

- The nucleus in adipocytes is flattened and displaced to one side of the lipid mass.
- The cytoplasm forms a thin rim around the lipid droplet.
- In routine histologic section, the lipid is lost through extraction by organic solvents such as xylene.
- Adipose tissue is richly supplied with blood vessels.
- Silver stains show each adipocyte surrounded by reticular fibers (Type III collagen).
- The reticular fibers are synthesized by adipocytes.

- Deposition and mobilization of lipid are influenced by neural and hormonal factors.
- One of the major metabolic functions of adipose tissue involves the uptake of fatty acids from the blood and their conversion to triglycerides within the adipocytes. Triglycerides are then stored within the cell as a lipid droplet.
- When adipose tissue is stimulated by hormonal or neural stimulation, triglycerides are broken into glycerol and fatty acids, a process called **mobilisation**.

- Fatty acids pass through the adipocyte cell membrane to enter a capillary.
- They are bound to the carrier protein albumin and transported to other cells as metabolic fuel.

- **Brown Adipose Tissue**

- Multilocular brown adipose tissue contain numerous fat droplets.
- The brown adipose tissue cells are smaller than white fat cells
- Brown adipose tissue, are abundant in newborn but are markedly reduced in adults.