenerate**. But this ability is not unlimited — repeated or long-standing injury, of the kind seen in fatty liver disease, can lead to permanent scarring the liver cannot undo on its own.

Why "silent" injury is a problem

The liver has very few nerve endings that sense pain, and a large amount of spare capacity. Together, these mean the liver can be under strain for years while you feel completely well. This is exactly why fatty liver disease is so often found by accident, and why understanding it — the purpose of this guide — matters so much.

KEY POINT

A healthy liver keeps hundreds of body systems running smoothly. Because it rarely complains until seriously stressed, protecting it is a matter of **prevention and early attention**, not waiting for symptoms.

SECTION 2

What Is NAFLD? And Why the Name Is Changing

NAFLD is a condition in which extra fat builds up in the liver of a person who drinks little or no alcohol. It is one of the most common liver conditions in the world — and its name is in the middle of an important, deliberate update.

NAFLD stands for **Non-Alcoholic Fatty Liver Disease**. Doctors generally consider a liver "fatty" once more than about **5% of its cells contain fat droplets**. The "non-alcoholic" part of the name exists to distinguish it from fatty liver disease caused mainly by alcohol — the fat looks similar under a microscope, but the underlying cause, and often the best approach to it, differs.

Why the name is being retired

In 2023, a large international panel of liver specialists agreed to move away from the term NAFLD, in favor of **MASLD** — Metabolic dysfunction-Associated Steatotic Liver Disease. There were good reasons:

- NAFLD defined the disease by what it *was not* ("non-alcoholic") rather than by what actually drives it.
- Some patients and families found the words "fatty" and the alcohol comparison stigmatizing.
- The newer name points to the true underlying issue — **metabolic health** — which also points toward what can be done about it.

KEY POINT — SAME DISEASE, CLEARER NAME

If you were told you have "NAFLD," "fatty liver disease," or "hepatic steatosis," and your chart now says **MASLD**, nothing about your condition has changed. The underlying biology is the same; the field simply adopted more accurate, less stigmatizing language. This guide uses "NAFLD" throughout because it remains the term most people recognize, but you can treat the two names as interchangeable for your own understanding.

NASH: the more active form

Within NAFLD, doctors distinguish a milder form — simple fatty liver, with little inflammation — from a more active, injury-causing form called **NASH** (Non-Alcoholic SteatoHepatitis). NASH is now more precisely called **MASH**. Section 3 covers this distinction in depth, since it matters a great deal for long-term outlook.

Classic term	Current term (2023 update)	What it describes
NAFLD	MASLD	Fatty liver linked to metabolic risk factors, with little or no alcohol involved.
NASH	MASH	The inflamed, more active form of NAFLD/MASLD.
(not previously named)	MetALD	A newer category for people with both metabolic risk factors and moderate-to-higher alcohol intake.

DID YOU KNOW?

You may still see "NAFLD" and "NASH" used in older research papers, some patient materials, and even some clinicians' everyday speech, since long-used medical terms take time to fully phase out. Recognizing both sets of names will serve you well for the next several years.

In practice, the rollout of any medical naming change takes years. Professional societies update their guidelines first, followed gradually by textbooks, electronic health record systems, insurance billing codes, and everyday clinical conversation. It is entirely normal to hear "fatty liver," "NAFLD," and "MASLD" used interchangeably by the same care team during this transition — and reasonable to simply ask your clinician which term they prefer, so your own notes and questions stay consistent with theirs.

SECTION 3

NAFLD, NASH & the Full Spectrum of Disease

NAFLD is not one fixed condition — it is an umbrella covering a range of severity. Knowing where a person sits within that range is the single most important question in their care.

Simple fatty liver (NAFL)

The liver contains extra fat, but with little or no inflammation and no significant injury to liver cells. Many people stay at this stage for life without complications — though it remains a signal that metabolic health deserves attention.

NASH — the active, inflamed form

Here, fat is accompanied by **inflammation** and **injury to liver cells** (pathologists describe swollen, "ballooned" cells). This active injury is what can, over years, trigger permanent scarring. NASH is the form of NAFLD most likely to progress, which is why identifying it matters so much.

