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Steroids

A **steroid lipid** is a type of lipid that differs in structure from triglycerides and phospholipids. A steroid lipid consists of 4 hydrocarbon rings (3 hexamers and a pentamer) that are joined to each other (see image below). However, the solubility characteristics of steroids are like other lipids in that they are nonpolar (hydrophobic). The best known and most abundant steroid lipid is **cholesterol**. Cholesterol is very important for several reasons. First, it is required to build and maintain cellular membranes. Second, cholesterol is used to synthesize bile, an important component of digestive juices that helps in the digestion of fat. Third, cholesterol is also used to synthesize steroid hormones (see image below). Steroid hormones are critical for healthy growth and development of most biological tissues. Cholesterol is essential to all animal life, so we find that animals (including humans) have the ability to make this important molecule. Animals also ingest cholesterol.



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