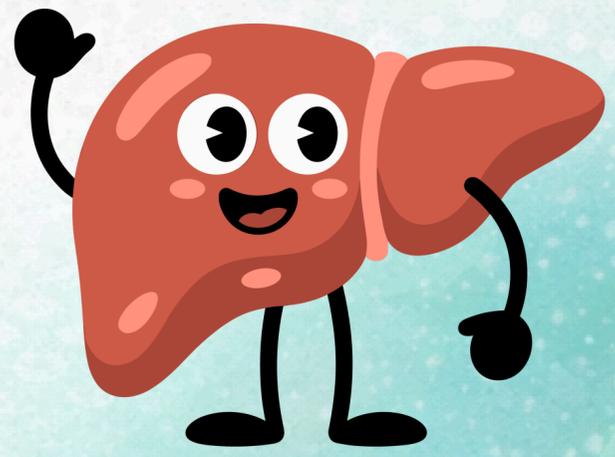


UNDERSTANDING FATTY LIVER PROGRESSION



What is Fatty Liver Disease?

Fatty liver disease, now called **Metabolic-Associated Steatotic Liver Disease (MASLD)** is a condition where too much fat builds up inside the liver cells. It is considered present when fat makes up more than 5% of the liver's weight ⁽¹⁾

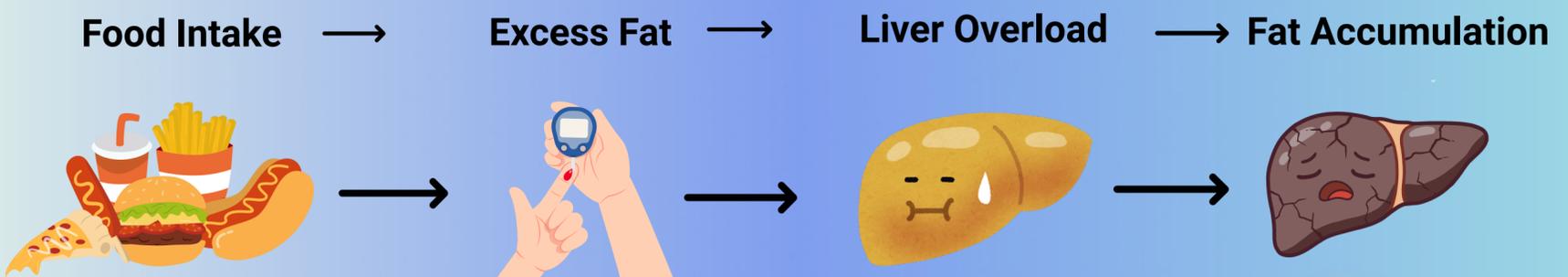
One of the most common liver conditions in the world ⁽²⁾



1 in 3 Adults Affecting Globally ⁽²⁾

And most of the people are completely unaware they have it ⁽²⁾

How does it develop? ^(1,3)



MASLD Linked to Metabolic Syndrome like ⁽¹⁾



Obesity



Type 2 Diabetes



High Blood Triglycerides



High Blood Pressure

Why it goes unnoticed? ⁽³⁾

No Pain **No Symptoms**

Only diagnosed through a blood test or an ultrasound done for a completely different reason



This is why **understanding fatty liver** matters knowing it exists is the first step toward preventing it from progressing. ⁽²⁾



References

1. EASL-EASD-EASO Clinical Practice Guidelines on the Management of MASLD. J Hepatol. 2024;81:492–542. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11474762/> [Open Access]
2. Younossi ZM et al. Epidemiology of MASLD. Clin Mol Hepatol. 2025;31(Suppl):S32–S50. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11925453/> [Open Access]
3. Chan WK et al. MASLD: A State-of-the-Art Review. J Obes Metab Syndr. 2023;32(3):197–213. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10583766/> [Open Access]

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How Fatty Liver Progresses

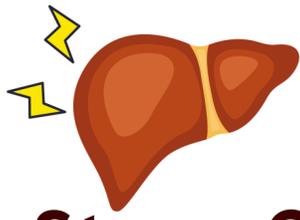
Fatty liver does not stay the same in every person



Stage 1

Steatosis

Fat accumulation



Stage 2

MASH⁽¹⁾

Inflamed Liver



Stage 3

Fibrosis

Scarred Liver



Stage 4

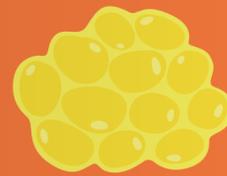
Cirrhosis^(1,2)

