

Triglycerides

Tuesday, November 4, 2014
6:19 PM

Outline:

- Hydrolysis of dietary TGs in intestine
- TG Resynthesis in intestine & export in Chylo into blood
- TG export from liver in VLDL
- TG removal from Chylo & VLDL
- TG Resynthesis in adipose
- Lipolysis
- VLDL in fasting
- Lab data

Learning Objectives:

- TG Synth (purpose, reactants, products, cellular location, tissue distribution, regulation)
- lipoprotein particles that transport TGs (intestine/liver) --> adipose
- removal of TGs from circulating lipoproteins
- Lipolysis (reactants, products, cellular location, tissue distribution, regulation)
- effects of feeding, fasting, & exercise on TG metabolism

Fed:

Intestine	Lumen	TG --> FA + MG	
	Cells	FA + MG --> TG	Chylo
Adipose	Capillaries	TG --> FA + Glycerol	Chylo --> Chylo Remnants
	Cells	FA + Glycerol --> TG	

- *blood: must contain TGs in a container (Chylo, VLDL, IDL, LDL)
- *TG cannot cross membranes, but FAs & MGs can
- *MG = Glycerol+1FA

Synthesis:

Liver	Cells	Carbs --> FA FA + Glyc3P --> TG	VLDL
Adipose	Capillaries	TG --> FA + Glycerol	VLDL --> IDL --> LDL
	Cells	FA + Glyc3P --> TG	

Fasting (Breaking Down TG Storage):

Adipocytes	TG --> FA + Glycerol	Albumin
Blood		FA-Albumin
Most Cells	FA --> Acetyl-CoA	