

Fatty Liver Disease : All you need to know!

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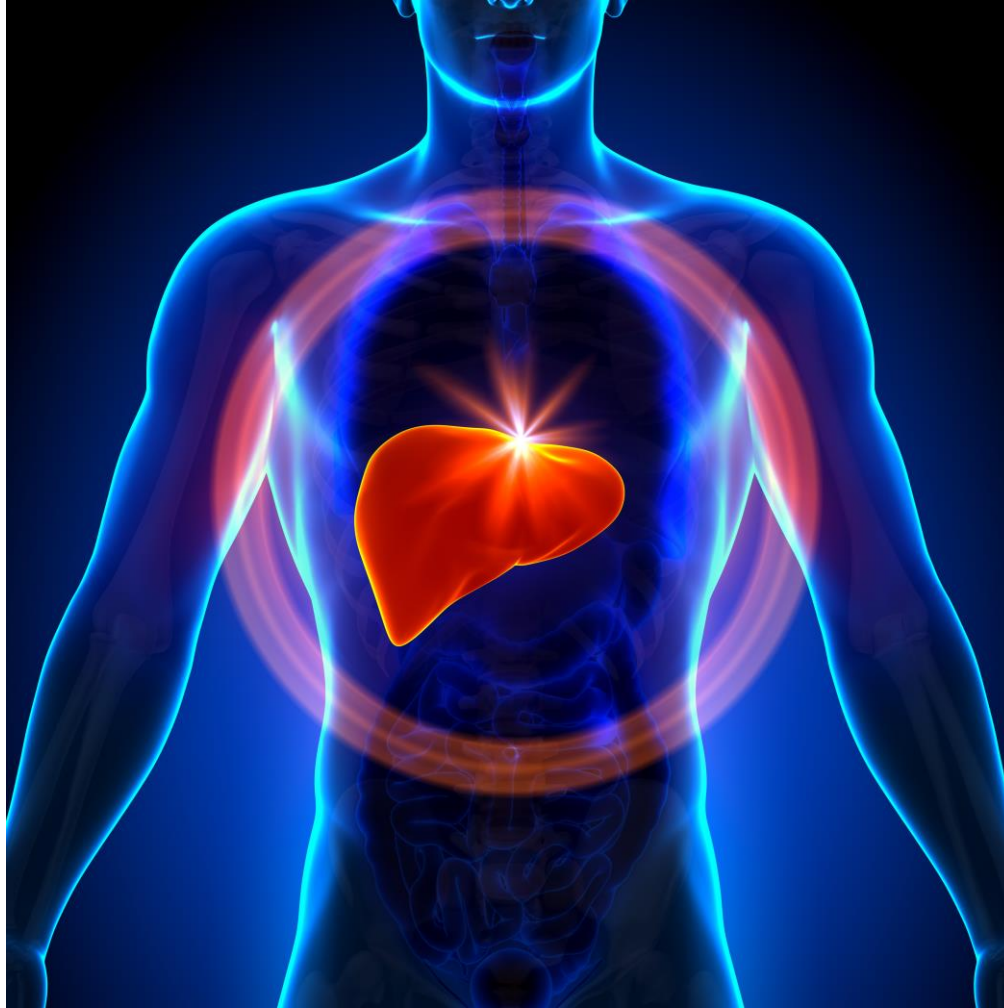
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Liver: Metabolic factory of our body