Cirrhotic Liver

Stage 1 : STEATOSIS

Fat accumulation

- Fat builds up in the liver.
- No inflammation.
- Reversible⁽¹⁾



Stage 2 : MASH

Inflammation & Cell Injury

- Liver become inflamed and damaged.
- Affects 13-20% of people with fatty liver.⁽²⁾



Stage 3 : FIBROSIS

Scar Tissue Formation

- Scar tissue develop, graded F1 to F3.
- Increases serious risk of complications.^(1,3)



Stage 4 : CIRRHOSIS

Severe Scarring

- Excessive scarring , liver failure risk, possible liver cancer.⁽¹⁾



Progression is not inevitable⁽³⁾

- Not everyone with fatty liver will reach cirrhosis.
- The speed varies for each person.
- Understanding the stages helps guide for better decisions.

References

1. EASL-EASD-EASO Clinical Practice Guidelines on the Management of MASLD. J Hepatol. 2024;81:492–542. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11474762/> [Open Access]
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What Speeds Up or Slows Down Progression?

Several factors influence how quickly or slowly fatty liver progresses. Some of these are within our control, and some are not. Being aware of them can help guide conversations with your healthcare team.^[1]

Factors that may accelerate progression

 Poorly controlled type 2 diabetes or insulin resistance.^(1,2)

Continued weight gain, particularly around the abdomen.⁽¹⁾ 

 A diet high in sugar, refined carbohydrates, and processed foods.⁽²⁾

Physical inactivity.⁽¹⁾ 

 Regular alcohol consumption, even moderate amounts can worsen liver inflammation⁽¹⁾

Certain genetic factors (e.g. the PNPLA3 gene variant) that increase susceptibility 

Factors that may slow or halt progression

Even a modest **weight loss of 5–7% of body weight** has been shown to meaningfully reduce liver fat and inflammation.^(2,3) 



Regular physical activity of at least 150 minutes of moderate exercise per week helps reduce liver fat independently of weight loss⁽²⁾

Good control of blood sugar, blood pressure, and cholesterol reduces the metabolic burden on the liver⁽¹⁾



A Mediterranean-style diet rich in vegetables, fish, olive oil, and whole grains is associated with less liver fat and inflammation.⁽²⁾



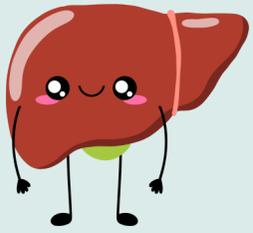
A note on monitoring :

Regular check-ups with your doctor allow early detection of any change in fibrosis stage, often through simple blood tests or a FibroScan, a quick and painless procedure that measures liver stiffness.⁽¹⁾

References

1. EASL-EASD-EASO Clinical Practice Guidelines on the Management of MASLD. J Hepatol. 2024;81:492–542. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11474762/> [Open Access]
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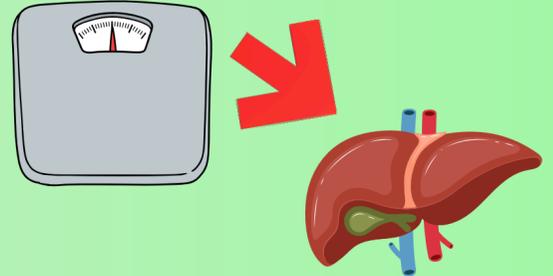


Can Fatty Liver Be Treated or Reversed?

One of the most encouraging aspects of fatty liver disease is that, particularly in its early stages, it responds well to treatment and can even be fully reversed. The liver is a resilient organ with a remarkable capacity to repair itself when the conditions that caused the damage are addressed.^[1]

What the evidence tells us:

- Losing 7–10% of body weight can reduce liver fat, inflammation & reverse early-stage fibrosis (F1–F2).^[1,2]
- 10% or more weight loss can regress fibrosis, even at advanced stages (F3).^[2]
- GLP-1 medications can reduce liver fat and inflammation.^[1]



At more advanced stages:

- **Cirrhosis (Stage 4)** is harder to reverse
- **Regular monitoring** is vital to catch complications
- including six-monthly liver ultrasounds to screen for liver cancer, and endoscopy to check for complications such as enlarged veins.^[1,2]



What this means for you:



No matter your stage, there are steps you can take to improve liver health.

Talk to your doctor about your treatment options!^[3]

References

1. EASL-EASD-EASO Clinical Practice Guidelines on the Management of MASLD. *J Hepatol.* 2024;81:492–542.

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