

# **Fatty Liver: The Medical Wake-Up Call Behind Lifestyle Healing**

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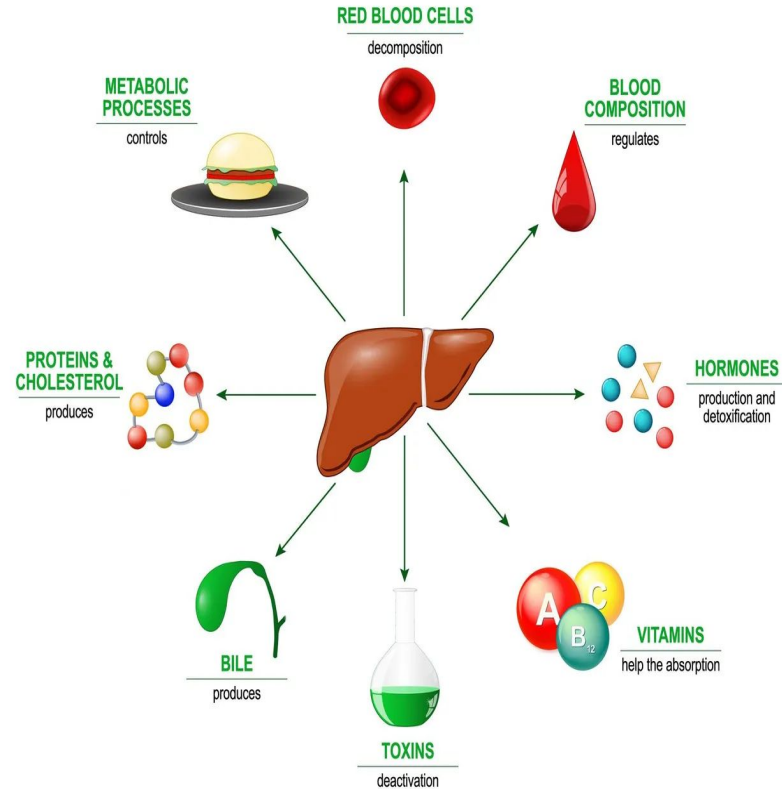
“You’ve probably heard of heart attacks and diabetes - but did you know one of the fastest-growing diseases in the world doesn’t cause any pain... until it’s too late?”

