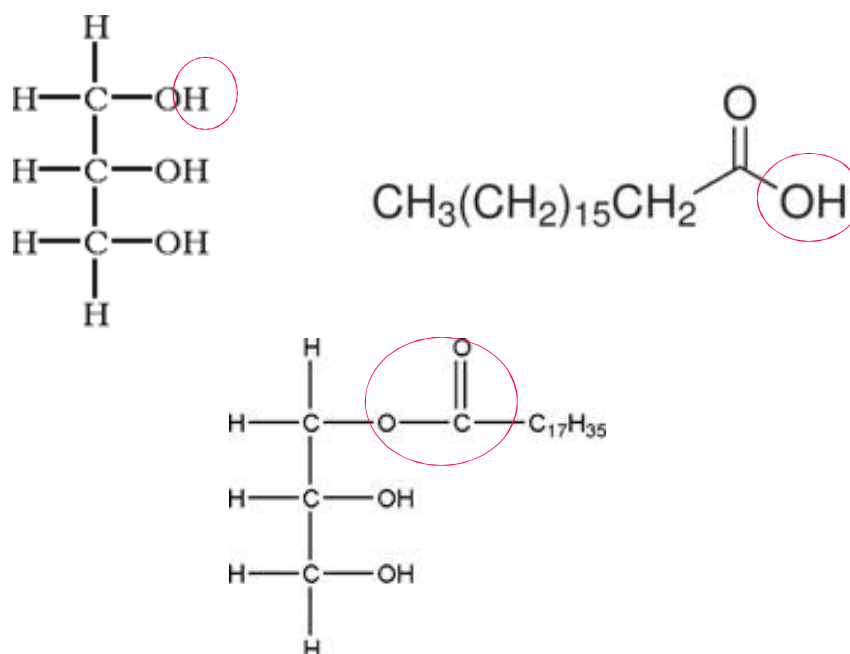


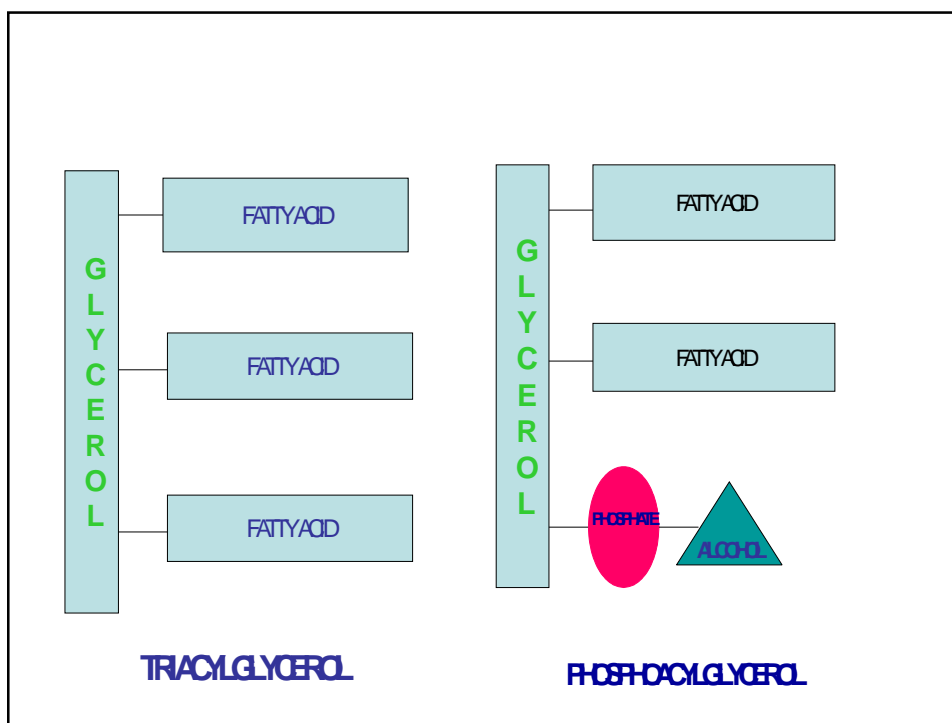
Digestion and Transport of TAG by Plasma Lipoproteins

