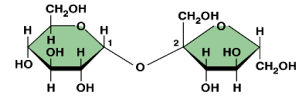


# Biochemistry – STRUCTURE

## Carbohydrates

- organic compounds containing carbon, hydrogen, and oxygen in the ratio 1:2:1
- made of monomers (building blocks) called monosaccharides

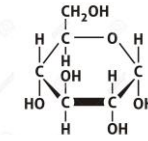


\_\_\_\_\_ are the building blocks of carbohydrates  
 Glucose, Fructose and Galactose are monosaccharides.

GLUCOSE MOLECULE

Disaccharide

Carbohydrates will usually be in a “\_\_\_\_\_ shape”



Monosaccharide

Names for sugars usually end in - \_\_\_\_\_ (maltose, cellulose, fructose)

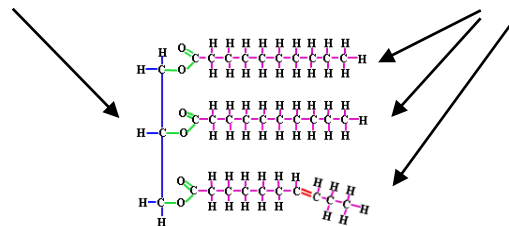
\_\_\_\_\_ are complex carbohydrates made of long chains of monosaccharides.

\_\_\_\_\_ (bread, cereals, and pastas) and \_\_\_\_\_ (plant cell walls) are sources of carbs.

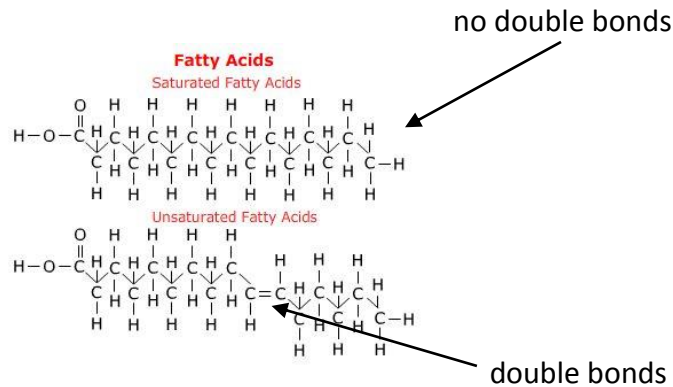
## Lipids

- fats, oils, waxes

Lipids are made of \_\_\_\_\_ and \_\_\_\_\_ (molecular structure is “E”)

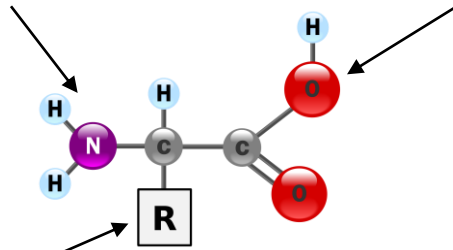


Cell membranes are made out of lipids – phospholipids – these form a barrier between the inside of the cell & the outside of the cell



## Proteins

- Monomer = \_\_\_\_\_
- Amino acids have an \_\_\_\_\_ group and a \_\_\_\_\_ group



along with a varied group (changes depending on amino acid formed)

- Proteins are held together by \_\_\_\_\_ bonds between each amino acid.
- Peptide bonds are formed through \_\_\_\_\_ (loss of a water molecule)
- Peptide bonds can be broken by \_\_\_\_\_ (addition of a water molecule)

**SHAPE matters.**

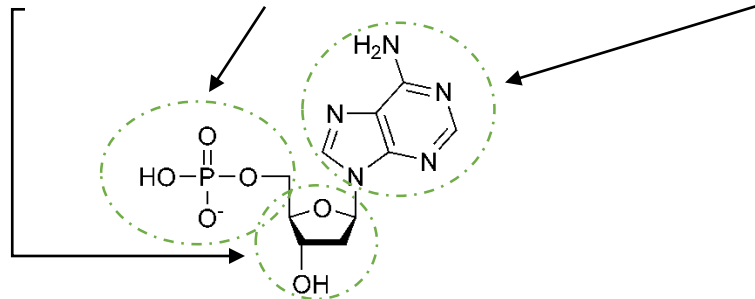
The \_\_\_\_\_ of the amino acids matters

- Different shapes = different jobs
- Different amino acids = different protein

## Nucleic Acids

Monomer= \_\_\_\_\_

- nucleotides are made of a \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_



The \_\_\_\_\_ on the nucleotide can be one of five possibilities. The \_\_\_\_\_ of the nucleotides is important because it dictates what \_\_\_\_\_ is formed

**Nucleotides are chained into a polymer of \_\_\_\_\_ or \_\_\_\_\_.**