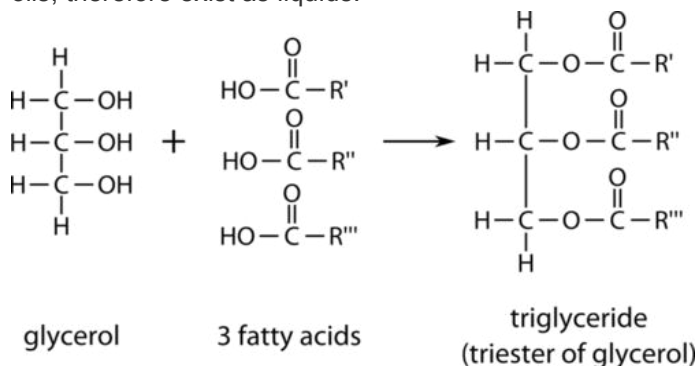


Some fats have saturated fatty acids, which have a high melting point and exist mostly as solid at room temperature like butter, whereas fats with unsaturated fatty acids have a low melting point like vegetable oils, therefore exist as liquids.



CHOLESTEROL (animal steroid)

Chemical Formula: : C₂₇H₄₆O

Cholesterol is made up of a hydroxyl group bond to four hydrocarbon rings and hydrocarbon tail. The hydroxyl group is soluble in water as it is polar and makes up most of the alcohol like ethanol. However the ring and the tail are non-polar, therefore hydrophobic.

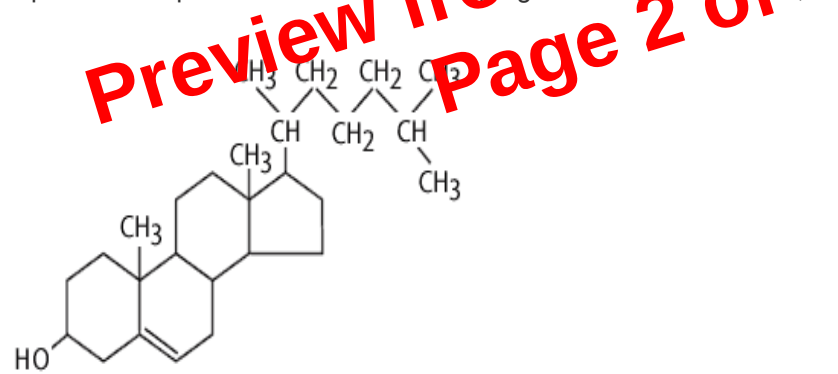
Since cholesterol has both a polar and nonpolar region it is referred to as amphipathic. Just like triglycerides it travels through blood thanks to lipoproteins.

All Steroids are made of cholesterol as they share the same four ring structure of hydrocarbons

Functions: Bile acids are produced thanks to cholesterol, which aid in digestion and absorption.

It is the structural component of cells (lipid bilayer).

It produces important hormone such as progesterone, testosterone, estrogen, and cortisone.



SATURATED AND UNSATURATED FATS

There are two kind of fats : saturated and unsaturated.

-Saturated fatty acids only have single bonds and all the hydrogen atom are bond to every carbon atom.

-Unsaturated fats have double bonds, as their four electrons are shared or exchanged in a bond due to a missing pair of hydrogen atoms in the middle of the chain. Single bonds occur only with two electrons.

Unsaturated fats that have one gap are called "monounsaturated" (such as oleic acid), whereas if they have more than one gap they are called polyunsaturated.

Most saturated fats are are of animal origin but also some plants. Examples include: beef fat, milk, coconut oil kernel oil, poultry fat etc..

Unsaturated fats are mostly of plant origin and some seafood. Examples Include: soybeans, olive oil, canola oil etc..