Fibrosis: how scarring is measured

Repeated injury prompts the liver to lay down scar tissue, graded on a scale often written F0 to F4:

Stage	What it describes
F0	No scarring.
F1	Mild scarring, limited to small areas.
F2	Moderate, "significant" scarring that has begun to spread.
F3	Advanced, "bridging" scarring, but not yet cirrhosis.
F4	Cirrhosis — widespread, permanent scarring.

KEY POINT — WHY FIBROSIS IS THE HEADLINE

Across many studies, **fibrosis stage is the strongest predictor** of long-term liver outcomes — stronger than the amount of fat or inflammation alone. This is why modern testing focuses on finding out whether scarring is present, not just whether fat is present.

Cirrhosis: the end stage

Cirrhosis is reached when scar tissue has replaced so much healthy tissue that the liver's shape and function are disrupted. Early ("compensated") cirrhosis may still cause no symptoms. Advanced ("decompensated") cirrhosis can bring fluid buildup in the abdomen (ascites), swollen veins prone to bleeding (varices), confusion (hepatic encephalopathy), jaundice, and a raised risk of liver cancer.

DID YOU KNOW?

Movement along this spectrum is **not a one-way street**. With meaningful improvement in metabolic health — and, increasingly, with medication — fat and inflammation can decrease, and even some fibrosis can improve. The earlier action is taken, the more the liver can recover.

SECTION 4

From Extra Fat to Cirrhosis: Stages Explained

Bringing Sections 2 and 3 together, here is the typical pathway a liver follows in NAFLD — useful to see laid out as a single journey.

Stage	What's happening	Typical experience
1 — Simple fatty liver (NAFL)	Extra fat, minimal inflammation.	No symptoms; often found incidentally.
2 — NASH	Fat, plus inflammation and cell injury.	Usually still no symptoms; the stage doctors want to catch.
3 — Fibrosis (F1–F3)	Scar tissue accumulates from repeated injury.	Often silent until F3; monitoring intensifies.
4 — Cirrhosis (F4)	Widespread scarring reshapes the liver.	May be symptom-free early on; complications possible as it advances.

Most people with NAFLD never move far along this pathway. Progression is usually slow, measured in years, and varies enormously from person to person depending on genetics, other health conditions, and how well metabolic risk factors are managed.

KEY POINT

Where you are on this pathway — not the NAFLD label itself — is what should drive the intensity of monitoring and treatment. This is why your clinician will focus on fibrosis stage above all else.

SECTION 5 How Common Is NAFLD? Who It Affects

NAFLD is the most common chronic liver condition in the world. If you have it, you are far from alone.

Estimates vary by region and method, but researchers believe NAFLD affects roughly **one in three adults worldwide** — on the order of 30% or more of the global adult population. Rates have climbed alongside rising rates of obesity and type 2 diabetes, and the condition is being found in younger and younger people.

Groups with higher rates

- **People with type 2 diabetes.** Many studies find that more than half of people with type 2 diabetes have NAFLD, and they are more likely to have the progressive NASH form.
- **People carrying excess weight,** particularly around the abdomen.
- **People with metabolic syndrome** — the cluster of higher blood sugar, higher blood pressure, abnormal cholesterol, and central weight gain.
- **Certain family and genetic backgrounds.** Some inherited gene variants raise risk, and prevalence differs across populations partly for genetic reasons.

DID YOU KNOW?

NAFLD is **not only an adult condition**. With rising childhood obesity, it has become one of the most common chronic liver conditions in children and teenagers in many countries.

A growing reason for liver transplants

As other causes of liver disease (such as hepatitis C) become more treatable, NASH-related liver disease has become one of the fastest-growing reasons people need a liver transplant.

KEY POINT

Because NAFLD is so common and so quiet, many people have it without knowing. Awareness is one of the most powerful tools available.

SECTION 6

Causes & Risk Factors

NAFLD develops when the body's handling of energy goes out of balance and the liver ends up storing more fat than it can comfortably manage. Several factors usually work together.