Functions of Liver

Metabolic

Storage

Excretory/
Secretory

Protective

Circulatory

Coagulation

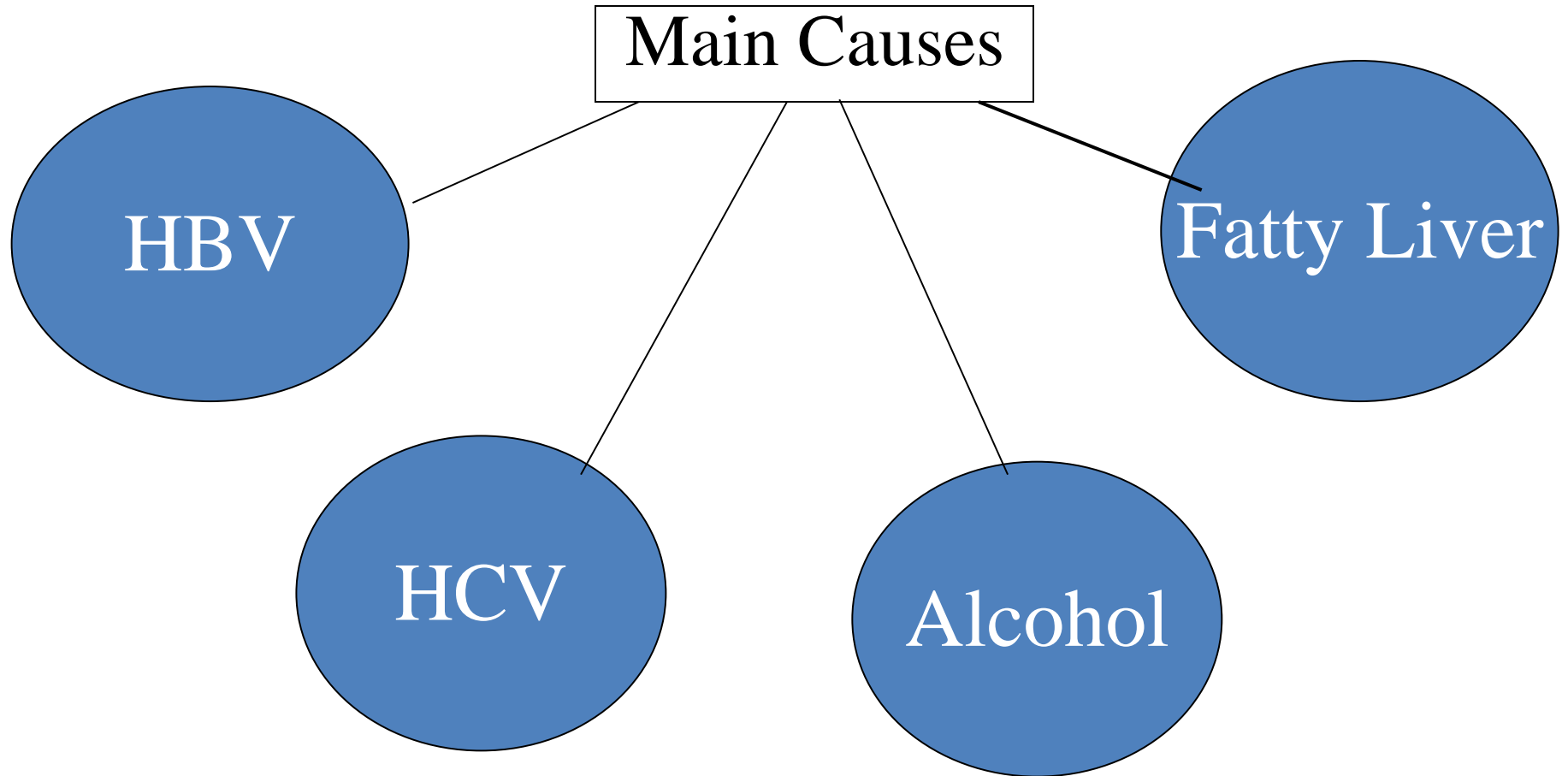
COMMON LIVER DISEASES

- **Hepatitis**.....
- **Alcoholic liver disease**.....
- **Fatty liver disease**.....
- **Non-alcoholic fatty liver disease**.....
- **Cirrhosis**.....
- **Liver cancer**.....

