GENERAL PATHOLOGY

L-9 REVERSIBLE INJURY:

FATTY CHANGE

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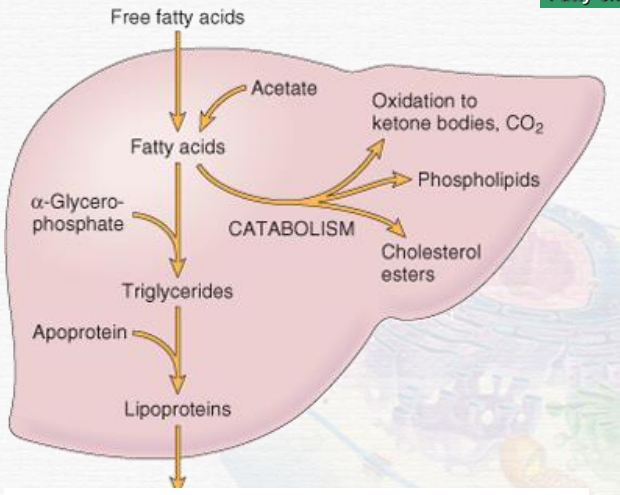
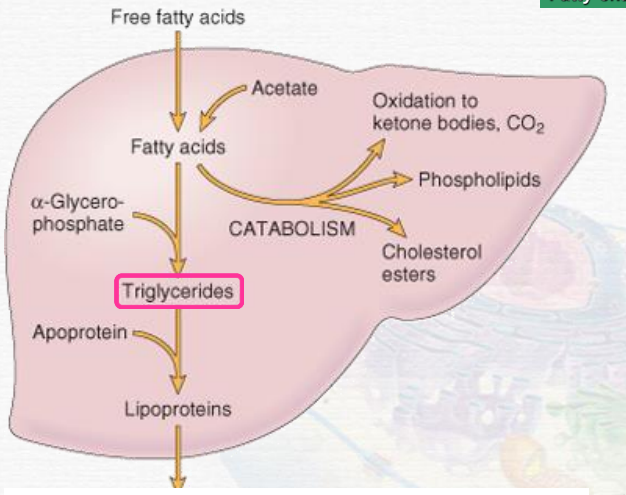
FATTY CHANGE

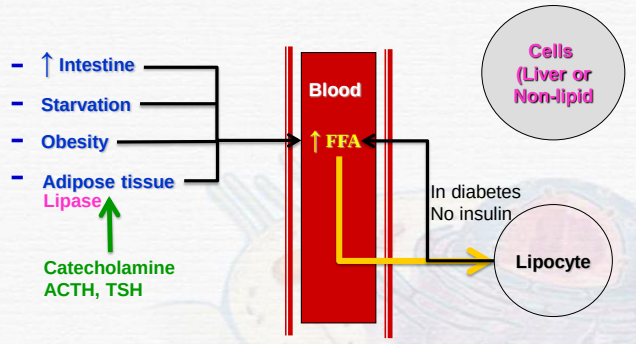
- Steatosis
- caused by hypoxic injury and various forms of toxic or metabolic injury
- Causes: alcohol, obesity, DM, anoxia, toxins, protein malnutrition etc.
- occurs in cells involved in and dependent on fat metabolism (e.g., hepatocytes, myocardial and renal epithelial cells)
- manifested by appearance of lipid vacuoles in cytoplasm

Fatty change



Fatty change





1. EXCESSIVE FORMATION / AVAILABILITY OF T.G.

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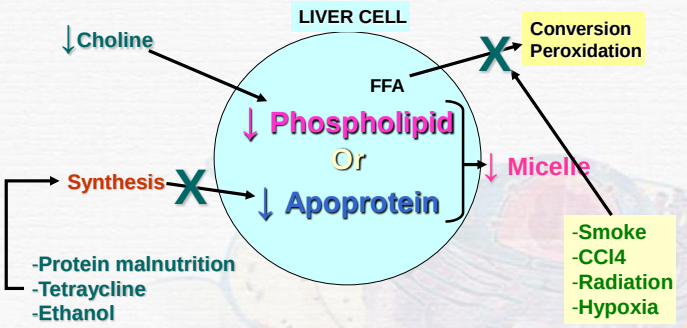