**FATTY LIVER**

# What is the LIVER ?



# Functions of the healthy liver

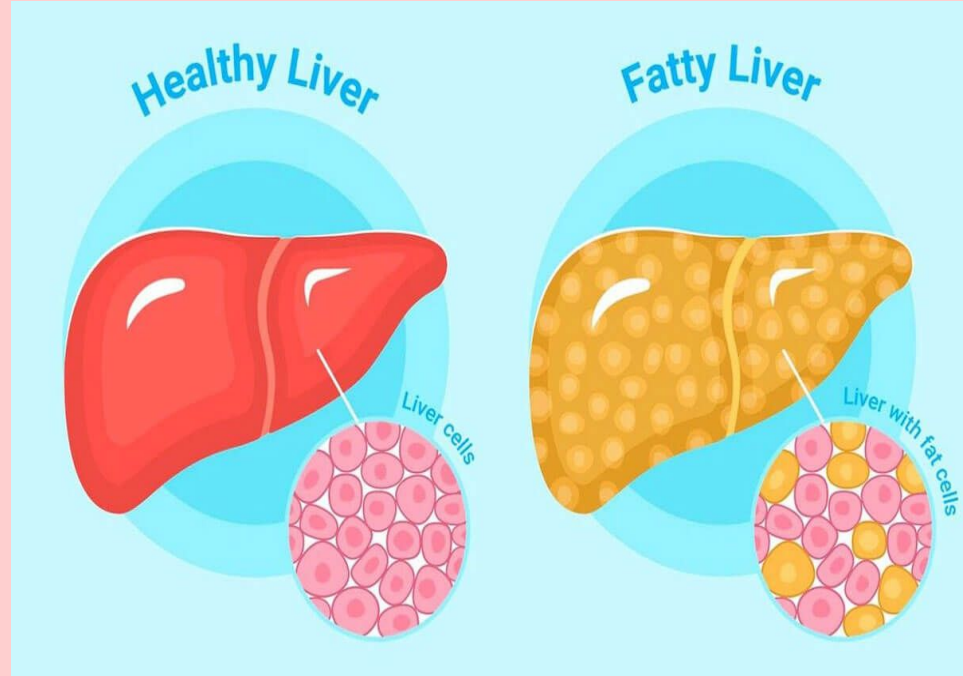


1. **Cleans your blood** – It removes toxins like drugs, alcohol, and waste.
2. **Makes bile** – A yellow-green fluid that helps break down fats in your food.
3. **Stores energy** – It stores sugar (glucose) as glycogen and releases it when your body needs energy.
4. **Makes proteins** – Like those that help your blood clot and your immune system work.
5. **Processes nutrients** – It helps turn the food you eat into nutrients your body can use.
6. **Breaks down old red blood cells** – It helps recycle parts of them.

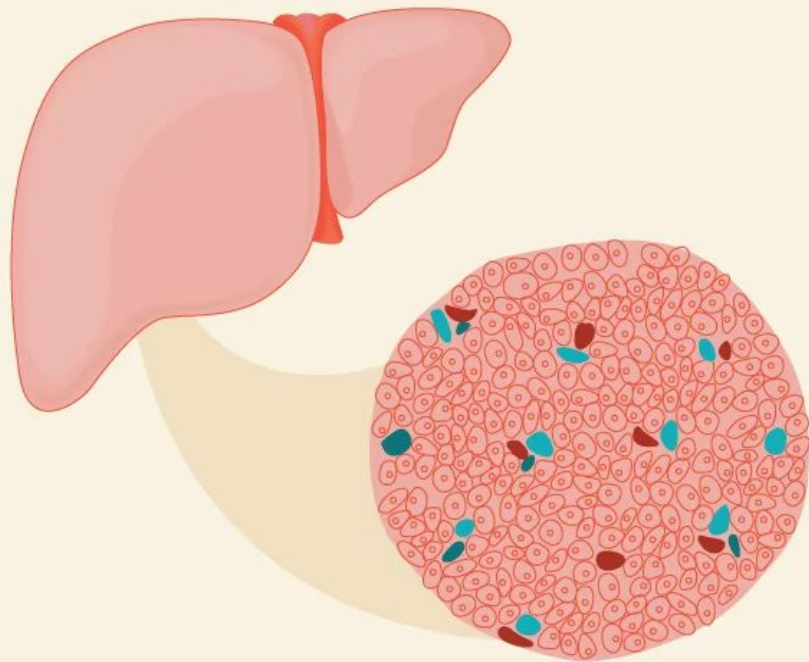
# What is Fatty liver ?

**Fatty liver** is a condition where **too much fat builds up in the liver**.

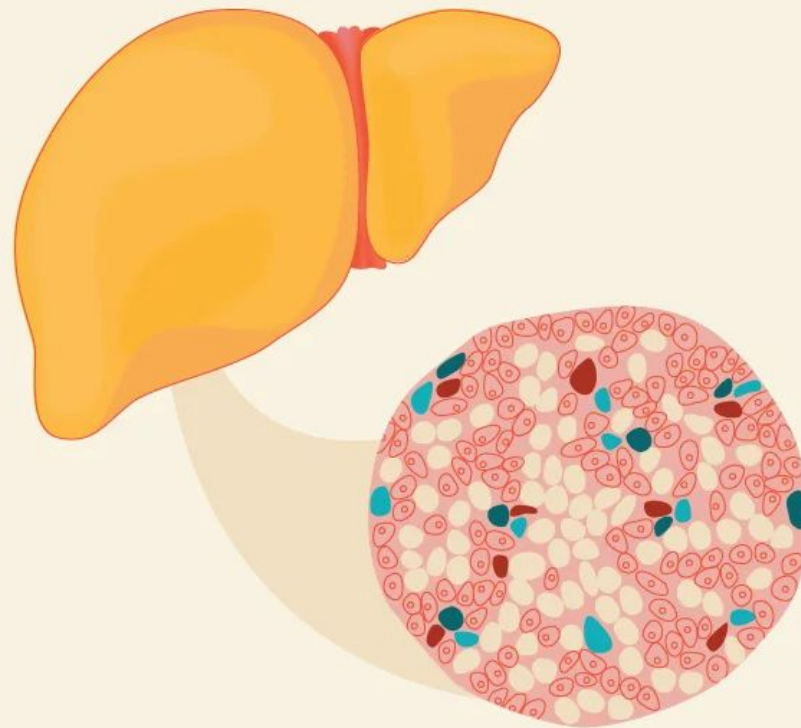
Normally, your liver has a small amount of fat. But if **more than 5–10% of the liver is fat**, it's called **fatty liver** (also known as **hepatic steatosis**)



