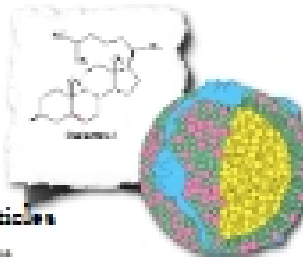



Lecture 20

Cholesterol Transport:
 Origin, function, fate of lipoprotein particles
 "Good cholesterol" vs. "Bad cholesterol"
 Lipoprotein particles in disease:
 Atherosclerosis
 Metabolic Disorder

Lipoprotein Particles
 Comprised of:
 Lipids
 Proteins

Lipids:
 Phospholipids
 Triacylglycerols
 Cholesterol
 Cholesterol esters
 Other lipids (such as lipid soluble vitamins)

Protein:
 Apolipoproteins (sometimes called apoproteins)

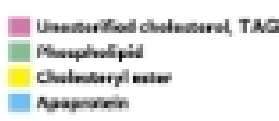





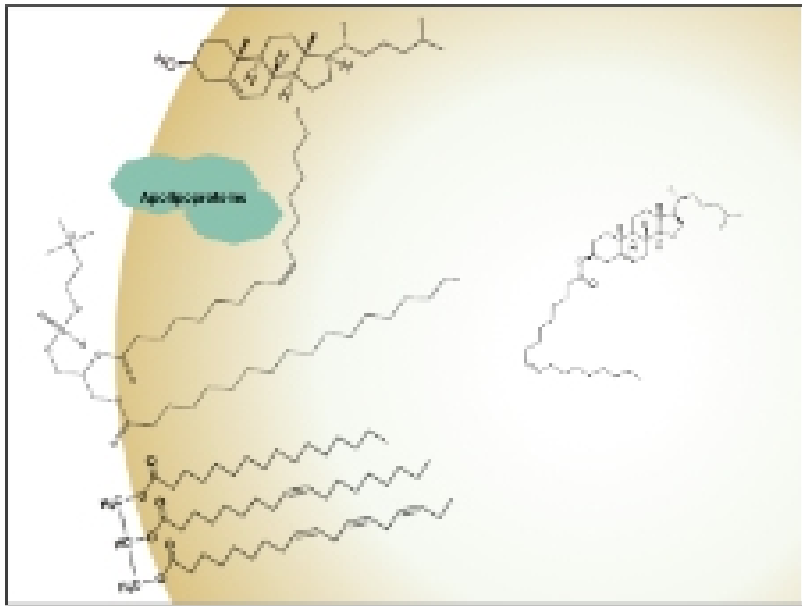
Table 26.1 Properties of plasma lipoproteins

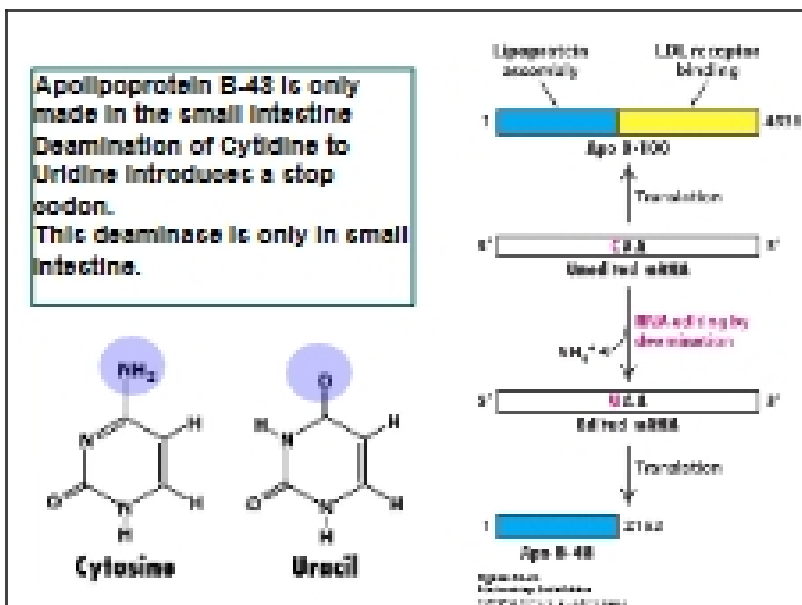
Plasma lipoprotein	Description ¹	Diameter (nm)	Apolipoprotein	Physiological role	Composition ²				
					TM	CE	T	PL	P
Chylomicron	CM	11-120	B48, C1	dietary fat transport	0	1	1	8	1
VLDL	VLDL	30-60	B100, C1	endogenous fat transport	0	11	7	18	6
LDL	LDL	11-25	B100	LDL receptor	0	50	8	30	11
HDL	HDL	8-12	A1, A2	cholesterol transport	10	50	8	30	11
IDL	IDL	13-20	B100	reverse cholesterol transport	0-10	40-50	10-15	20-30	10-15

¹Abbreviations: TM, triacylglycerol; CE, cholesteryl ester; PL, phospholipid; P, protein.

Table 26.2
 Composition, Relative
 HDL and LDL in Serum







Chylomicron Three Stages

Nascent Chylomicron: Formed but not functional
intestines, lymph, early bloodstream

Mature Chylomicron: In bloodstream and functional
bloodstream, GI present

Chylomicron Remnants: Leftovers return to liver
bloodstream, liver

