NEED TO KNOW

LIPIDS 2

Describe the structure of fatty acids and how fatty acids are synthesized, stored, and utilized.

- Acetyl CoA Carboxylase (ACC)
- Glycerol Kinase
- Glycerol-Phosphate-dehydrogenase
- Fatty Acid Synthase
- Malic enzyme
- Relationship between glucose metabolism and FA synthesis
- Nomenclature and how to name fatty acids
- TAG synthesis

Describe fatty acid liberation from adipose and its importance in energy homeostasis.

- Diseases
- Hormone sensitive lipase
- Adipose Triglyceride Lipase

Describe fatty acid oxidation and ketone body production and explain their importance in energy homeostasis.

- β-oxidation
- Carnitine Shuttle
- carnitine palmitoyl-transferase I (CPTI)
- carnitine palmitoyl-transferase II (CPTII)
- HMG CoA Synthase
- Carnitine
- Ketone body synthesis

Describe the inborn errors of metabolism which result in fatty acid oxidation disorders.

- Carnitine deficiencies
- CPT-I deficiencies
- CPT-II deficiencies
- Medium-chain fatty acyl CoA dehydrogenase deficiency (MCAD)
- Refsum disease