The central engine: insulin resistance

Insulin helps your cells take in sugar from the blood for energy. In **insulin resistance**, cells respond less well to insulin, so the body makes more of it to compensate. This pushes the liver to take in more fatty acids and manufacture new fat, while making it harder to clear fat away. Insulin resistance is the thread connecting NAFLD to diabetes, weight, and heart disease.

Common risk factors

- **Excess weight**, especially around the abdomen.
- **Type 2 diabetes or prediabetes**.
- **High blood pressure**.
- **Abnormal cholesterol**, particularly high triglycerides or low HDL ("good") cholesterol.
- **Metabolic syndrome** — the cluster of the above.

To diagnose the current MASLD/NAFLD spectrum, clinicians look for a fatty liver *plus at least one* of these cardiometabolic risk factors — not all five are required, just one.

Other contributors

- **Genetics**. Variants in genes such as *PNPLA3* and *TM6SF2* can make the liver more prone to storing fat and to scarring.
- **Diet patterns** high in added sugars (especially sugar-sweetened drinks and fructose), refined carbohydrates, and ultra-processed foods.
- **Low physical activity** and long periods of sitting.

- **Disrupted sleep**, including obstructive sleep apnea.
- **Polycystic ovary syndrome (PCOS)** and certain hormonal or thyroid conditions.

DID YOU KNOW? — "LEAN" NAFLD

An estimated 1 in 10 to 1 in 5 people with NAFLD have a **normal body weight**. In these cases, genetics and body-fat distribution play a larger role. A normal number on the scale does not rule NAFLD out.

TALK WITH YOUR CLINICIAN

If several of these risk factors sound familiar, it's reasonable to ask your primary-care provider whether your liver should be checked — especially if you also have type 2 diabetes.

SECTION 7 The Metabolic Connection & Your Heart

One of the most important — and most surprising — facts about NAFLD is this: for most people with the condition, the greatest threat to health is not the liver at all. It's the heart and blood vessels.

NAFLD rarely travels alone. It clusters with the other features of **metabolic syndrome**, and shares the same root of insulin resistance. Because of this, NAFLD is best thought of as the liver's expression of a body-wide metabolic imbalance.

NAFLD and cardiovascular disease

People with NAFLD have a higher risk of heart attacks, strokes, and other cardiovascular problems. In fact, **cardiovascular disease is the leading cause of death among people with NAFLD** — more common than death from liver disease itself. This is why good NAFLD care always includes attention to blood pressure, cholesterol, and blood sugar.

KEY POINT

Managing NAFLD is not only about protecting your liver. The same steps — improving blood sugar, blood pressure, cholesterol, weight, and activity — also protect your heart, which is statistically the bigger danger.

Other connected conditions

- **Type 2 diabetes.** The relationship runs both ways — each condition raises the risk and severity of the other.
- **Chronic kidney disease.**
- **Certain cancers**, beyond liver cancer, linked through shared metabolic pathways.
- **Sleep apnea and PCOS.**

DID YOU KNOW?

Because these conditions are so intertwined, a visit about your liver may lead your clinician to also check your heart-disease risk, kidney function, and diabetes control. That's good, joined-up care — not a sign that something has gone wrong.

SECTION 8

Signs, Symptoms & Why It's Often Silent

Most people with NAFLD feel completely normal. The condition is usually discovered by chance, not because of symptoms.

In earlier stages, NAFLD typically causes **no symptoms at all**. When symptoms do appear, they tend to be vague:

- **Fatigue** or a general lack of energy.
- A dull ache or fullness in the **upper right side of the abdomen**.
- Difficulty concentrating, sometimes described as "brain fog."

These are non-specific — many other things can cause them — so they aren't a reliable way to detect the condition. Blood tests and imaging are what actually reveal it.

Signs that suggest more advanced disease

- Yellowing of the skin or eyes (jaundice).
- Swelling of the abdomen or legs and ankles.
- Easy bruising or bleeding.
- Persistent itching.
- Confusion, disorientation, or unusual drowsiness.
- Vomiting blood or passing black, tarry stools.

SEEK MEDICAL CARE PROMPTLY

Signs such as vomiting blood, black tarry stools, sudden confusion, or a swollen, painful abdomen can indicate a serious complication and warrant prompt medical attention. This guide cannot assess urgency — a clinician can.

