# Test Your Knowledge: Macromolecules of Life

## For Anatomy & Physiology I

**Biological Macromolecules, Fill in the blank:**

| Macromolecule | Monomer | Elements Present | Function | Examples |
|---|---|---|---|---|
| Carbohydrates | | C,H,O | | |
| Lipids | | | | Fats, Oils, Phospholipids, Cholesterol, Grease, Waxes, Steroids |
| Proteins | Amino Acids | | | |
| Nucleic Acids | | | Genetic Information | |

**Carbohydrates** are classified by _____.

The most common simple sugars are glucose, galactose and fructose that are made of a single sugar molecule. These can be classified as _____.

Sucrose and _____ are classified as disaccharides; they are made of two monosaccharides joined by a dehydration reaction.

The most complex carbohydrates are starch, _____ and cellulose, classified as _____.

**Lipids** most abundant form are _____.

Triglycerides building blocks are 1 _____ and 3 _____ per molecule.

If a triglyceride only contains _____ bonds that contain the maximum number of _____, then it is classified as a saturated fat.

If a triglyceride contains one or more _____ bonds, then it is classified as an unsaturated fat.

Lipids are also responsible for a major component of the cell membrane wall that is both attracted to and repelled by water, called _____.

The tail of this structure is made of 2 _____, that are water insoluble (hydrophobic).

The head of this structure is made of a single _____, that is water soluble (hydrophilic).

**Proteins** building blocks are amino acids that are held together with _____ bonds. These are covalent bonds that link the amino end of one amino acid with the carboxyl end of another.

Their overall shape determines their _____.

The complex 3D shape of a protein is called a _____.

Proteins have four levels of structure: _____, _____, _____, _____.

**Nucleic Acids** are polymers made of building blocks called _____.

There are two types of nucleic acids.

_____ is composed of nucleotides that have ribose sugar.

_____ is composed of nucleotides that have deoxyribose sugar.

References

Shier, D., Butler, J., & Lewis, R. (2016). Hole's Human Anatomy & Physiology (14th

ed.). New York, NY: McGraw-Hill Education