

# Carbohydrates

The major dietary carbohydrate of animal origin is **lactose**

Nutrient	How many in calories
1g carbohydrates	4 kcal
1g proteins	4 kcal
1g fats	9 kcal

Classification of carbs

Monosaccharide's	Oligosaccharides	- Polysaccharides
<b>Simple sugars</b>	<b>2 – 10 Monosaccharide's</b> by a glycosidic bond	<b>Polymers of Monosaccharide's</b>
Formula : ( CH <sub>2</sub> O ) n	Most abundant : disaccharides	<b>Can be branched : glycogen</b>
Cannot be broken down	Ose : for di & mono	<b>Can be linear : cellulose</b>

## Disaccharides

*My crazy aunt is telling lies, silly*

<u>Maltose</u>	2 <b>glucose</b> bonded by <b>a 1,4</b> // origin : <u>starch</u> hydrolysis
<u>Cellobiose</u>	2 <b>glucose</b> bonded by <b>B 1,4</b> // origin : <u>cellulose</u> hydrolysis
<u>Isomaltose</u>	2 <b>glucose</b> bonded by <b>a 1,6</b> // origin : <u>dextran</u> hydrolysis
<u>Trehalose</u>	2 <b>glucose</b> bonded by <b>a 1,1</b>
<u>Lactose</u>	<b>Milk sugar</b> Composed of <b>Galactose &amp; Glucose</b> joined by <b>(β-1, 4)</b> link.
<u>Sucrose</u>	<b>Table sugar</b> Composed of <b>(glucose-α-1,2-fructose)</b> obtained from <u>cane or beet</u>

## Polysaccharides: 2 forms

Amylose	Amylopectin
%20	%80
<b>Straight chains a 1,4</b>	<b>(branched ) the α-1,4 chains contain branches connected via α-1,6 glycosidic bonds</b>