KEY POINT

Feeling fine does **not** mean the liver is fine. Because NAFLD is usually silent, testing — not symptoms — is how it is found.

SECTION 9 How NAFLD Is Diagnosed

Diagnosis has two goals: confirming that fat is present and ruling out other causes, and — most importantly — finding out whether any scarring (fibrosis) has developed.

Step 1 — The story and a physical exam

A clinician will ask about weight history, diet, activity, alcohol use, medications, family history, and other conditions such as diabetes.

Step 2 — Blood tests

- **Liver enzymes** (ALT, AST, GGT, ALP). These can be mildly raised — but many people with NAFLD, even with scarring, have *normal* enzyme levels.
- **Tests to exclude other causes**, such as viral hepatitis B and C, autoimmune liver disease, iron overload (hemochromatosis), and thyroid problems.
- **Metabolic tests**, including fasting glucose or HbA1c, a cholesterol/triglyceride panel, and liver function markers such as albumin, bilirubin, and platelet count.

Step 3 — Estimating the risk of scarring

- **FIB-4 index**. A score from age and three routine blood values (AST, ALT, platelet count) that sorts people into low, indeterminate, or higher likelihood of advanced scarring.
- **Other blood-based scores** may also be used.

Step 4 — Imaging

Test	What it shows
Ultrasound	Good at detecting moderate-to-large amounts of liver fat; a common first scan.
Transient elastography (FibroScan/VCTE)	A quick, painless bedside test measuring liver stiffness as a stand-in for scarring.
MRI-based tests	Highly accurate measurement of both fat and stiffness; often used in specialist care.

Step 5 — Liver biopsy (only sometimes)

A biopsy remains the most detailed way to see inflammation and scarring under a microscope, but is now reserved for situations where the diagnosis is unclear or precise staging is needed, since non-invasive tests have improved so much.

DID YOU KNOW?

A typical journey looks like this: a routine test hints at a fatty liver → blood work and a FIB-4 score are done → if scarring looks possible, an elastography scan follows → and if concern remains, a referral to a liver specialist is made. Most people never need a biopsy.

TALK WITH YOUR CLINICIAN

Good questions to ask: "Do my results suggest any scarring?" "What is my FIB-4 score, and what does it mean for me?" and "How and when should we re-check?"

SECTION 10 Ruling Out Alcohol & Other Causes

The "non-alcoholic" in NAFLD is doing important work — a fatty liver can also be caused, or worsened, by alcohol or by other specific conditions. Getting this distinction right shapes the whole care plan.

Where alcohol fits

Many people have both metabolic risk factors *and* drink some alcohol. Under the current classification system, someone who meets NAFLD/MASLD criteria but also drinks a moderate-to-higher amount of alcohol falls into a distinct category called **MetALD**, recognizing that both factors likely contribute. When alcohol is the predominant driver, the diagnosis shifts to **alcohol-associated liver disease (ALD)** instead.

Category	Main driver(s)
NAFLD / MASLD	Metabolic factors; little or no alcohol.
MetALD	Both metabolic factors <i>and</i> moderate-to-higher alcohol intake.
ALD	Alcohol is the predominant cause.

TALK WITH YOUR CLINICIAN — HONESTLY

It can feel uncomfortable, but being candid about how much you drink helps your clinician classify the condition correctly and give advice that actually fits your situation. There is no judgment in an accurate picture — only better care.

Other causes worth ruling out

Before settling on a NAFLD diagnosis, clinicians also consider:

- **Certain medications** that can cause fatty liver in some people.
- **Viral hepatitis** (especially B and C).
- **Autoimmune liver conditions.**

- **Inherited conditions**, such as hemochromatosis (iron overload) or Wilson disease (copper overload).
- **Rapid weight loss, malnutrition, or specific metabolic disorders.**

KEY POINT

These categories are not rigid boxes. A person's situation can shift over time — for example, if alcohol intake or metabolic health changes — and their care should shift with it.

SECTION 11 Possible Complications

Most people with NAFLD will never develop serious liver complications. Understanding what can happen — and how rarely — helps put the condition in perspective.