## Healthy Liver



## Unhealthy Liver



# Why This Talk Matters

- 1 in 3 people may have fatty liver and not even know it.
- Most cases are **silent**—until it's too late.
- Fatty liver is now the **leading cause of Chronic Liver Disease globally**, overtaking alcohol.
- My goal today: to show how **medical insight + lifestyle choices = powerful prevention.**

# Why is it a problem ?

If too much fat stays in the liver, it can cause:

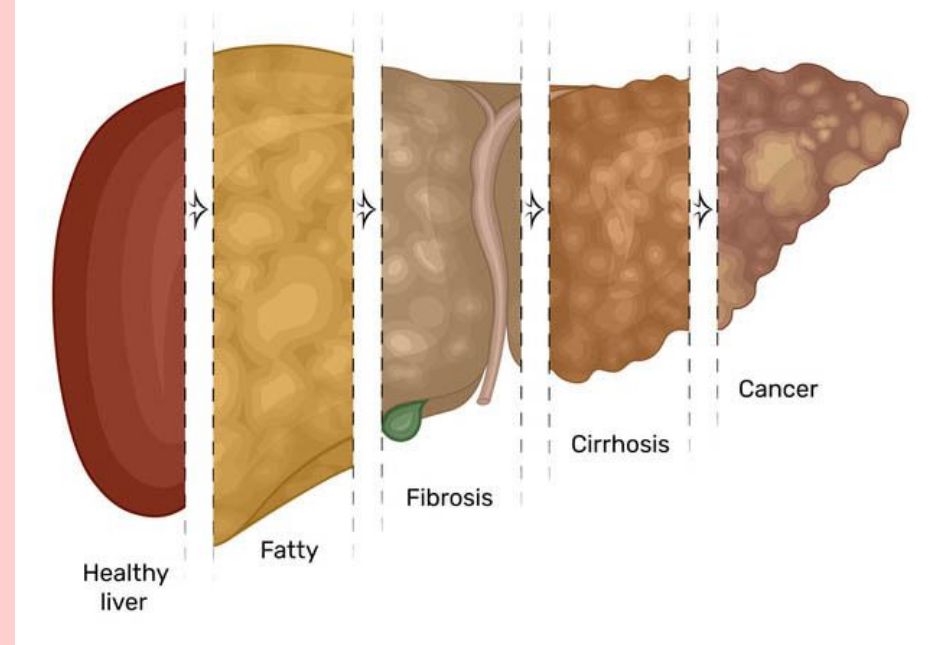
- **Inflammation** (called **steatohepatitis**)
- **Scarring** (called **fibrosis** or **cirrhosis**)
- Eventually, it can **damage the liver permanently** and lead to **liver failure (Cirrhosis)** or **liver cancer**



# Progression of Fatty Liver

## Stages:

- Simple Steatosis (Fat accumulation)
- Steatohepatitis (Inflammation)
- Fibrosis (Scar tissue formation)
- Cirrhosis (Advanced scarring leading to liver dysfunction)



