LIPID METABOLISM

LIPOLYSIS - Lipid catabolism whereby lipids become

1. **Glycerol** that can be converted into **Pyruvic Acid** which enters the TCA Cycle. 1 ATP per PA
2. **Fatty Acids** converted via **BETA-OXIDATION**
   a. 12 ATP per each 2-carbon fragment via acetyl-CoA in the TCA Cycle.
   b. 5 ATP from NADH & $FADH_2$ via ETS
   c. TOTAL of 144 ATP molecules per 18 carbon Fatty acid molecule.

LIPOGENESIS - Lipid synthesis

1. **Glycerol** by *dihydroxyacetone phosphate* via glycolysis
2. Acetyl-CoA can build any amino acid, carbohydrate, or lipid except essential fatty acids: Linoleic acid & Linolenic acid

LIPID TRANSPORT

1. Free fatty acids - bound to albumin
2. Lipoproteins
   a. Chylomicrons - carries lipids from GI to CVS
   b. LDLs - to peripheral tissues from liver
   c. HDLs - from peripheral tissues to liver