Liver-related complications

- **Progression to cirrhosis.** In a minority of people, years of inflammation and scarring lead to cirrhosis (F4). Risk is highest in those with NASH and advancing fibrosis.
- **Complications of cirrhosis**, including ascites, variceal bleeding, hepatic encephalopathy, and jaundice.
- **Liver cancer**, whose risk rises substantially once cirrhosis is present, prompting regular surveillance.

Complications beyond the liver

- **Cardiovascular disease** — the most common cause of death in NAFLD.
- **Type 2 diabetes** and worsening blood-sugar control.
- **Chronic kidney disease.**

DID YOU KNOW?

For people with cirrhosis of any cause, doctors often recommend vaccination against hepatitis A and B and regular liver-cancer surveillance — typically an ultrasound every six months.

KEY POINT — KEEPING PERSPECTIVE

Having NAFLD does not mean these outcomes are likely. It means they are worth *preventing* — and the tools to do so are within reach for most people.

SECTION 12

Treatment & Management: The Big Picture

There is real reason for optimism. NAFLD often responds well to changes in metabolic health, and for the first time there are medicines specifically aimed at its more advanced form.

Layer 1 — The foundation: lifestyle and metabolic health

For nearly everyone, the cornerstone of treatment is improving the metabolic factors driving the disease. Weight change, where appropriate, has a dose-related effect on the liver:

Approximate body-weight reduction	Typical liver benefit reported in studies
Around 3-5%	Meaningful reduction in liver fat.
Around 7-10%	Reduction in inflammation; resolution of NASH in many people.
10% or more (sustained)	Best chance of improving fibrosis.

Figures are general research averages; individual results vary.

Layer 2 — Treating the conditions that travel with NAFLD

- **Blood sugar management**, since some diabetes medicines carry added liver and heart benefits.
- **Cholesterol management**. Statins are generally considered **safe** in NAFLD and important for lowering cardiovascular risk.
- **Blood pressure control**.

Layer 3 — Medications aimed at the liver disease itself

In 2024, the first medication designed specifically for NASH with moderate-to-advanced scarring received approval in the United States, for use alongside diet and exercise. Certain diabetes and weight-loss medications, including the GLP-1 class, have also shown liver benefits in studies. A specialist can advise whether any of these are appropriate for your situation.

Layer 4 — Procedures and advanced care

- **Metabolic (bariatric) surgery**, for eligible people with significant obesity.
- **Liver transplantation**, for carefully selected people with end-stage liver disease.

A WORD OF CAUTION ON MEDICINES AND SUPPLEMENTS

This guide cannot recommend specific drugs or doses. Please make these decisions with a qualified clinician, and be cautious about over-the-counter "liver detox" products.

KEY POINT

The most reliable, universally beneficial treatment remains improving metabolic health. Medicines are a powerful and growing addition — but work best *alongside* the foundation, not instead of it.

SECTION 13

Eating for Liver Health

No single food causes or cures NAFLD. What matters is the overall pattern of eating over weeks, months, and years.

The most studied pattern: Mediterranean-style eating

- Plenty of **vegetables, fruits, legumes, and whole grains**.
- **Healthy fats**, especially olive oil, nuts, and seeds, in place of butter and processed fats.
- **Fish and seafood** a couple of times a week, with poultry in moderation.
- Less **red and processed meat**, and fewer sweets and sugary drinks.

What to cut back on

Cut back on...	Why it matters for the liver
Sugar-sweetened drinks & added sugars	Fructose and rapidly absorbed sugars push the liver to make and store fat.
Ultra-processed foods	Often high in sugar, refined starch, and unhealthy fat.
Refined carbohydrates	Spike blood sugar and feed fat production.
Excess saturated fat	Found in fatty processed meats and many fried, packaged foods.

A few evidence-informed extras

- **Coffee**. Regular coffee (with limited added sugar) is linked in observational studies to lower rates of liver scarring.
- **Fiber**, supporting steadier blood sugar and gut health.
- **Portion awareness** rather than extreme restriction — very rapid weight loss can sometimes stress the liver.

TALK WITH A PROFESSIONAL

A registered dietitian can tailor these principles to your tastes, budget, culture, and other conditions. Ask your clinician whether a referral is possible.

