

# Lipid Transport

## Chylomicrons:

- Largest & Least Dense of the lipoproteins
  - Transport diet derived lipids (triglycerides) from the intestine, through the lymph, to the blood and the rest of the body
  - As chylomicrons pass through bloodstream, body cells remove lipids from them.
  - Liver cells remove the remnants of the chylomicrons from the blood and reassembles them into new triglycerides.
- The liver is the most active site of lipid synthesis; it uses fatty acids to make cholesterol, other fatty acids, triglycerides from carbohydrate, protein and alcohol. The new lipids are combined with a protein carrier and are transported to other parts of the body.

## VLDL: Very Low Density Lipoprotein

- Made in the liver
- Transports mainly triglyceride (about 50%), some cholesterol, and phospholipid
- VLDL travel through the body and cells remove triglyceride from them.
- As they lose triglyceride, the proportion of cholesterol increases and they become more dense; they become a low-density lipoprotein (LDL)

## LDL: Low Density Lipoprotein

- Composed primarily of cholesterol (about 50%)
- They circulate throughout the body and release triglyceride, cholesterol and phospholipid to body cells.
- Body cells collect the lipids and use them to make cell membranes, hormones or store them for later use.
- Liver removes LDL from circulation
- Often termed “**Bad Cholesterol**” because a **high level of this lipoprotein is linked to heart disease.**

## HDL: High Density Lipoprotein

- Transports cholesterol from the cells back to the liver for recycling or disposal
- Often termed “**Good Cholesterol**” because a **high level of HDL is linked to a lower risk of heart disease**

**Lipoproteins with a low protein-to-lipid ratio have a low density; those with a high protein-to-lipid ratio have a high density**