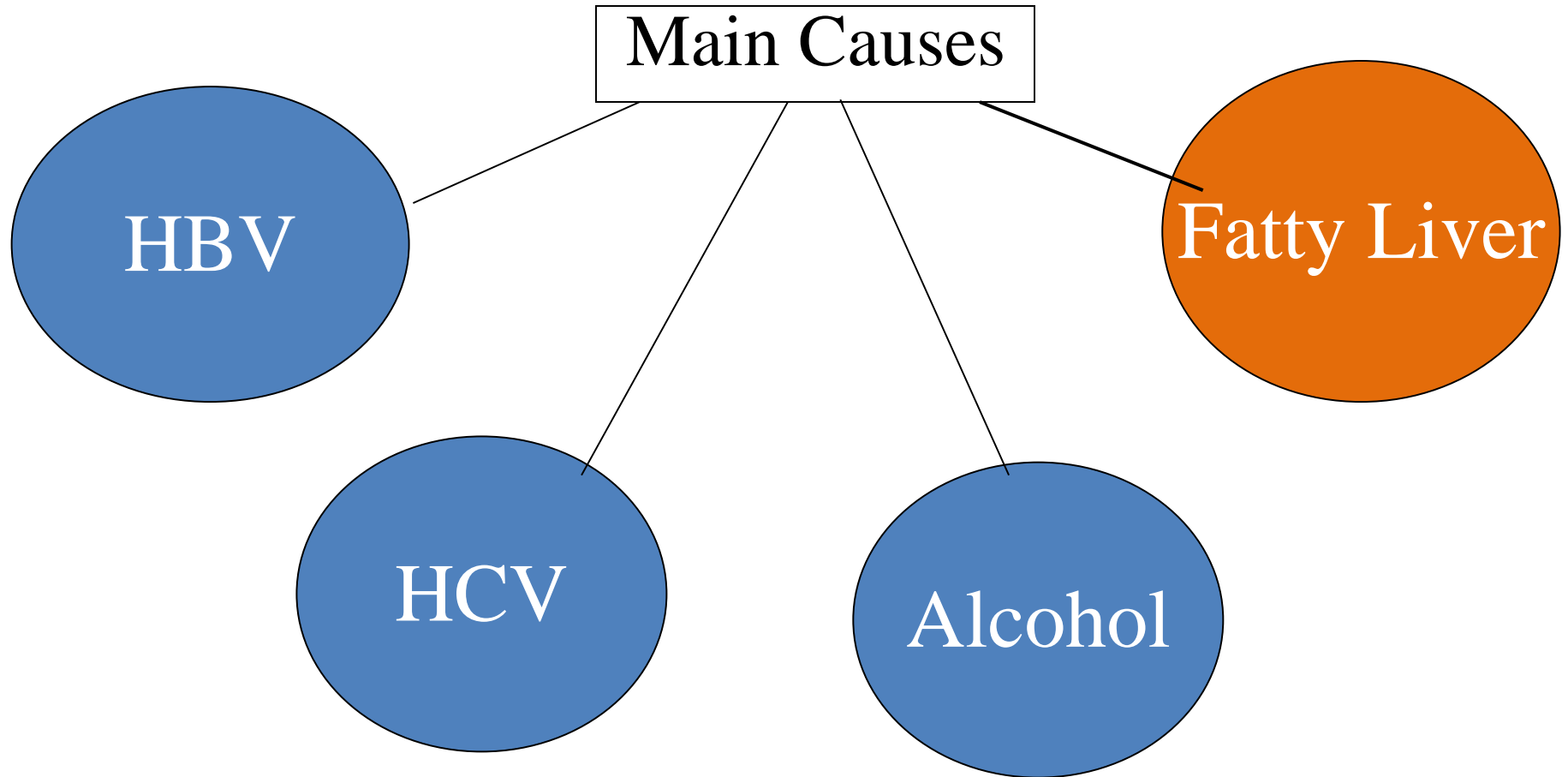
THOSE AT RISK

- **Overweight persons**.....
- **Those who consume alcohol**.....
- **Hepatitis B or Hepatitis C patients**.....
- **Fatty liver disease patients**.....