NOTE

This section describes general dietary patterns for education only. If you have diabetes, kidney disease, or another condition, seek individualized advice before making significant changes.

SECTION 14

Moving More: Physical Activity

Exercise helps the liver in a special way: it can reduce liver fat even when the number on the scale barely changes.

Why activity works

Physical activity improves how the body uses insulin, burns fat that would otherwise accumulate in the liver, and reduces inflammation — with benefits shown **independent of weight loss**.

A practical target

- **Aerobic activity:** roughly 150 minutes per week of moderate activity (brisk walking, cycling, swimming), built up gradually.
- **Strength / resistance training** two or more days a week.
- **Less sitting**, breaking up long stretches with short movement breaks.

KEY POINT

The best exercise is the one you'll actually keep doing. Consistency matters more than intensity — walking counts, gardening counts, dancing counts.

BEFORE YOU START

If you have heart disease, are new to exercise, or have other health concerns, check with your clinician about what type and intensity is safe to begin with.

SECTION 15

Weight, Habits & Lasting Change

Knowing what to do is rarely the hard part. Doing it consistently, in a busy life, is where most of us struggle.

Set goals you can actually keep

- **Small and specific beats big and vague.** "A 15-minute walk after lunch on weekdays" is easier to sustain than "get fit."
- **Aim for direction, not perfection.** Even modest, sustained improvements help.
- **Anchor new habits to existing ones**, like tying a walk to your morning coffee.

Handle setbacks gently

Lapses are part of every long journey, not a sign of failure. What matters is returning to your routine. Self-compassion is a practical strategy, not just a nice idea.

Build support around you

- **Enlist people** — a friend, family member, or community group.
- **Use your care team** — dietitians, diabetes educators, and counselors.
- **Track what motivates you** — energy, sleep, and lab numbers, not only the scale.

DID YOU KNOW?

The Liver and Kidneys Hope Foundation's community programs exist partly for this reason · change is easier when you're not doing it alone.

A NOTE ON SAFETY

Extreme diets, crash weight loss, and unregulated "fat-burner" or "detox" products can be counter-productive or even harmful. Sustainable, moderate change works better over time.

SECTION 16 Alcohol, Medications & Supplements

Your liver processes nearly everything you consume. A few mindful choices here can make a real difference.

Alcohol

Because the liver is already under metabolic strain in NAFLD, alcohol adds a second source of stress. Even amounts once considered "moderate" may contribute to injury, and higher intake moves a person toward the MetALD or ALD categories described in Section 10. Many clinicians advise minimizing or avoiding alcohol, especially once significant scarring is present.

Everyday medications

- **Acetaminophen (paracetamol)** is generally acceptable in normal doses for many people, but ask your clinician what's safe for you, and watch for it hidden in combination cold-and-flu products.
- Tell every prescriber and pharmacist that you have a liver condition.
- Don't stop prescribed medicines (such as statins) on your own — raise concerns with your clinician first.

"LIVER DETOX" AND HERBAL PRODUCTS — BE CAREFUL

Products marketed to "cleanse" or "detox" the liver are not proven to help NAFLD, and some supplements have caused liver injury outright. **Check with a clinician or pharmacist before taking any supplement.**

Vaccinations and other protections

People with chronic liver conditions are often advised to stay current on vaccinations, including hepatitis A and B.

TALK WITH YOUR CLINICIAN OR PHARMACIST

Bring a full list of everything you take — prescriptions, over-the-counter medicines, vitamins, and supplements — to your appointments.

SECTION 17 Monitoring & Your Care Team

NAFLD is a long-term condition, monitored over time rather than "fixed" in a single visit.

What monitoring usually involves

- **Periodic blood tests** tracking liver enzymes, metabolic markers, and fibrosis scores.
- **Repeat elastography or imaging** at intervals your clinician judges appropriate.
- **Attention to the whole metabolic picture** — blood pressure, cholesterol, blood sugar, and weight.
- **For those with cirrhosis**, additional surveillance including regular liver-cancer screening.

