

Lipids

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## Lipids

The body creates lipoproteins which are different depending on the density and size. Lipoproteins are essential in the transportation of lipids for absorption by the cells in the body. They help in resolving the challenge of transporting fat through the body's bloodstream which is watery. They carry three categories of lipids, that is, cholesterol, triglycerides, and phospholipids. Chylomicrons, Very Low-Density Lipoproteins (VLDL), Low-Density Lipoproteins (LDL) and High-Density Lipoproteins (HDL) are the four types of lipoproteins made by the body.

Chylomicrons are the most important type of lipoproteins and constitute of triglycerides lipids in high proportion. Through the lymph system, the chylomicrons transport the triglycerides to the whole body from the ileum. This is very important since as they move in the body, cells near them absorb triglycerides from them which make the chylomicrons to become small and depleted. The remnants of chylomicrons are detected and removed from the blood through protein receptors found on the liver's membrane. From these remnants, the liver makes lipids and bundles them with proteins as VLDL.

VLDL is essential in transporting the triglycerides to various body tissues. The body cells absorb the triglycerides from the VLDL which makes this lipoprotein smaller and highly concentrated with cholesterol hence becoming an LDL. With fewer constituent of triglycerides, the LDL transports the cholesterol to muscles, mammary glands, and other body tissues. This is critical since absorption of the components in LDL, triglycerides, phospholipids and cholesterol help in making hormones. They also help in the building of new membranes and are used as energy. Receptors of LDL in the liver help in stopping the circulation of cholesterol in the body. This is vital in the control of cholesterol levels in the blood.

HDL helps in the removal of cholesterol from cells and transporting it to be disposed or recycled in the liver. This is very important since the removal of cholesterol minimizes the vulnerability to heart disease. Additionally, HDL aids in the prevention of heart attack arising from the breaking of the artery-clogging plaque through its anti-inflammatory property. The LDL and HDL are very critical to one's health since they are both involved in the transportation of cholesterol. Low levels of HDL and high levels of LDL are perilous to a person's health since it increases the risk of heart disease and heart attacks. However, high levels of HDL are a good indication of more cholesterol being transported back to the liver from excretion which lowers the risk of heart disease.