Chapter 18

Chapter 15

Lippincott's Illustrated Review
Biochemistry





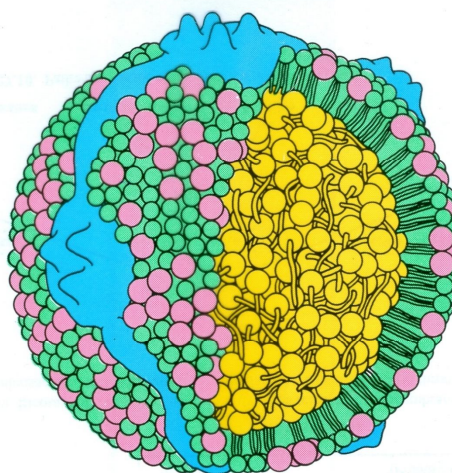
Lipoproteins

- Multimolecular Complexes of Lipids and Proteins
- For Transport of Lipids in the Plasma
- Lipids Include

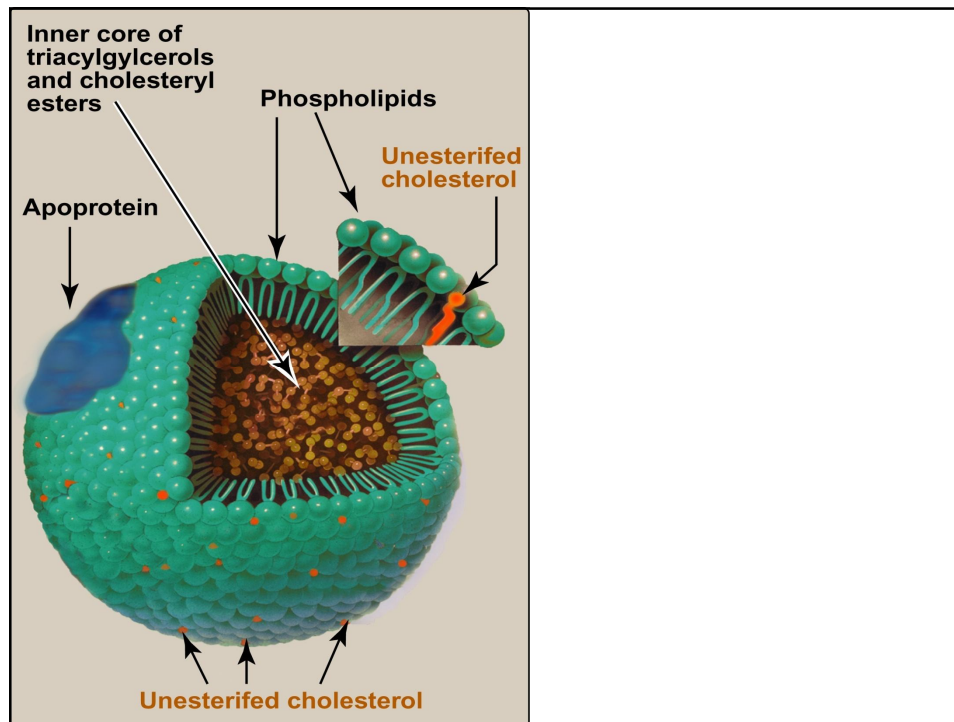
- **TAG** Triacylglycerol
- **CE** Cholesterol Ester
- **CH** Cholesterol
- **PL** Phospholipids

Apolipoproteins

- The Protein Part of Lipoproteins
- Amphipathic
- Include Several Classes
Apo A, Apo B-48, Apo E....
- Structural Role, Regulatory Role and Binding to Cell Surface Receptors