# Risk Factors and Causes

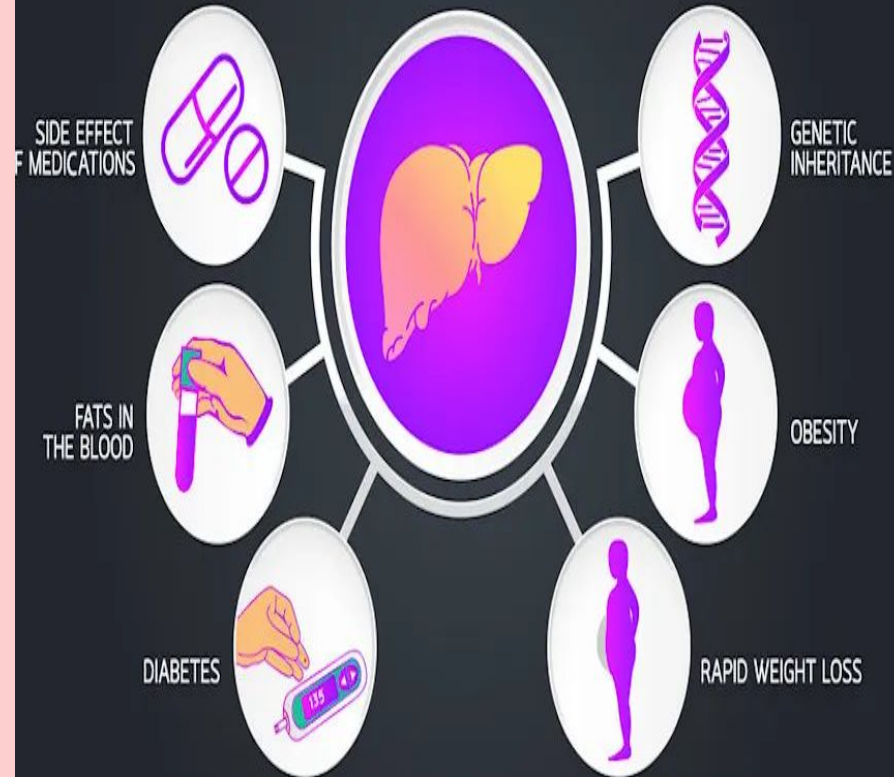
## Primary Causes:

- Obesity
- Type 2 Diabetes
- High cholesterol and triglycerides
- Excessive alcohol consumption

## Secondary Causes:

- Medications
- Rapid weight loss
- Malnutrition

# CAUSES OF FATTY LIVER



Fatty liver isn't just about the liver — it's part of a bigger condition called **metabolic syndrome**, which includes:

- Belly fat
- High blood sugar (diabetes or prediabetes)
- High cholesterol
- High blood pressure



# Symptoms and Diagnosis

- Often asymptomatic in early stages
- Fatigue
- Discomfort in the upper right abdomen

## **Symptoms (only in advanced cases)**

- Tired all the time
- Pain or heaviness in the upper right belly
- Unexplained weight loss
- Weakness
- Swelling in your belly or legs (in very advanced stages)

## How do you know if you have fatty liver?

- If you're overweight, have diabetes, or high cholesterol, it's smart to **ask your doctor to check your liver**—even if you feel fine.
- An **ultrasound + blood test** is usually enough to start.

# How do you know if you have fatty liver?

## 1. Blood Test (Liver Function Test)

- Doctors often **check your liver enzymes (ALT, AST)**.
- If they're **elevated**, it might be a sign of liver inflammation or fat buildup.

## 2. Imaging Tests

These help *look* at the liver:

- **Ultrasound** – the most common and easy test.
- **CT scan or MRI** – shows fat more clearly.
- **FibroScan** – a special ultrasound that checks for both **fat** and **stiffness** (scarring) in the liver.





Height:  
Weight:  
Physician:  
Other  
Fasting:



Yes

CAP (dB/m)

MEDIAN

IQR  
32

293

E (kPa)

MEDIAN

10.4

IQR  
1.3  
IQR/Med  
12%

9/18/2023 8:37:25 AM

Exam:

XL

SWF = 50Hz

Organ:

Operator:

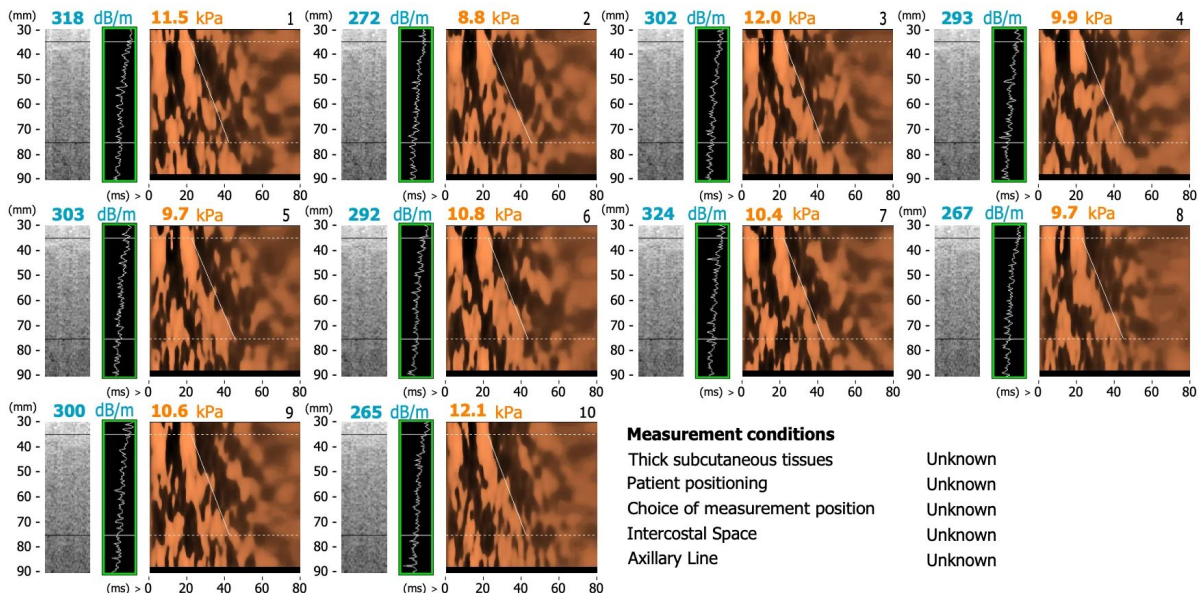
E-MEASUREMENTS:

Liver,

12

SWS:

1.87 m/s



FibroScan 530 Compact / SN: F80389

Probe XL+ / SN: 0092780

Software release number FS 4.1.2

FibroScan® is a medical device intended as an aid for the management of patients with liver disease. Measurements should be performed by a certified operator. The values obtained must be interpreted by a physician experienced in dealing with liver disease, taking into account the complete medical records of the patient, the number of valid measurements and their dispersion. Probes must be calibrated according to the manufacturer's recommendations.

echosens™



# Complications of Untreated Fatty Liver

## Potential Outcomes:

- Cirrhosis
- Liver failure
- Hepatocellular carcinoma (Liver cancer)
- Cardiovascular diseases

# The Power of Lifestyle

Fatty liver can be reversed in early stages, so it's **better to catch it early** and take action before it becomes serious.

# Here's how to treat fatty liver:

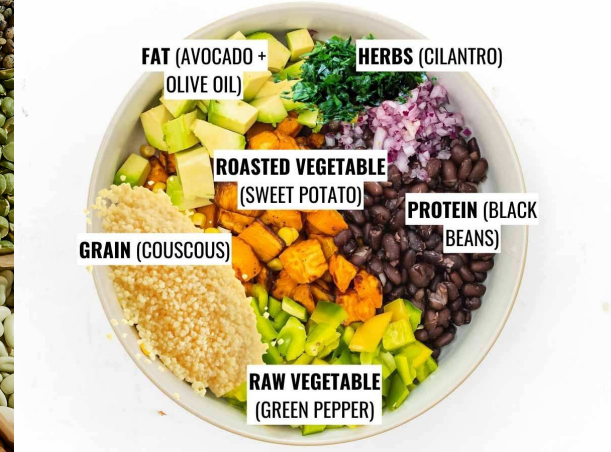
## 1. Lose weight (safely!)

- Losing just **5–10% of your body weight** can **reduce liver fat and inflammation**.
- Example: If you weigh 160 lbs, losing 8–16 lbs can make a big difference.
  - Aim for at least **30 minutes a day**, 5 days a week.
  - Walking, biking, swimming, yoga — all help **burn fat and improve insulin sensitivity**.

# Here's how to treat fatty liver:

## Eat a liver-friendly diet

- 🍎 **Eat more:** Fruits, vegetables, whole grains, lean protein (like tofu, beans), healthy fats (nuts, olive oil)
- Cut back on sugar, processed foods, and saturated fats.
- 🍭 **Avoid or limit:**
  - Sugar (soda, sweets, juice)
  - White bread, white rice
  - Fried and fatty foods
  - Red meat
  - Processed snacks



# Here's how to treat fatty liver:

## Avoid alcohol

- Even small amounts can **make fatty liver worse**, especially if it's alcoholic fatty liver.

## Check your medications

- Some medicines can affect the liver. Always tell your doctor all the drugs and supplements you take.