Who might be on your team

Primary care provider

Hepatologist / gastroenterologist

Registered dietitian

Diabetes / endocrine specialist

Cardiologist

Nurse educator

Pharmacist

Mental-health professional

Community & peer support

Not everyone needs all of these. Many people are managed well in primary care, with a specialist involved when scarring is a concern.

KEY POINT — YOU ARE THE CONSTANT

Clinicians come and go, but you're present at every appointment. Keeping your own records — lab results, scores, medications, and questions — makes your care smoother.

MAKE THE MOST OF APPOINTMENTS

Write your top two or three questions before each visit. Ask for numbers and what they mean.

SECTION 18 Special Situations

NAFLD looks a little different across different groups.

Children and teenagers

With rising childhood obesity, NAFLD has become one of the more common chronic liver conditions in young people. Care centers on the whole family, and pediatric specialists guide diagnosis and treatment.

"Lean" NAFLD

A meaningful minority of people with NAFLD have a normal body weight, more often shaped by genetics and where the body stores fat. A normal weight should never be a reason to dismiss liver findings.

People with type 2 diabetes

Because NAFLD is so common and often more advanced in this group, many guidelines suggest actively checking for liver scarring, for example calculating a FIB-4 score.

Pregnancy

NAFLD can be associated with certain pregnancy complications, and some medications used for metabolic health aren't suitable during pregnancy. Discuss your liver health with your care team if pregnant or planning to be.

Older adults

NAFLD often sits alongside several other conditions and medications in older age. Care emphasizes balancing benefits and risks while maintaining strength, mobility, and quality of life.

TALK WITH YOUR CLINICIAN

If any of these situations apply to you or a family member, mention it directly — it may change what testing or treatment makes sense.

SECTION 19 Living Well: Mind, Mood & Community

A diagnosis touches more than the body. Caring for your emotional wellbeing is a legitimate, important part of living well with NAFLD.

Feelings are normal — and worth tending

It's common to feel worried, frustrated, or even ashamed after a diagnosis, particularly given the stigmatizing language the condition has carried in the past. These feelings are understandable, and worth addressing, since stress and low mood can make healthy routines harder to maintain.

Practical supports

- **Talk to someone** — a trusted person, support group, or counselor.
- **Protect sleep**, which supports both metabolic health and mood.
- **Manage stress** in ways that work for you.
- **Reframe the goal** as energy, longevity, and wellbeing — not a number.

On stigma

NAFLD is a medical condition with strong biological and genetic roots — not a character flaw. The shift toward newer, less stigmatizing language reflects that, and you deserve care delivered with respect.

IF YOU ARE STRUGGLING

If you are experiencing persistent low mood, hopelessness, or thoughts of harming yourself, please reach out to a healthcare professional or a local crisis line. Support is available.

COMMUNITY MATTERS

Connection is protective. Foundations, patient groups, and peer networks — including programs offered by The Liver and Kidneys Hope Foundation · exist so no one has to navigate liver health in isolation.

SECTION 20 Prevention

Much of what helps treat NAFLD also helps prevent it. The same handful of habits do most of the work.

- **Aim for a healthy weight**, watching waist size in particular.
- **Eat mostly whole foods** in a Mediterranean-style pattern, easy on sugary drinks and ultra-processed foods.
- **Move regularly**, combining aerobic activity with some strength work.
- **Keep your metabolic numbers in range** with your clinician's help.
- **Be moderate with alcohol**, or avoid it.
- **Don't smoke.**
- **Prioritize sleep**, addressing problems like sleep apnea.

Know your risk, get checked

If you have risk factors — especially type 2 diabetes, excess weight, or metabolic syndrome — a simple conversation with your clinician about whether your liver should be assessed is one of the most valuable preventive steps you can take.

KEY POINT

Prevention is not about perfection. It's a set of ordinary, repeatable choices that protect your liver, your heart, and your future all at once.

SECTION 21 Myths vs. Facts

Misunderstandings about fatty liver disease are widespread. Clearing them up reduces fear and encourages the right action.