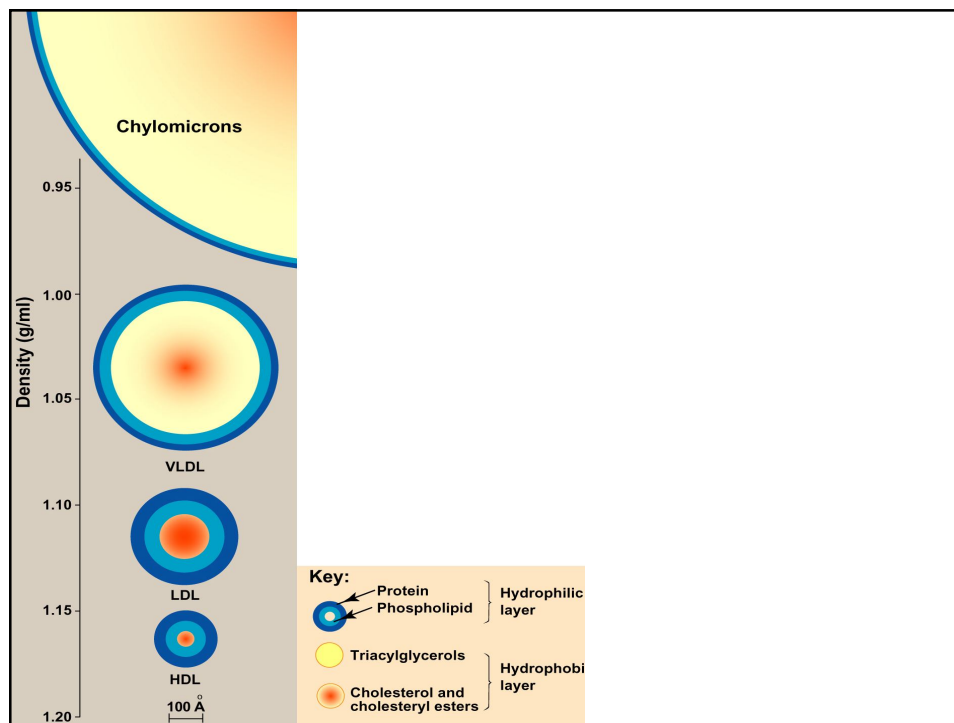
- Unesterified cholesterol
- Phospholipid
- Cholesteryl ester
- Protein B-100

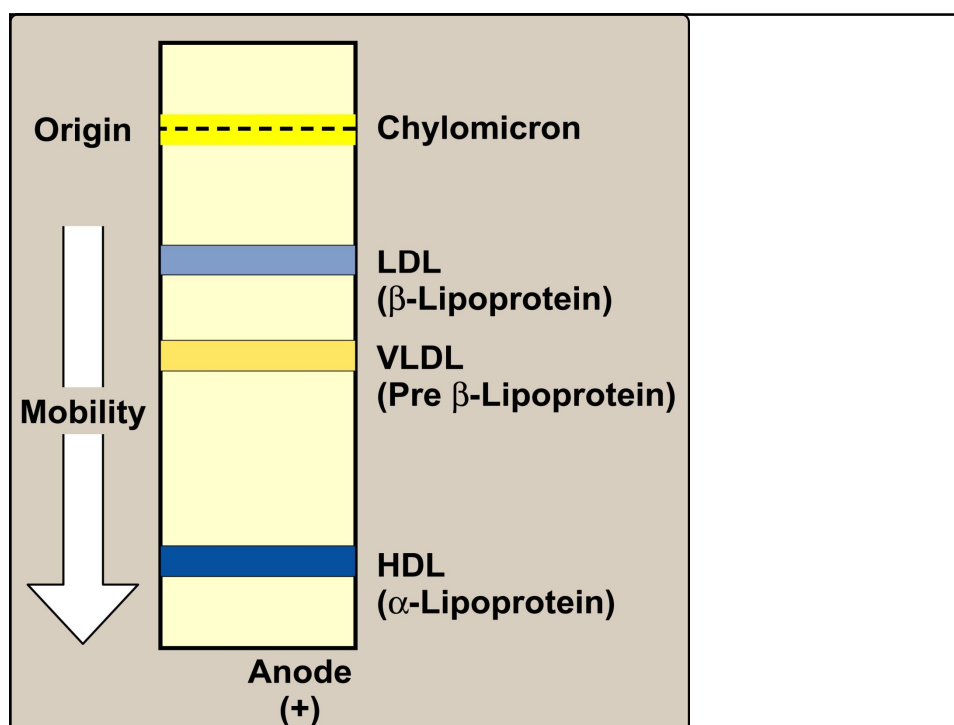


Classes of Lipoproteins

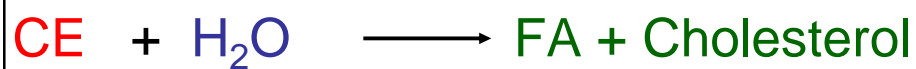
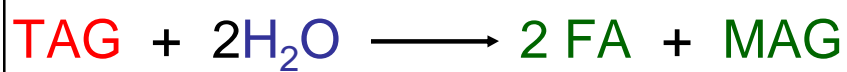
<u>Lipoprotein</u>	<u>Density</u>	<u>Protein</u>	<u>Major Lipid</u>
Chylomicrons	<0.95	2 %	TAG (85%)
VLDL	0.95- 1.006	9%	TAG (55%)
IDL	1.006-1.019	11%	TAG (26%) CE (30%)
LDL	1.019- 1.063	20%	CE (35%)
HDL	1.063- 1.21	45%	PL (25%)

