



CARBOHYDRATES

By :

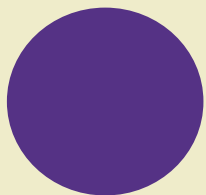
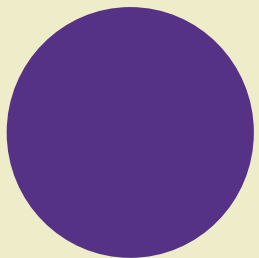
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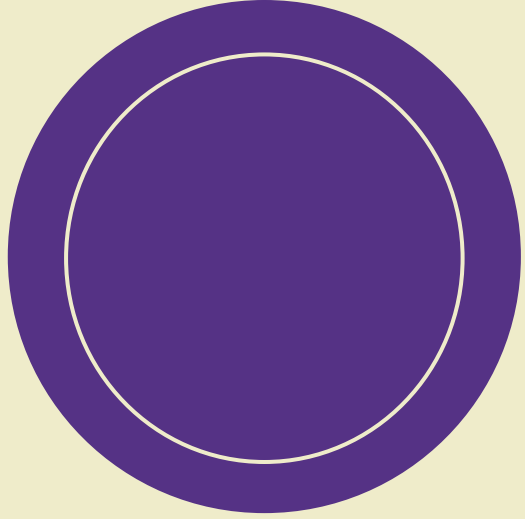
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ILOs

1. Introduction
2. Identify types of carbohydrate
3. Identify the function of carbohydrate
4. Mention risk of carbohydrate
5. Identify deoxysugars
6. Summary
7. References



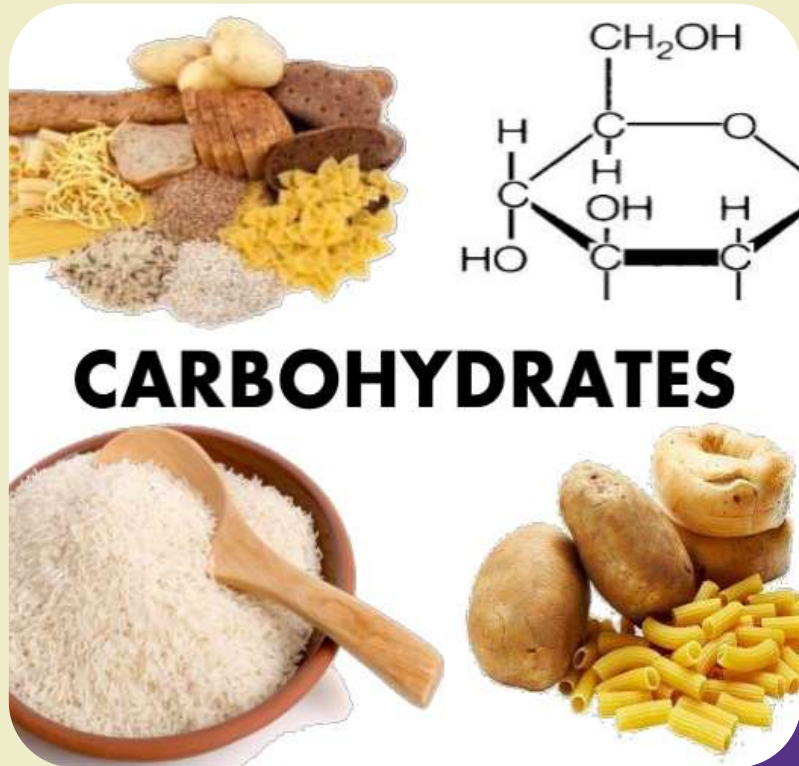


➤ Introduction



❑ Carbohydrates are widely distributed in plants and animals; they have important structural and metabolic roles. In plants, glucose is synthesized by photosynthesis and stored as starch. Animals can synthesize carbohydrates from lipid glycerol and amino acids.

❑ Carbohydrates also serve as a structural component of many organisms. The general formula $(CH_2O)_n$



➤ Carbohydrates are classified as aldehyde or ketone or derivatives of a polyhydric alcohol

