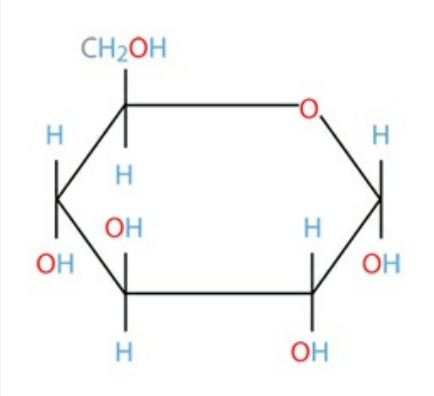
Dehydration Synthesis

Making a larger molecule by taking out water.

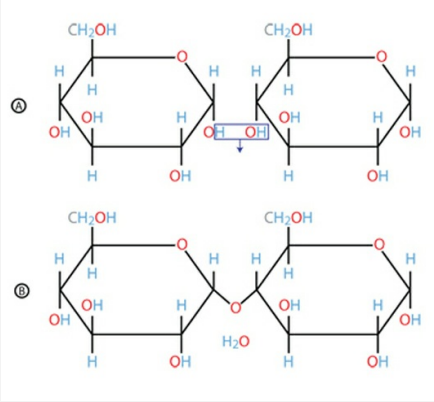
Monosaccharide (glucose ==> C6H12O6)



***There is a carbon atom at each corner that is not shown**

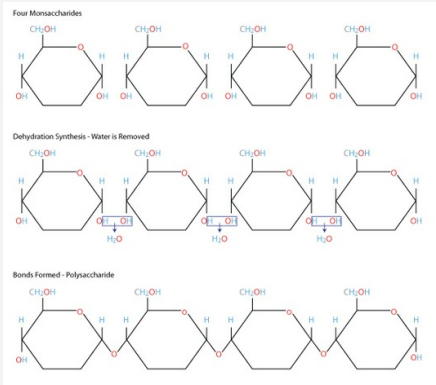
Simple sugar, one molecule of sugar. It can be used right away or stored. To store it, it has to be connected to other molecules using dehydration synthesis.

Dehydration Synthesis in Carbohydrates



Cells use dehydration synthesis to link two glucose molecules together into **maltose**. Maltose is a disaccharide which can be stored.

Polysaccharides



Sugars are usually stored as **polysaccharides** (many sugars) which is a sugar with more than two monosaccharides. Also called **starch**

Review

Glucose	Monosacch-aride	Readily avalible	Can be immediately turned to ATP
Glycogen	Polysacchari-de/starch	Short-term use/storage	Takes a bit to turn to ATP
Fat	Lipid	Long-term use/storage	Takes a long time to turn to ATP

Hydrolysis

Splitting a larger molecule by adding water.

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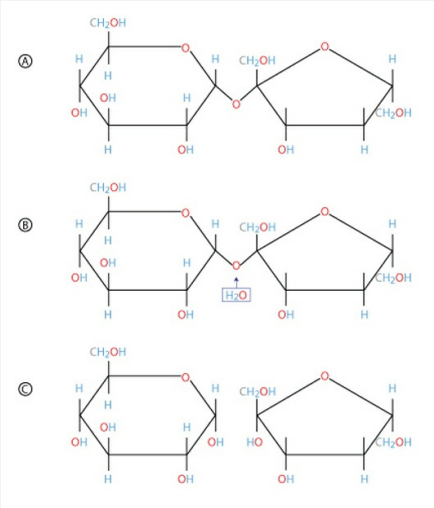
Carbohydrates

Sugars used to make/short-term store energy.

Disaccharide

A sugar with 2 monosaccharides

Hydrolysis in Carbohydrates



Hydrolysis of a fructose molecule.
Hydrolysis is used to/when:
-break down food in the digestive system
-body needs quick/fast energy (simple sugars)

Body can run out of energy but still have fat because fat takes a long time to break into simple sugars.

Vocabulary

Organic Macrom-olecules	A molecule that has many elements, one of which is carbon. Ex: Proteins, carbohydrates, lipids
Simple Molecule	Ex: Water
Cellulose	A carbohydrate plants use in cell walls to provide support
Fiber	No calories; humans can't digest; helps you shit
Fructose	A monosaccharide
Maltose	A disaccharide consisting of two glucose molecule linked together that can be stored
Sucrose	A dissacharide consisting of a glucose molecule and a fructose molecule
Starch	Another name for polysaccharides
Glycogen	A polysaccharide consisting of many glucose molecules linked together (sometimes hundreds). Extra sugar is stored as glycogen in the liver of the body as a short-term energy storage

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