INTRO TO LIPIDS

CARBOXYL GROUP

PHOSPHOLIPIDS

PHOSPHOLIPIDS are the major components of cell membranes. They contain a phospholipid backbone with a hydrophilic polar head group and a hydrophobic tail. This results in a bilayer membrane structure, with the hydrophilic heads facing outward and the hydrophobic tails facing inward.

TRIGLYCERIDES

TRIGLYCERIDES

STEREOIDS

POLYSACCHARIDES

LIPIDS

Lipids are a diverse group of organic compounds that are essential for the function of living organisms. They include fats, oils, waxes, and steroids. Lipids are classified into several categories based on their structure and function. The main types of lipids include:

1. **Triglycerides**: These are the most common type of lipids, consisting of three fatty acids attached to a glycerol molecule. Triglycerides are the primary energy storage molecules in the body.

2. **Phospholipids**: These lipids contain a phosphorus-containing group and are a major component of cell membranes. They help in maintaining the fluid-membrane structure.

3. **Steroids**: These lipids are derived from cholesterol and are involved in various physiological processes like signal transduction and hormone activation.

4. **Waxes**: These are long-chain fatty acid esters that form a protective layer on plant and animal surfaces.

5. **Glycolipids**: These are lipids that contain a carbohydrate moiety and are found in cell membranes.

6. **Sphingolipids**: These are lipids that contain sphingosine, a nitrogen-containing amine, and are involved in cell signaling and membrane structure.

7. **Fatty Acids**: These are long-chain carboxylic acids that are a major component of triglycerides and phospholipids.

These lipids play crucial roles in various biological processes and are essential for the proper functioning of cells and organisms.