Monosaccharide

simpler
carbohydrates

Disaccharide

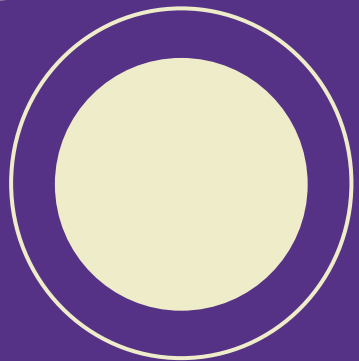
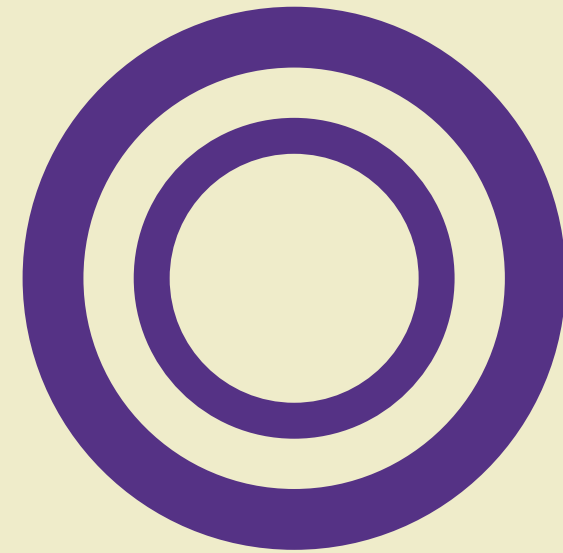
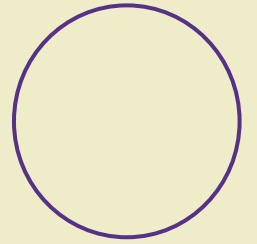
two
monosaccharide
units(maltose,
sucrose and
lactose)

Oligosaccharide

containing a small
number (typically
three to ten
two to ten
Monosaccharides

➤ **Function of carbohydrate**

- ❖ Carbs Provide Your Body and gives Energy
- ❖ They Also Provide Stored Energy
- ❖ Carbohydrates Help Preserve Muscle
- ❖ They Promote Digestive Health