<u>Lipoprotein</u>	Apo Protein Types	
Chylomicrons	Apo B, Apo C, Apo E	Dietary Lipids
VLDL	Apo B, Apo C, Apo E	Endogenous TAG
IDL	Apo B, Apo E	
LDL	Apo B	Cholesterol
HDL	Apo A , Apo C, Apo E	Cholesterol Return to Liver

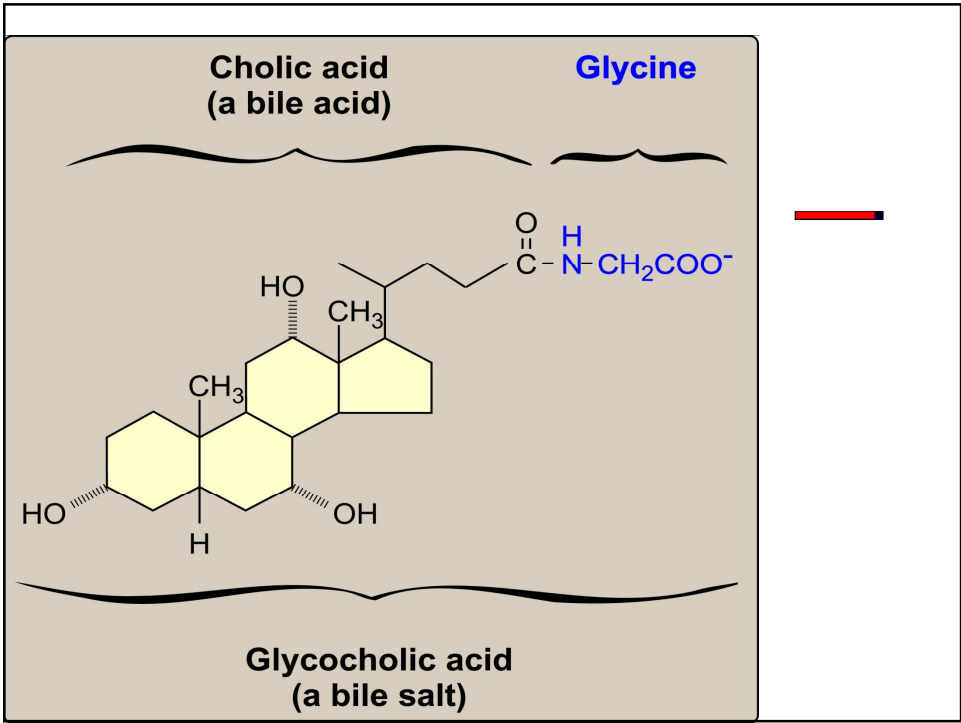
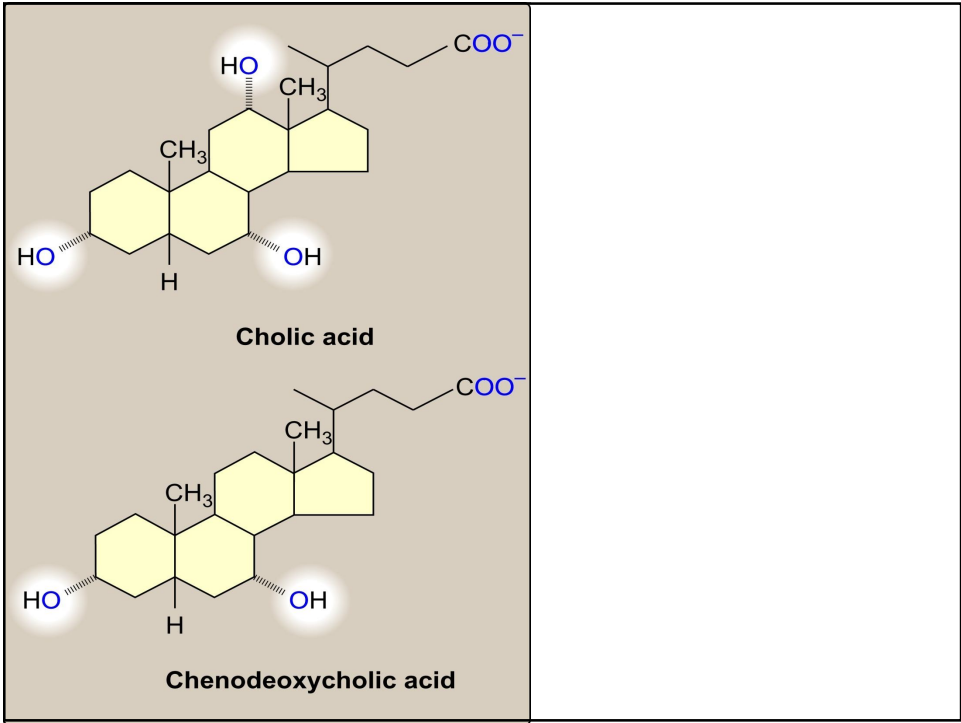