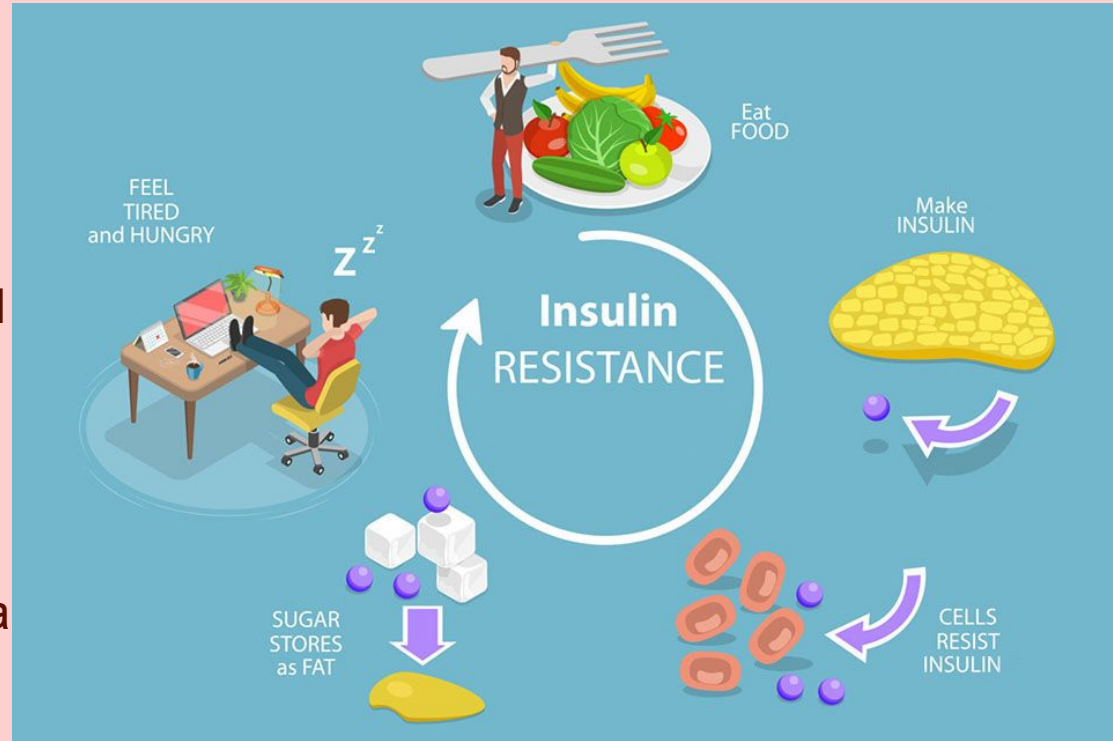
## Control related health issues

- If you have **diabetes, high cholesterol, or high blood pressure**, keeping them in control helps your liver too.

## Why controlling diabetes, cholesterol, and blood pressure helps your liver:

- High blood sugar = more **insulin resistance**
- Over time, this leads to **inflammation**, scarring, and can even turn into **NASH** (a more serious form of fatty liver)

💡 **Control tip:** Keep blood sugar steady with fewer sweets, carbs, and by exercising.