2. DEPLETION OF MICELLE POOL

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3. TRANSPORT DEFECT

-ETHANOL

-HEREDITARY LIPIDOSIS

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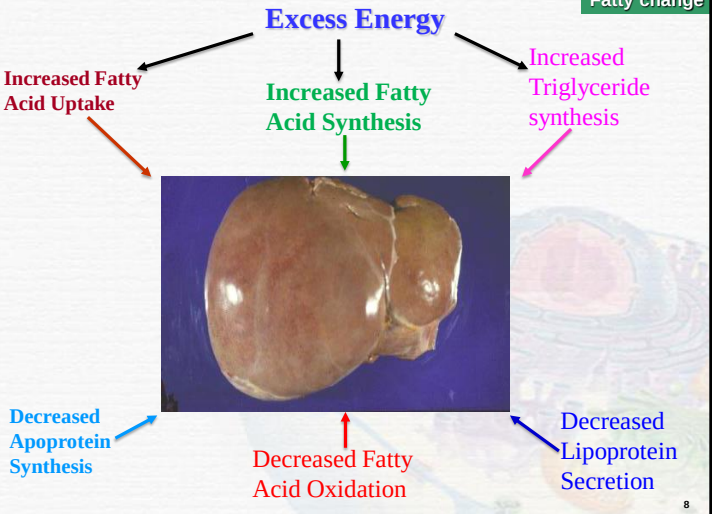

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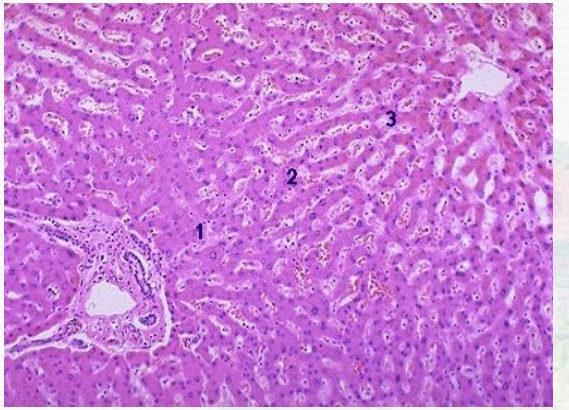
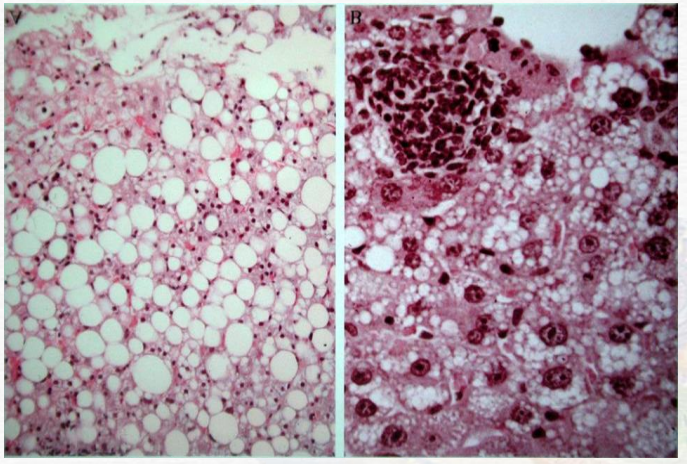
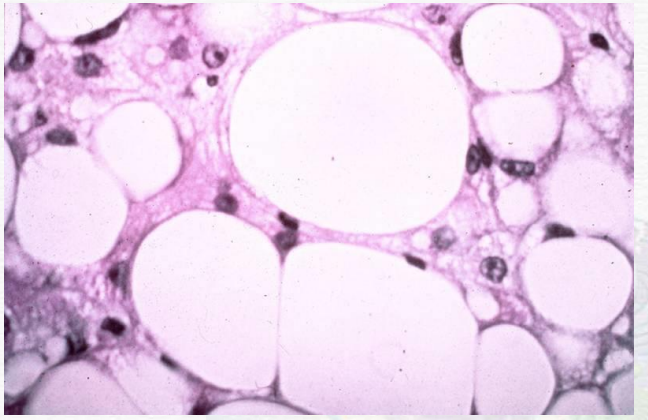
- **Microscopically**
  - Vacuoles
    - Clear
    - Sharp boundaries
  - Nucleus pushed aside
  - Special stains
    - Oil red O — Orange to red
    - Sudan III — Yellowish orange
    - Sudan IV — Red