Main Causes of Liver Disease in India



Main Causes of Liver Diseases in India



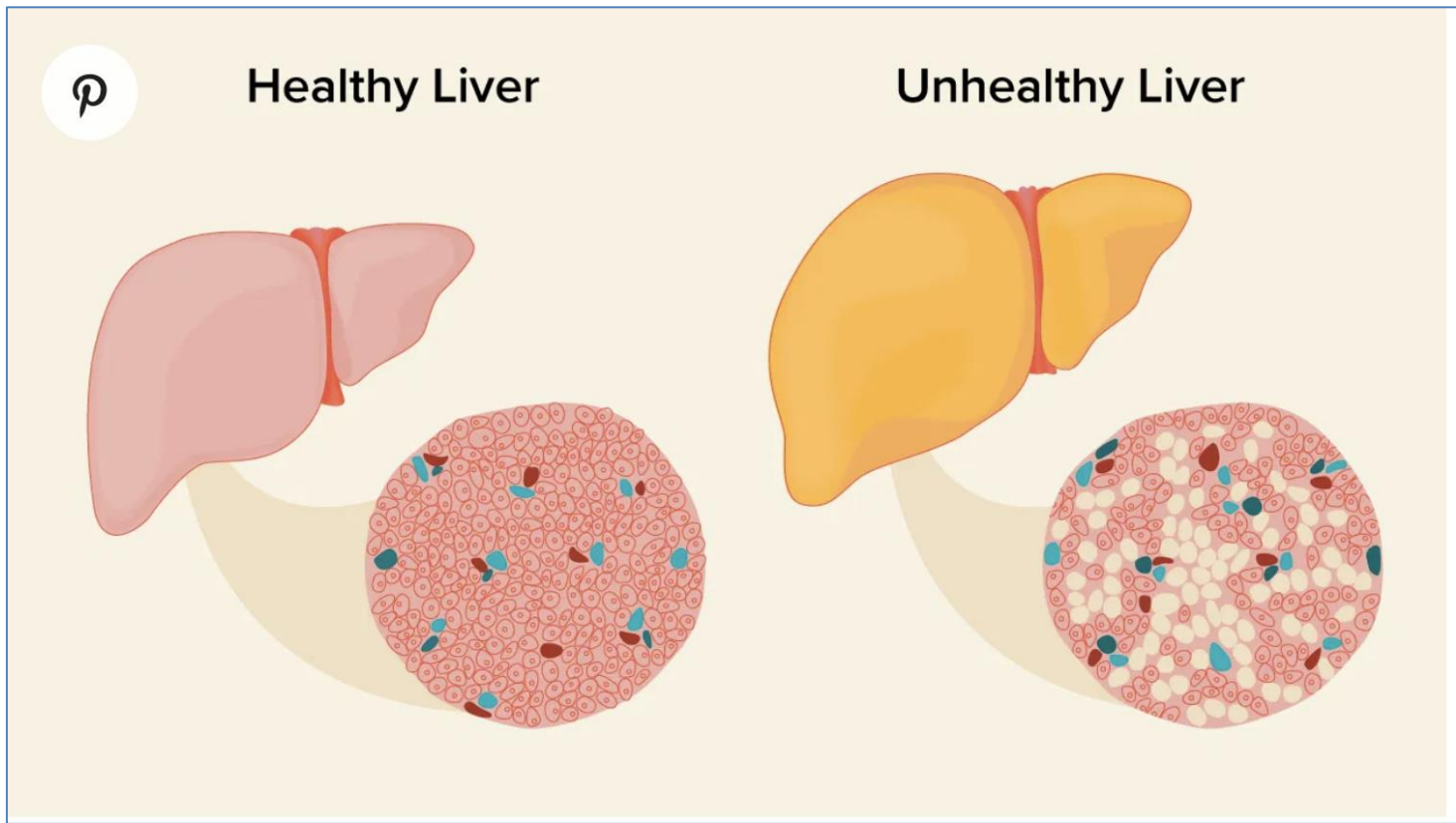
What is Fatty Liver

- Also known as Hepatic Steatosis
- Due to excess accumulation of fat in the liver (>5% of liver weight)
- Types:

Alcoholic Fatty Liver

Non-Alcoholic Fatty Liver

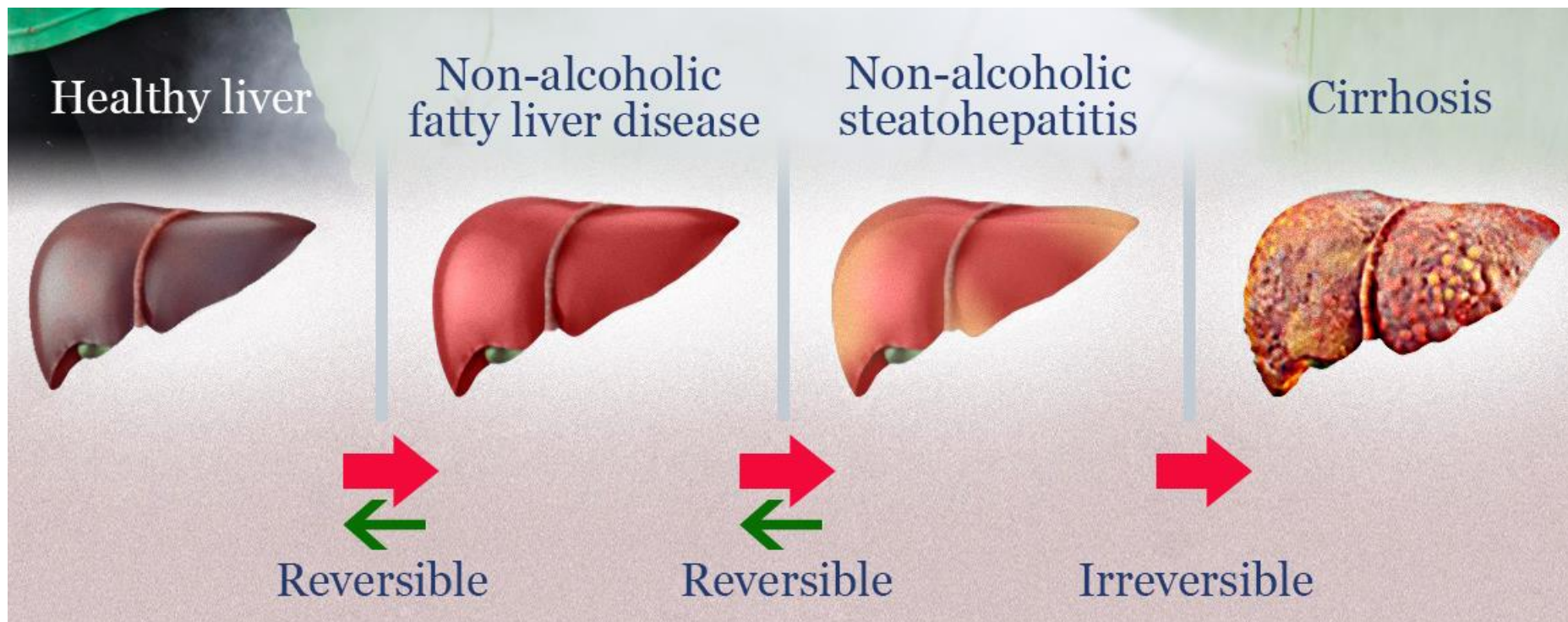
What is Fatty Liver



Stages of Fatty Liver Disease

- **Simple fatty liver.** There is a build-up of excess fat in the liver.
- **Steatohepatitis.** In addition to excess fat, there is inflammation in the liver.
- **Fibrosis.** Inflammation in the liver has caused scarring.
- **Cirrhosis.** Scarring of the liver has become widespread.

