

Disorder of Lipid Metabolism

Hypercholesterolemia:

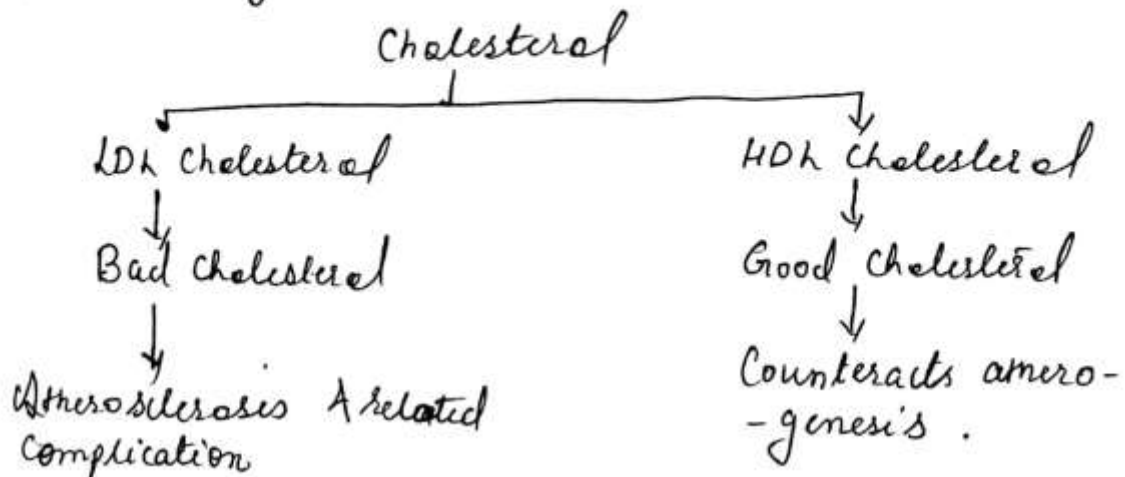
Increase in plasma cholesterol ($> 200 \text{ mg/dL}$) concentration is known as hypercholesterolemia.

Observed in many disorders:-

- 1.) Diabetes mellitus:- Due to increased cholesterol synthesis
- 2.) Hypothyroidism - Due to decrease in HDL (High density lipoprotein) receptor.
- 3.) Obstructive jaundice - Obstruction in the excretion of cholesterol through bile.
- 4.) Nephrotic Syndrome - Due to increase in plasma lipoprotein fraction.

Hypercholesterolemia associated with

- ↳ Atherosclerosis
- ↳ Coronary heart disease (CHD)



Control of Hypercholesterolemia

1. > Consumption of PUFA (Polyunsaturated FA)
2. > eg. Cottonseed oil, Soybean oil, Sunflower oil, Corn oil, fish oils.
3. > Dietary intake of 2300 mg/day is advised
3. > Dietary fiber :- Decreases the cholesterol absorption
4. > Avoid high Carbohydrate diet.
5. > Change in the lifestyle.
6. > Moderate alcohol consumption.
7. > use of drug :- eg. Lovastatin

FATTY LIVER

Fatty liver :-
"When excessive amount of Triacylglycerol (fat) accumulate (stored) in liver"

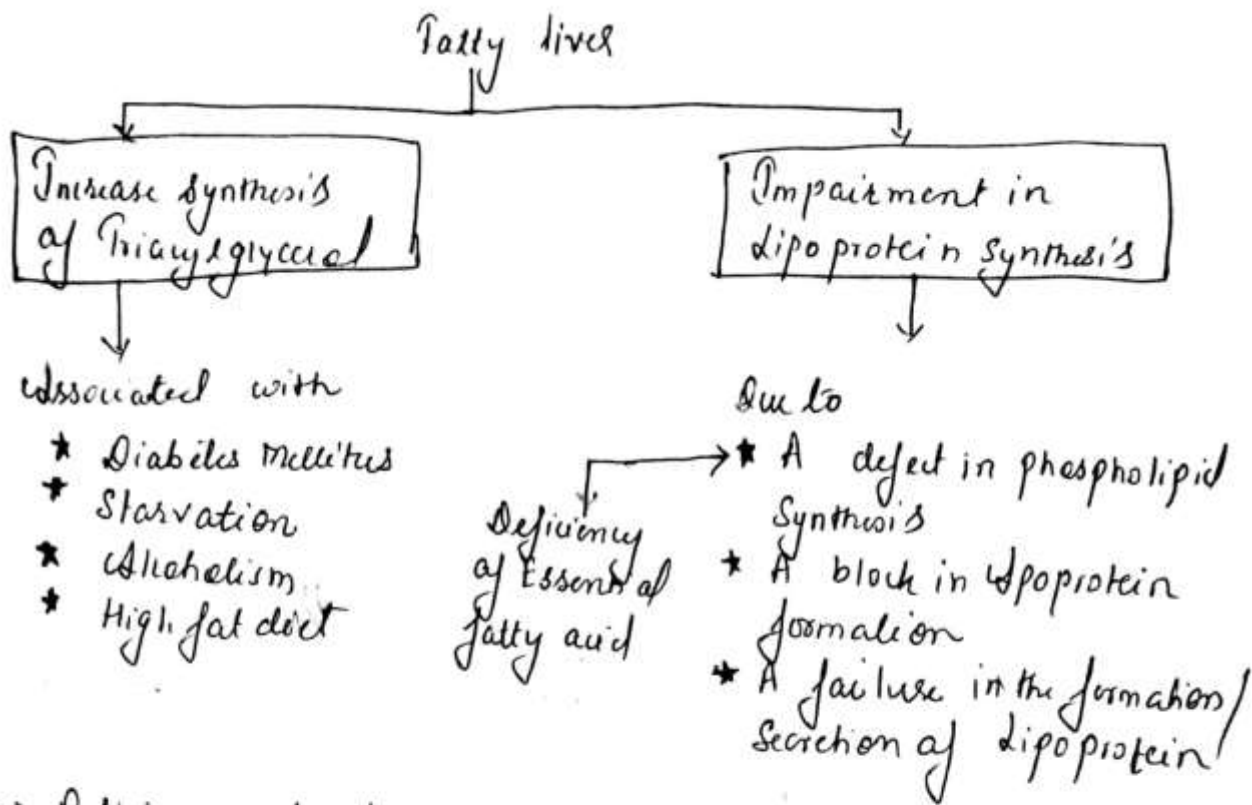
Normal liver :- Kupffer cell contain lipid in the form of droplet.

Fatty liver :- Triacylglycerol are found in the entire cytoplasm of liver cell.

↓
Impairment of metabolic function of liver.

↓
Hepatic Fibrosis
↓
Cirrhosis.

Cause:-



- Deficiency of Vitamin E → Fatty liver.
- Chronic Alcoholism → Fatty liver & Cirrhosis.

ATHEROSCLEROSIS

Definition:- "It is Complex disease characterized by thickening or hardening of arteries due to accumulation of lipid" (particularly cholesterol, free and esterified) Collagen, fibrous tissue, proteoglycans, Calcium deposits etc. in the inner arterial wall.