➤ Risk of carbohydrate



Galactosemia

Glycogen storage diseases

High cholesterol

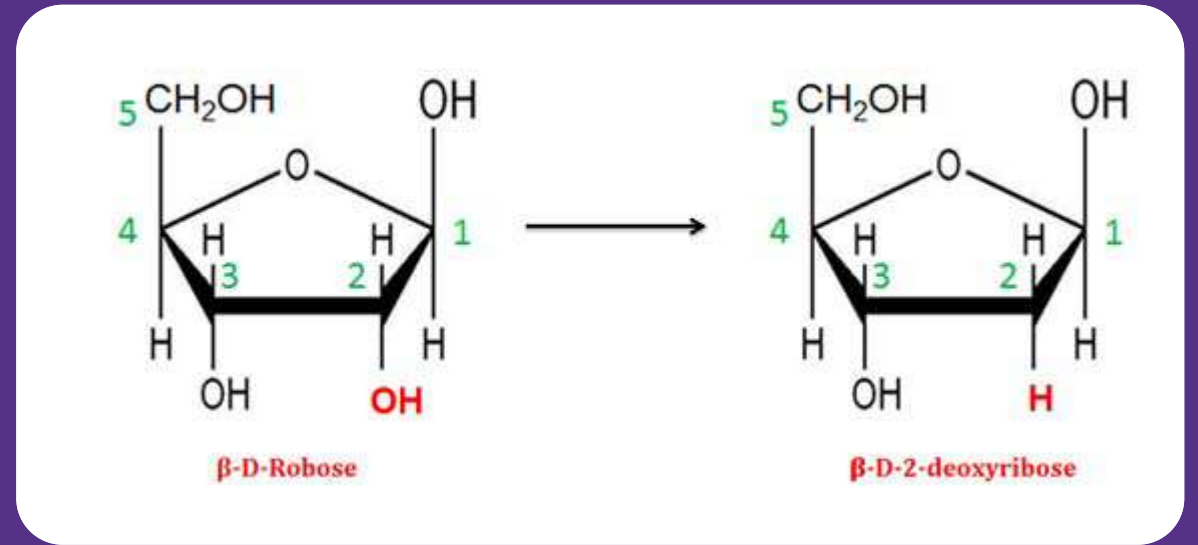
Heart diseases

Hypoglycemia

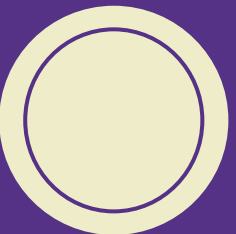
Hyperglycemia

Lactose intolerance

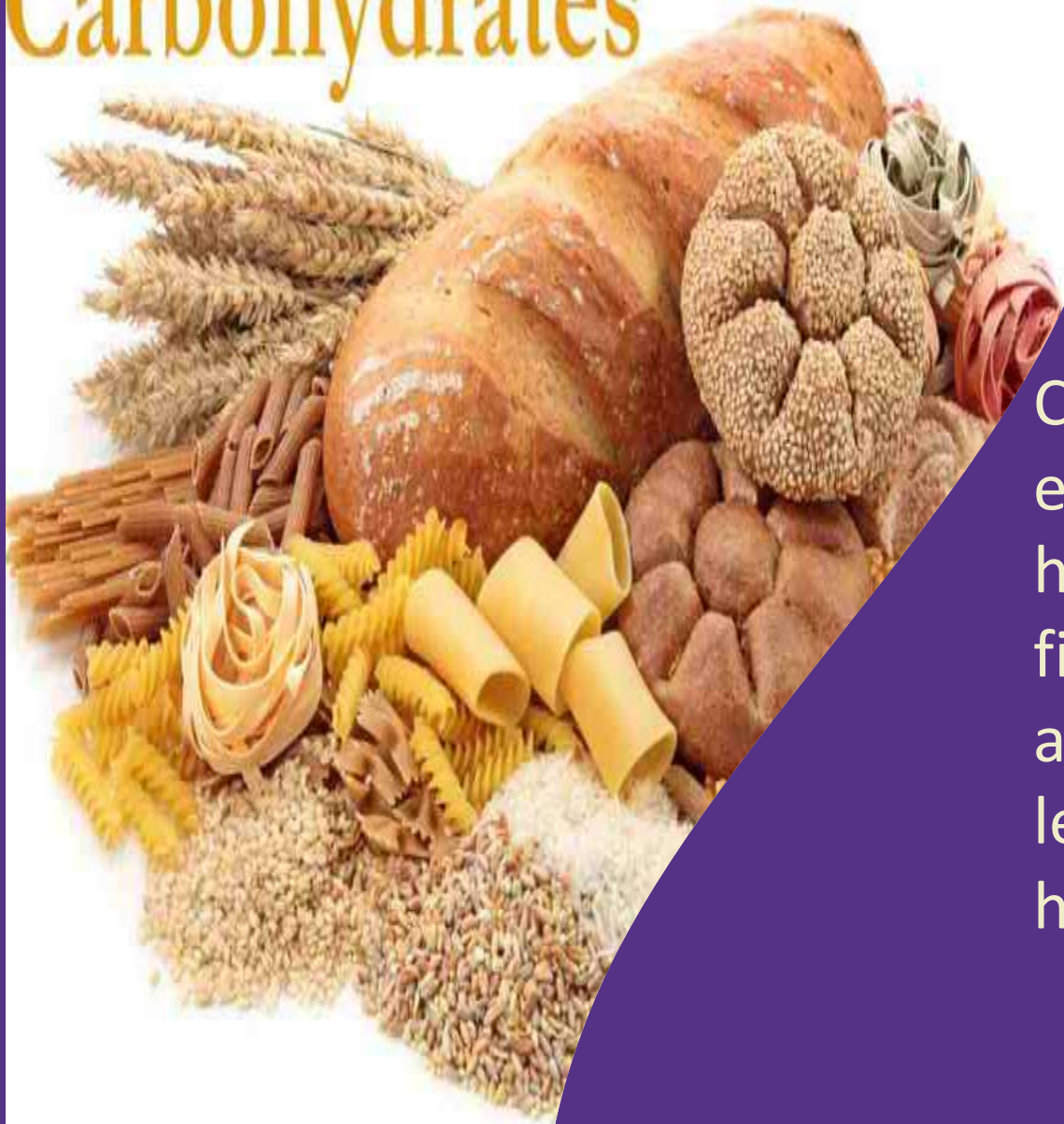
➤ Deoxysugars



- ❑ Deoxysugars are important structural components in numerous natural products, including glycoproteins, bacterial endotoxins, and secondary metabolites.
- ❑ Deoxysugars also play an important role in the DNA-binding properties of antibiotics



Carbohydrates

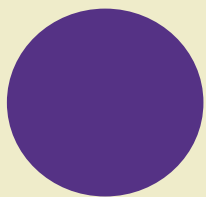
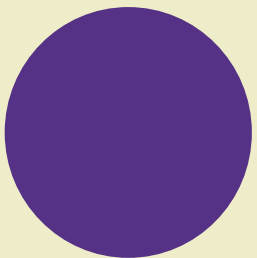


➤ Summary

Carbohydrates are an important source of energy for the body. Some types are more healthful than others. For instance, dietary fiber is a carbohydrate that protects heart and gut health, whereas added sugars can lead to an increased risk of type 2 diabetes, heart disease, and overweight.

References

1. Harper's Illustrated Biochemistry /Robert K. Murray, MD, PhD/
twenty-sixth edition
2. Lippincotts Illustrated Reviews Biochemistry 3rd Ed.
3. <https://my.clevelandclinic.org/health/articles/15416-carbohydrates>





Thank You!