Stages of Liver Damage



What Causes Fatty Liver ?



What Causes Fatty Liver ?

- Obesity
- Diabetes
- Insulin resistance
- Dyslipidemia (High levels of fats in blood)

Other less common causes:

- Pregnancy
- Rapid weight loss
- Certain drugs and toxins

Symptoms of Fatty Liver ?

- Often asymptomatic, picked up routine health check up
- Weakness, tiredness, fatigue
- Discomfort in right upper abdomen
- Symptoms related to its complications - cirrhosis

Symptoms of Liver Disease



**Bleeding
from nose**



**Vomiting
Blood**



**Stomach
pain**



Weight loss



Fatigue



Jaundice

Symptoms / Signs of Cirrhosis



Water in Tummy (Ascites)



Jaundice



Esophageal Varices



Liver Cancer

Fatty Liver Disease in India

- Simple fatty liver is very common in India reflecting the number of people who are obese or overweight
- It is one of the most common forms of liver disease, with an estimated 30-40%% people in India having early forms of NAFLD.

Fatty Liver Disease in India

General
population

- 9-32 %

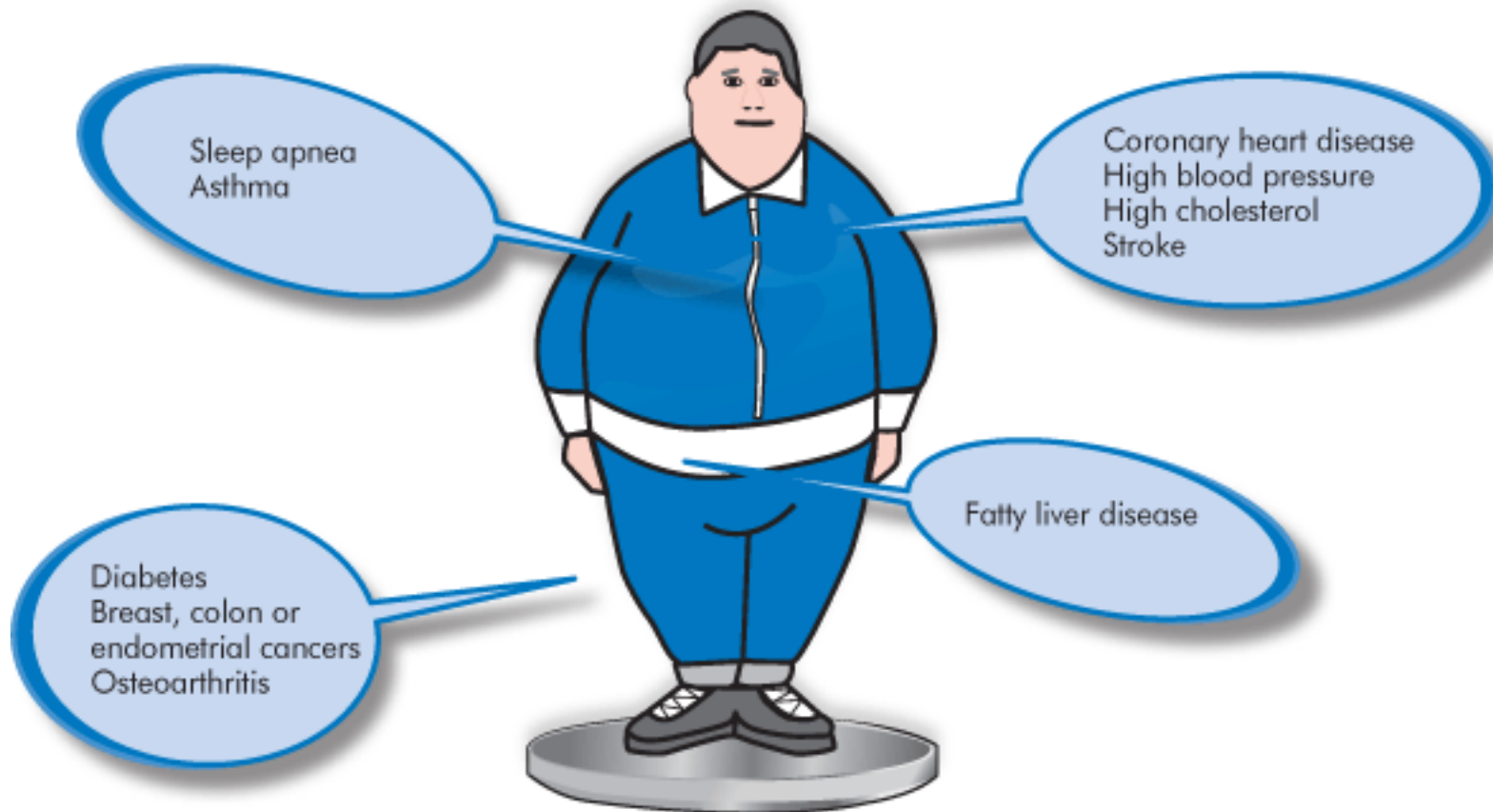
Type 2
DM

- 56.5%

Female

- 60%

Obesity: A major Risk Factor



**Criterion for overweight:
BMI > 25 kg/m²!**

Kolkata NAFL Study

- Most of the NAFLD subjects (75%) were not overweight.
- 103/164 (63%) had normal BMI (18.5-24.9 kg/m²).
- 20/164 (12%) were underweight (BMI <18.5 kg/m²).

