Dietary Triacylglycerols

- Hydrolysis occurs when chylomicrons encounter lipoprotein lipase anchored in capillary walls
- When Energy is in **good supply:** Converted back to Triacylglycerols for storage in adipose tissue
- When energy is in **low supply:** Fatty acid carbon atoms are activated then oxidized as acetyl-CoA
- Acetyl-CoA generates energy via the citric acid cycle and oxidative phosphorylation.
- Acetyl-CoA serves as starting material for **Lipogenesis**, **Ketogenesis** and the **synthesis of cholesterol**, from which all other steroids are made

Triacylglycerols from Adipocytes

- When stored TAGs are needed as an energy source, lipases within fat cells are activate by hormone level variation (Low insulin, High Glucagon)
- **Stored Triacylglycerols** are hydrolyzed to **fatty acids**
- ∴Free fatty acids and glycerols are released in bloodstream
- These **fatty acids** travel in association with **Albumins** where they are converted to Acetyl-CoA for energy generated

Glycerol from Triacylglycerols

- Glycerol produced from TAG Hydrolysis is carried to liver/kidneys
- There it is converted to **Glyceraldehyde-3-Phosphate** and Dihydroxyacetone (**DHAP**)
- DHAP enters Glycolysis/gluconeogenesis pathways
- ∴ Linking lipid and carbohydrate paths