Myth	Fact
"NAFLD and MASLD are two different diseases."	They are the same condition. MASLD is simply the updated, 2023 name for what was previously called NAFLD.
"Only heavy drinkers get a fatty liver."	NAFLD is, by definition, driven by metabolic factors in people who drink little or no alcohol.
"If I feel fine, my liver is fine."	NAFLD is usually silent. People can have significant scarring while feeling completely well.
"Thin people can't have it."	An estimated 1 in 10 to 1 in 5 people with NAFLD have a normal weight ("lean" NAFLD).
"There's nothing I can do about it."	Early NAFLD is often reversible, and improving metabolic health helps at every stage.
"A detox tea will cleanse my liver."	No supplement is proven to treat NAFLD, and some have caused liver injury.
"NAFLD is only a liver problem."	It's closely tied to heart disease, diabetes, and kidney health.
"My doctor said MASLD, so I must have a different, newer disease."	No — MASLD is not a new disease. It is the same condition previously called NAFLD, simply renamed for accuracy in 2023.
"Losing weight fast is best for my liver."	Very rapid weight loss can actually stress the liver. Steady, sustainable change is safer and more effective.

KEY POINT

If you remember only one thing: NAFLD (now more precisely called MASLD) is common, usually silent, closely tied to overall metabolic health, and — especially early — very often improvable.

CLOSING

Questions, Glossary, Resources & Disclaimer

Questions you might ask your doctor

- Do my results suggest I have NAFLD (MASLD), and how was that decided?
- Is there any sign of liver scarring? What is my FIB-4 score?
- Do I need any imaging, such as a FibroScan, or a referral to a liver specialist?
- What are my numbers for blood sugar, blood pressure, and cholesterol?
- What changes would help me most, and can I see a dietitian?
- Are any of my current medicines or supplements a concern for my liver?
- Should I be vaccinated against hepatitis A or B?
- How and when will we re-check my liver?

Glossary

Term	Plain-language meaning
ALT / AST	Liver enzymes measured in blood; may be normal even in NAFLD.
Cirrhosis	Advanced, permanent liver scarring (fibrosis stage F4).
Elastography (FibroScan/ VCTE)	A painless scan measuring liver stiffness as a stand-in for scarring.
Fibrosis	Scar tissue in the liver, graded F0 (none) to F4 (cirrhosis).
FIB-4	A score from age and routine blood tests estimating the chance of advanced scarring.
MASLD	Metabolic dysfunction-Associated Steatotic Liver Disease — the current name for NAFLD.
MASH	The current name for NASH — the inflamed, more active form of NAFLD/MASLD.
MetALD	NAFLD/MASLD in a person who also drinks moderate-to-higher amounts of alcohol.
NAFLD	Non-Alcoholic Fatty Liver Disease — the classic name for this guide's subject, now called MASLD.
NASH	Non-Alcoholic SteatoHepatitis — the classic name for MASH.
Steatosis	The medical word for fat accumulation — here, in the liver.

About The Liver and Kidneys Hope Foundation

The Liver and Kidneys Hope Foundation (TLHF) is a Nevada-based 501(c)(3) nonprofit dedicated to liver-health education, community support, and outreach. Through educational materials like this guide, community programming, our chapter network, volunteer efforts, and fundraising initiatives, we work to raise awareness of liver conditions and support the people affected by them. The Foundation is not a medical provider and does not deliver clinical care.

A NOTE ON SOURCES AND CURRENCY

This guide reflects widely accepted, general medical understanding intended for patient education, including the 2023 update to disease terminology. It does not cite individual studies. For the most current, individualized information, your healthcare professional is the best resource.

Full disclaimer

PLEASE READ

This publication is provided by The Liver and Kidneys Hope Foundation for **general educational purposes only**. It is **not medical advice** and is not a substitute for professional diagnosis, treatment, or the judgment of a qualified, licensed healthcare provider who knows your personal history. The Liver and Kidneys Hope Foundation is **not a medical provider** and does not practice medicine, provide clinical services, or establish a provider-patient relationship through this material.

Do not use this guide to diagnose or treat a health problem or disease, and do not disregard or delay seeking professional medical advice because of something you have read here. If you think you may have a medical emergency, contact your local emergency services immediately.

The Foundation makes no warranties about the completeness, accuracy, or currency of this information and accepts no liability for actions taken based on it. Always consult your own healthcare professional.

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