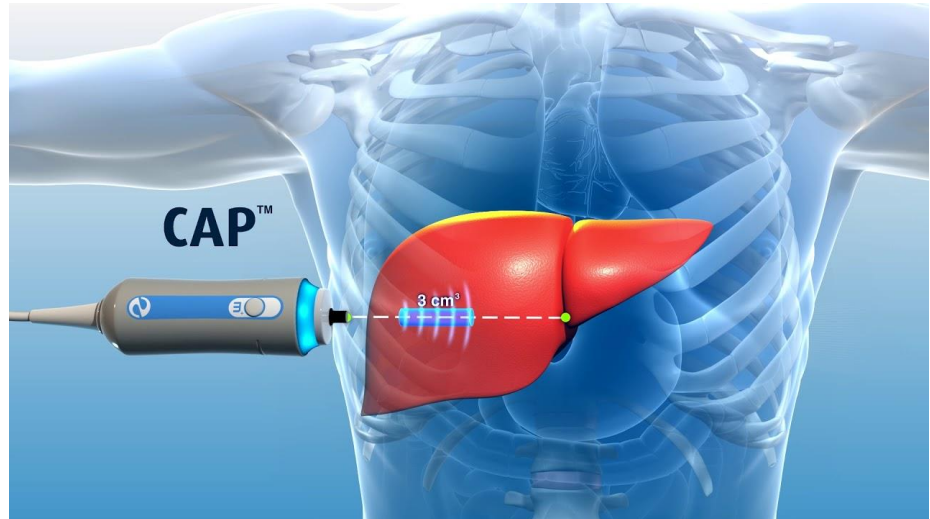
Fatty Liver: Diagnosis

- Medical history
- Examination
- Blood tests- Liver function tests showing elevated AST or ALT
- High Blood sugar, HBAiC,
- High Cholesterol, Triglyceride

Imaging:

- Mostly diagnosed by Ultrasound Test
- Sometimes CT Scan or MRI of liver
- Fibroscan

Fibroscan



Fatty Liver: Diagnosis

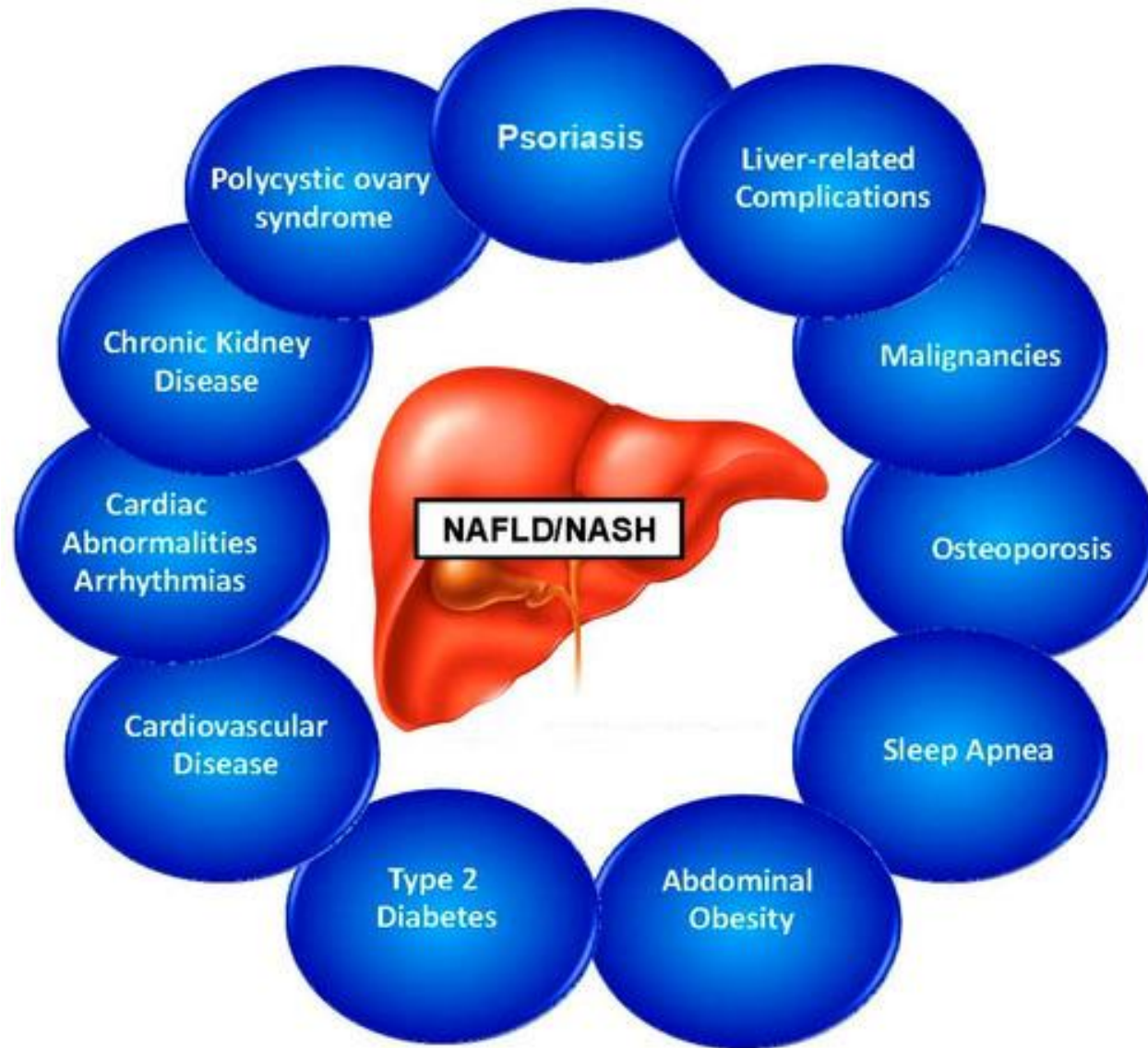
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Liver Biopsy

