

SI Session 18

11/10

1. Acetyl-Coenzyme A is known as a carrier of what? What vitamin aids in the synthesis of this molecule?

Acetyl-Coenzyme is known as a carrier of fatty acids.

Pantothenic acid (B5)

2. What group of enzymes are biotin-dependent and are involved in metabolic processes like fatty acid and amino acid synthesis?

Carboxylases

3. What vitamin plays an important role in both A.A metabolism and nucleotide metabolism? What is its function and deficiency?

Folic Acid/Folate

Function: One carbon unit carrier

- Sometimes there is a leftover carbon that gets transferred to another reaction where it is needed

Deficiency: Megaloblastic anemia

4. Vitamin B12, also known as Cobalamine, is essential for what? Give both its function and deficiency

Function: We make a protein, whose sole purpose is to bind to B12 in order to absorb it into the small intestine... (INTRINSIC FACTOR)

Deficiency: Pernicious anemia

5. What vitamin is required for A.A metabolism and has no known deficiency? What is this vitamin involved in?

Pyroxidine

Function: Involved in amine transfers → enzymes are involved in ping pong mechanisms.
(amino transferases)

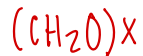
6. What are the two classes of carbohydrates?

Simple and complex

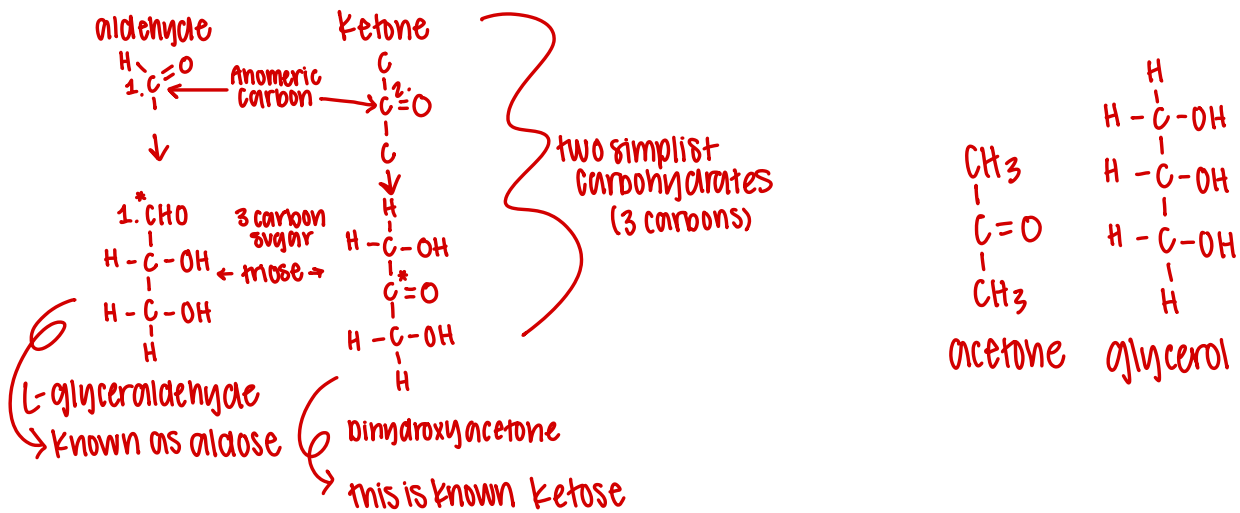
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7. Draw the basic formula of a carbohydrate. What is this basic structure referred to as?

Monosaccharide



8. What are the two simplest carbohydrates? What functional groups are present?



- Thiamine (B1)