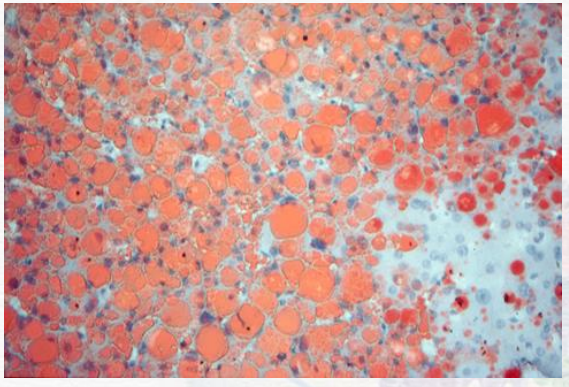
Normal Liver







Fatty change



Oil Red-O Stain

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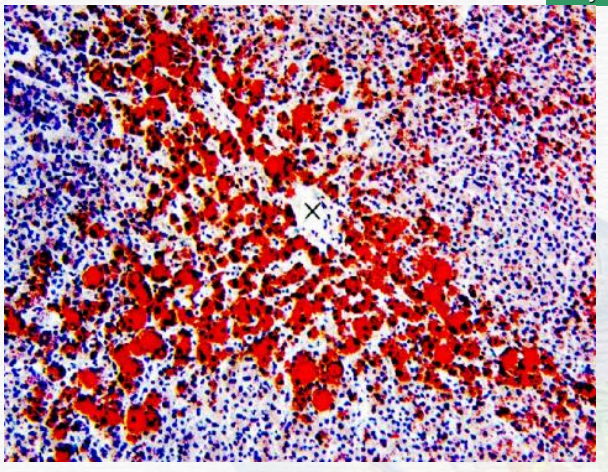
Fatty change



Sudan III Stain --- Liver

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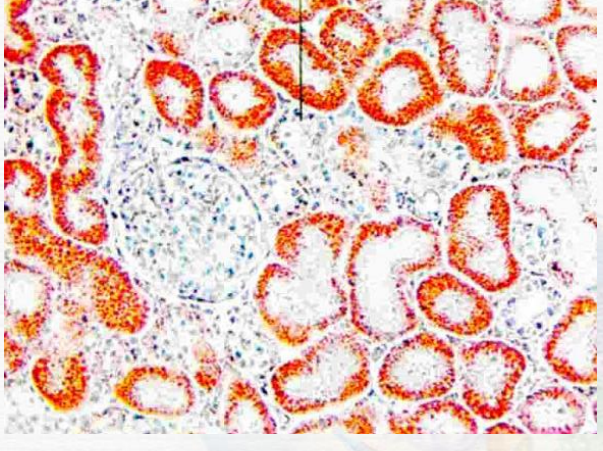
Fatty change



Sudan III Stain -- Kidney

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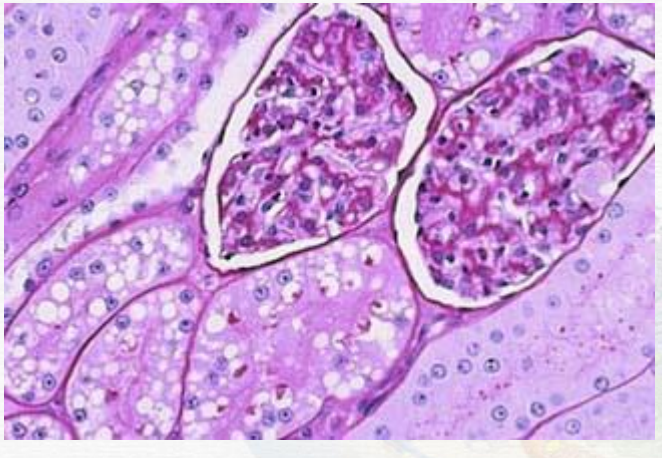
Fatty change



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- **Grossly**
  - Enlarged organ
  - Float in water (low sp. Gravity)
  - Friable
  - Pale or Yellow
  - Cut Surface
    - Bulges out
    - Greasy to touch
  - Capsule stretched

Fatty Liver

Normal (right) and fatty (left) livers. Both are unfixed.