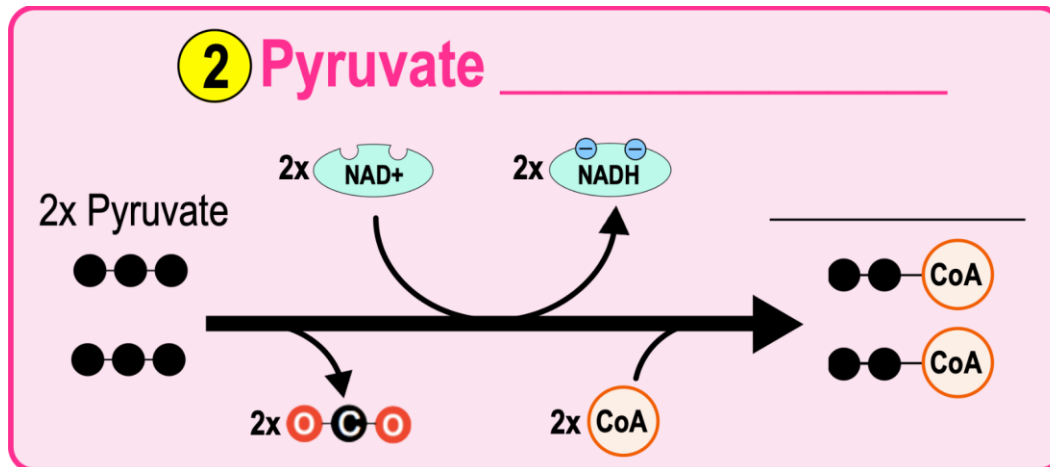
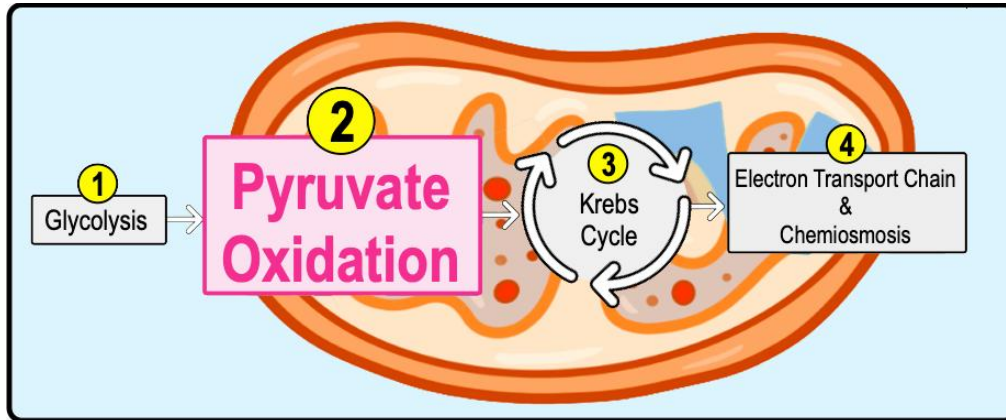


CONCEPT: PYRUVATE OXIDATION

- *Recall:* Glycolysis results in ____ pyruvate molecules, which are then transported to the *mitochondrial* _____.
- **Pyruvate Oxidation:** 2nd step of cellular respiration that converts each *pyruvate* into a molecule of *Acetyl*-_____.
- Occurs in *mitochondrial matrix* & produces ____ acetyl-CoA, ____ NADH, & ____ CO₂ molecules (per 1 glucose).

EXAMPLE: Pyruvate Oxidation.



PRACTICE: Each of the following describes the pyruvate oxidation reaction except that _____.

- a) It connects glycolysis to the citric acid cycle.
- b) Each pyruvate is converted to an acetyl-CoA molecule.
- c) NAD⁺ is reduced to NADH.
- d) This reaction occurs within the cytoplasm.
- e) Carbon dioxide is released as a by-product.

PRACTICE: In aerobic cellular respiration, pyruvate molecules must be transformed through a process called pyruvate oxidation before they can be broken down in the Krebs Cycle. What are the products of pyruvate oxidation?

- a) Acetyl CoA, O₂, and ATP.
- b) Acetyl and CO₂.
- c) Acetyl CoA, FADH₂, and CO₂.
- d) Acetyl CoA, NADH, and CO₂.
- e) Acetyl CoA, NAD⁺, ATP, and CO₂.