Fat Transport S-5.2

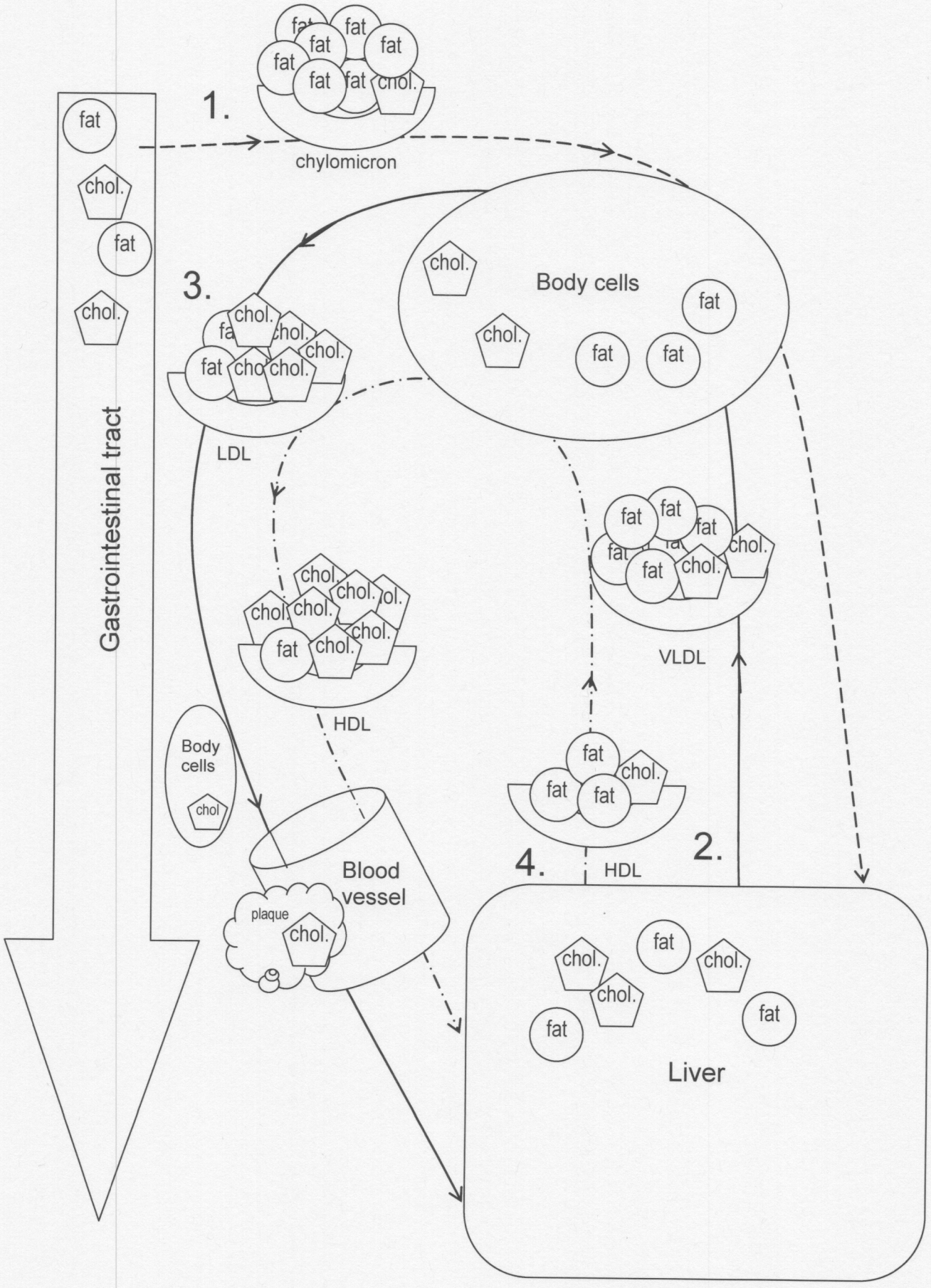
1. Chylomicron are synthesized in the wall of the GI tract from absorbed fat and fat soluble compounds. They are absorbed into the lymphatic system and then move to blood stream. While in blood stream, fat (triglycerides) is released to body cells. The chylomicoron remnant is taken up by liver.

2. The liver produces very low density lipoproteins (VLDL) which are released into the blood stream for circulation. The VLDL delivers fat to cells and exchanges fat for cholesterol with HDL, further decreasing fat content. As the VLDL loses fat the low density lipoprotein (LDL) is formed.

3. LDL functions to deliver cholesterol to tissues for cell membranes, and formation of hormones and compounds like vitamin D. If LDL is modified (oxidized or acetylated) it can be taken up by macrophages which convert to foam cells and contribute to the formation of atherosclerotic plaques.

Diets high in saturated fat decrease LDL reuptake in the liver, increasing circulating LDL.

4. High density lipoproteins (HDL) are synthesized in the liver. The HDL scavenge free cholesterol outside of the liver, carry cholesterol back to the liver, and also deliver cholesterol to VLDL and LDL in exchange for fat. HDL are then taken up by the liver and degraded.


1.
chylomicron
fat
chol.
Gastrointestinal tract
Body cells
3.
LDL
VLDL
HDL
Body cells
chol
Blood vessel
plaque
4.
HDL
2.
Liver