Diseases Associated with Fatty Liver



Fatty Liver: Treatment



Fatty Liver: Treatment



Healthy Diet

Weight Loss

Exercise

- Correct Obesity
- Treat Dyslipidemia
- Treat Diabetes
- Treat Hypertension
- Use of specific drugs for fatty liver
- Avoid alternative medications

VEGETABLES Lifestyle SLEEP Energy Organic BALANCE Protein FAT Activities FIT DIET RELATIONSHIPS Vitamins Produce FRESH Brain Health Fitness HEALTH NUTRITION DIET BALANCE Activity Family Stress Management JOY FOOD Fun Movement Outdoors Exercise Laughter

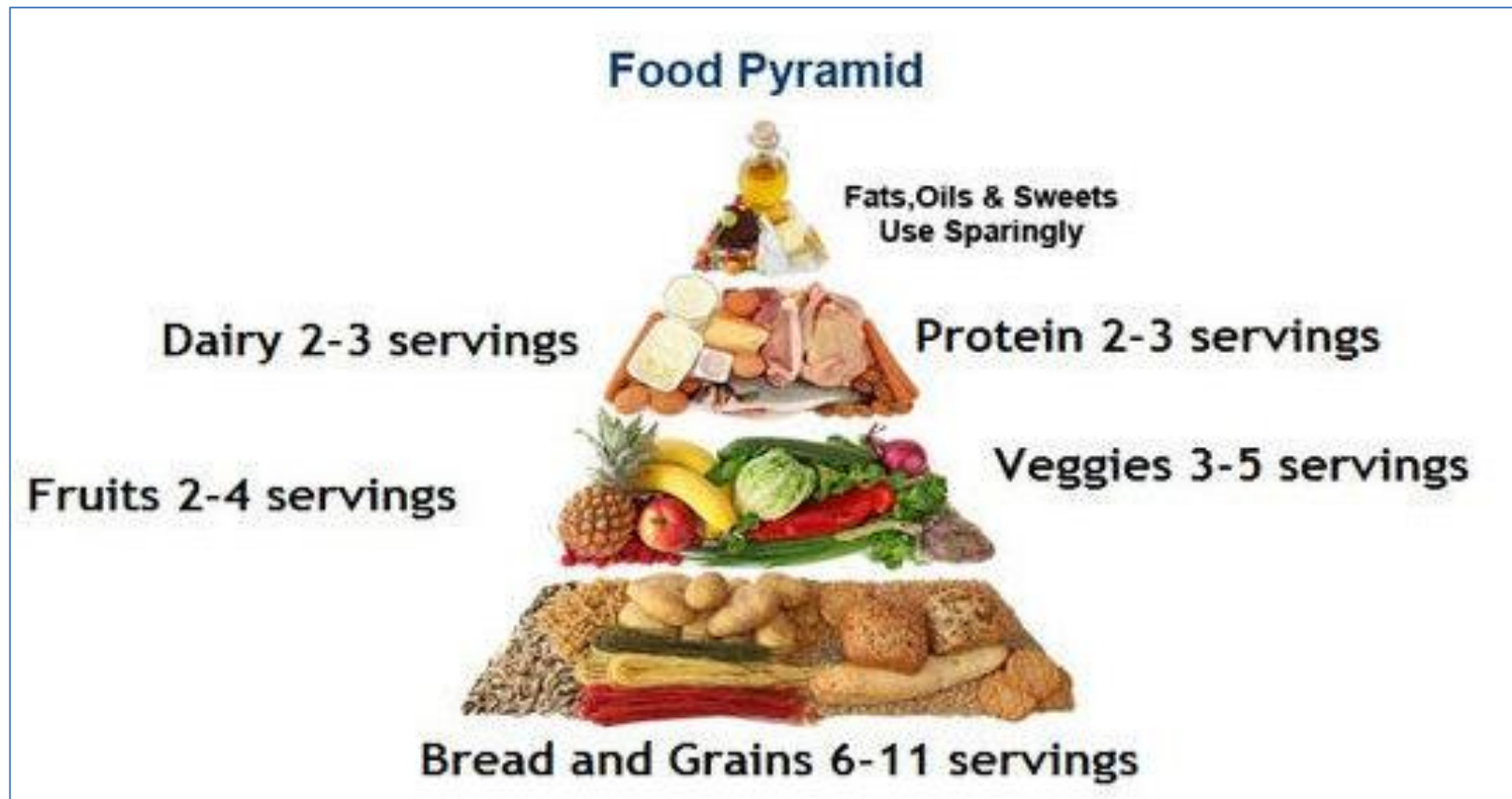
Healthy Lifestyle



Treatment: Weight loss

- Mainstay treatment of NAFLD
- 3–5% loss of body weight can improve steatosis
- 10% loss may be needed to improve inflammation

Healthy Diet



Diet for Fatty Liver Disease

- **Eat a diet that's rich in plant-based foods**, including fruits, vegetables, legumes, and whole grains
- **Limit your consumption of refined carbohydrates**, such as sweets, white rice, white bread, other refined grain products
- **Limit your consumption of saturated fats**, which are found in red meat and many other animal products
- **Avoid trans fats**, which are present in many processed snack foods