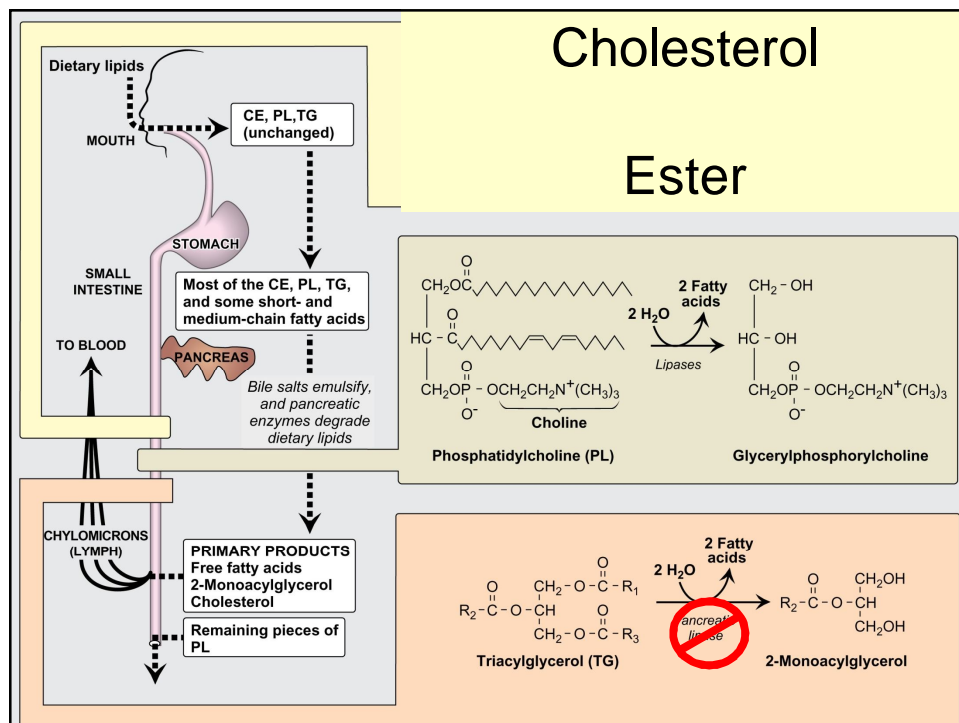
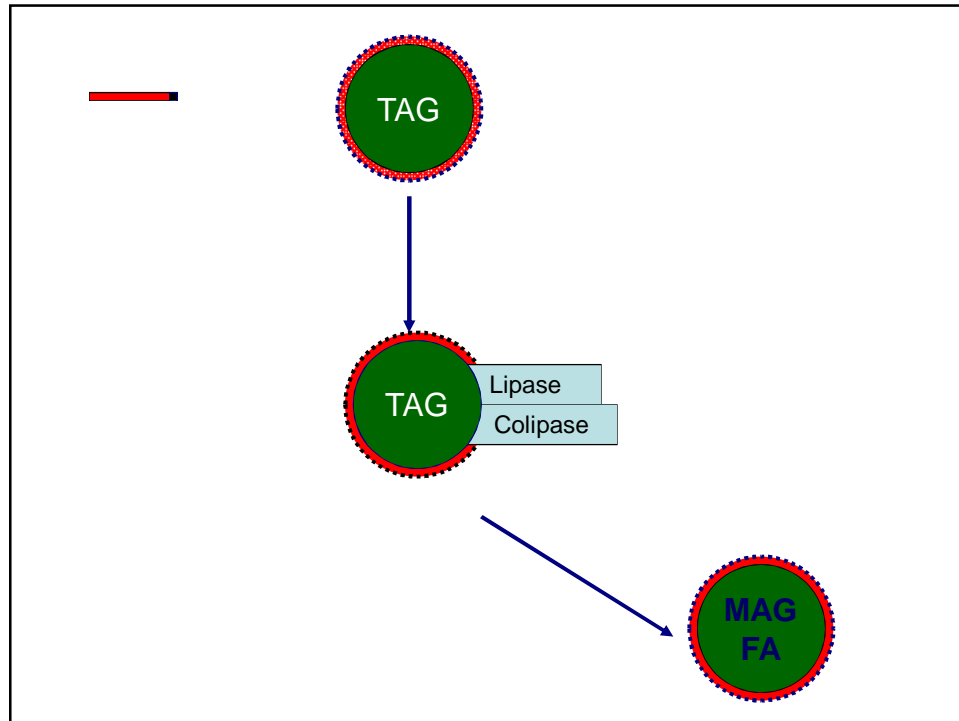