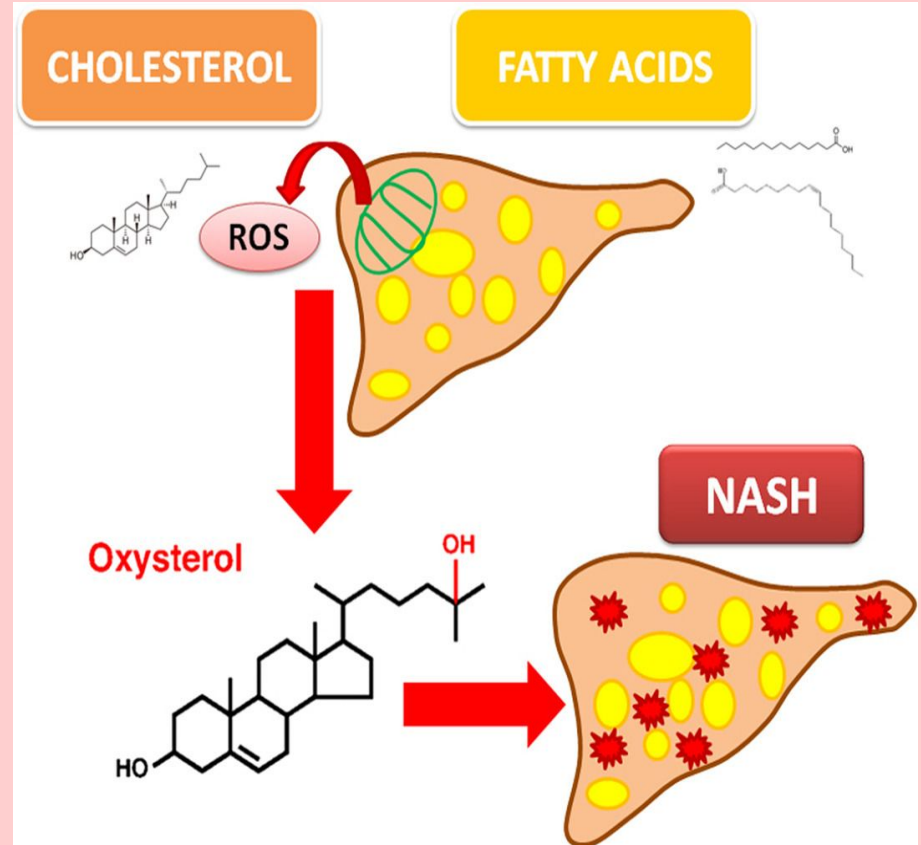


# Why controlling diabetes, cholesterol, and blood pressure helps your liver:

## High cholesterol (especially triglycerides)

- Too much **bad cholesterol (LDL)** or **triglycerides** = more fat floating in your blood
- That fat can **build up in your liver**, making fatty liver worse

💡 **Control tip:** Avoid fried food, sugar, and processed snacks. Eat oats, nuts, and more fiber.



Why controlling diabetes, cholesterol, and blood pressure helps your liver:

### High blood pressure

- High pressure **stresses blood vessels**, including in your liver
- It can **speed up liver damage**, especially if the liver is already inflamed

 **Control tip:** Lower salt, manage stress, and get active.



# What You Can Do Today

## *Your Action Plan*

- Get tested if you have risk factors
- Eat whole, real foods
- Move daily – walking, yoga, dancing
- Get enough sleep
- Limit alcohol
- Prioritize self-care and stress relief

# Functional Meets Medical

- **Yoga:** lowers cortisol, improves insulin sensitivity controlling a sugars
- **Mindfulness/Meditation:** reduces inflammation, supports sustainable lifestyle change
- **Plant-based, mindful eating:** anti-inflammatory, liver-supportive

# What About Medicine? A New Era for Liver Health

- Lifestyle remains the foundation of healing fatty liver.
- Patients with advanced disease, the first FDA-approved treatment
  - Rezdiffra (resmetirom), is now available.
  - Works by targeting fat and inflammation in the liver
  - Used in patients with moderate to advanced fibrosis
  - Recognizing fatty liver as a serious, treatable condition.
- This marks a new chapter in how we manage liver health.

# How to follow fatty liver and track progression

## 1. Blood Tests (Liver Function Tests – LFTs)

- **ALT & AST** are key liver enzymes.
- If they're **high**, it may mean inflammation.
- Goal: **See if they go down** over time with diet, exercise, weight loss.
- Noninvasive Blood Markers
  - a. Some doctors use scores like:
    - i. **FIB-4**
    - ii. **NAFLD Fibrosis Score**
  - b. These combine age, enzymes, platelets, etc., to estimate fibrosis risk — no needle needed.

# How to follow fatty liver and track progression

## 2. Imaging Tests

These help monitor how much fat or scarring is in the liver.

- **Ultrasound** – Simple, but not very sensitive for early changes.
- **FibroScan (elastography)** – Measures **stiffness** of the liver (how much fibrosis/scarring is present).
  - It gives two scores: one for **fat** and one for **fibrosis**.
- **MRI (with special sequences like PDFF or MR elastography)** – More precise but more expensive.
- Usually **every 6–12 months** if you're under follow-up care, or **sooner** if your enzymes are still high.

# Clinical Signs

- Watch for signs of **progression** like:
  - Belly swelling (ascites)
  - Yellowing of skin/eyes (jaundice)
  - Confusion (encephalopathy)
  - Fatigue, weight loss, or leg swelling

➡ If any of these appear, it may mean cirrhosis is developing — get medical attention right away.

# Conclusion

## The Liver is Listening—Are You?

- Fatty liver is silent, but **not irreversible**
- Medical science proves lifestyle works
- You are more in control of your health than you

“Ask your doctor. Change your habits. Protect your liver. It starts today.”