

Carbohydrates

In addition to lipids and proteins, the membranes also contain carbohydrates. These are short-chained polysaccharides (oligosaccharides) that attach to the proteins and lipids on the extracellular layer of the membrane. If attached to a protein, they are called **glycoproteins**, and if attached to a lipid, they are called **glycolipids**. One function of these oligosaccharides bound to membrane proteins or lipids is to form additional cell markers. Your blood type (A, B, AB, or O), for example, is determined by glycoproteins expressed on your red blood cells. Additionally, some cells, such as the apical surface of epithelial cells, have a dense layer of glycoproteins referred to as the **glycocalyx**. The glycocalyx has been implicated in cell recognition during development, adherence of cells to each other, and playing a role in the permeability of the membranes.



This content is provided to you freely by BYU-I Books.

Access it online or download it at

https://books.byui.edu/bio_264_anatomy_phy_l/514__carbohydrates.