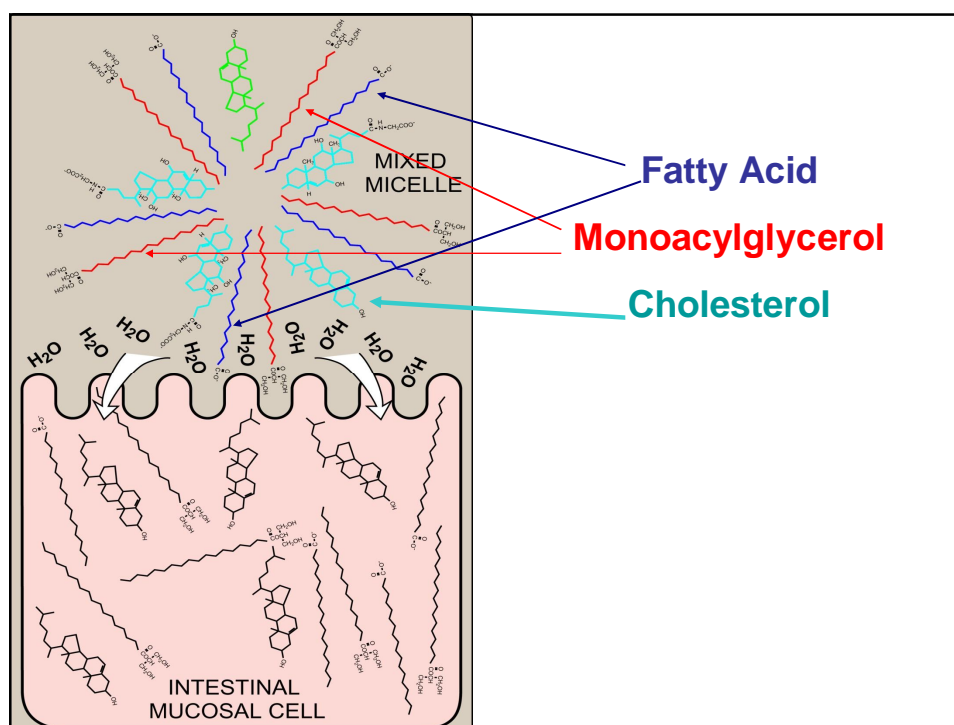
Digestion of Dietary Lipids



Solubility Problem







Digestion of TAG with Short or Medium Chain Fatty Acids

- **Begins in the Stomach**
 - Lingual Lipase
 - Gastric Lipase
- **Acid Stable**
- **Significance**
 - In Neonates
 - In Pancreatic Insufficiency