- **Avoid alcohol**
- **If overweight, cut calories from your diet to lose weight**

Exercise





EXERCISE

30 MINUTES A DAY
5 DAYS A WEEK

Exercise

IT TAKES

4 WEEKS

FOR **YOU** TO SEE YOUR BODY CHANGING

IT TAKES

8 WEEKS

FOR YOUR **FRIENDS AND FAMILY**

IT TAKES

12 WEEKS

FOR **THE REST OF THE WORLD**

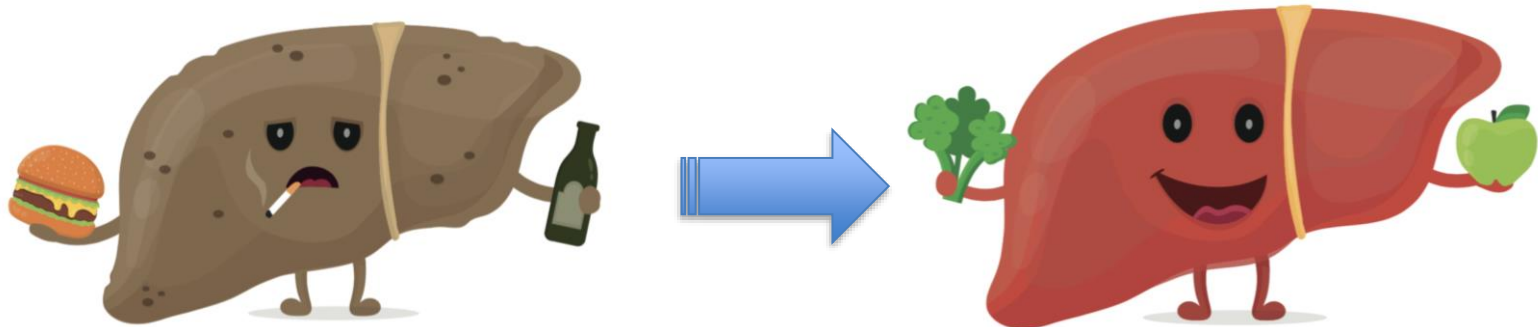
KEEP GOING

Summary

- Fatty liver is a common problem
- Alcohol leads to fatty liver
- Non-alcoholic fatty liver disease: in those who do not consume alcohol
- Up to 30-40% of population can have NAFLD
- Poor lifestyle and unhealthy diet are the most important causes
- Unchecked, fatty liver can progress to cirrhosis in some

Summary

- Those with fatty liver often have other associated conditions such as Dyslipidemia, Hypertension, Diabetes
- Mainstay of treatment is exercise, weight loss, and healthy diet
- A healthy liver is the precursor of a healthy body !!



My Seven Pearls Towards Healthy Liver !

Learn A,B,C... for your liver health !!

A) Avoid Alcohol

B) Balanced diet

C) Control of diabetes , dyslipidemia

D) Drugs (avoid drugs and toxins)

E) Exercise

F) Follow up with doctor

G) Get vaccinated against hepatitis B

