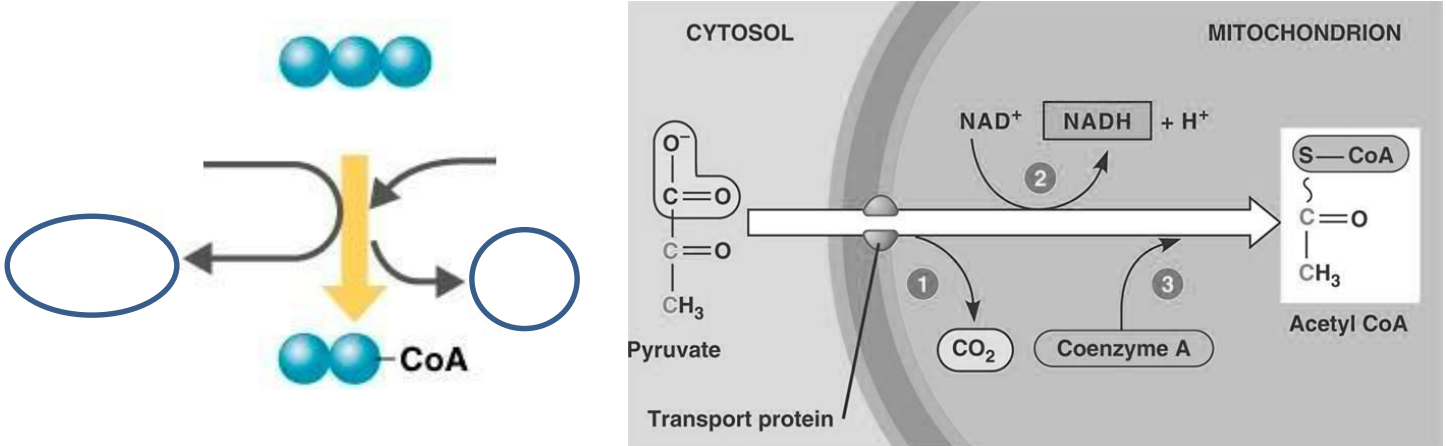


Pyruvate Oxidation: The Transition Step

- A molecule of enters the mitochondrion from the cytoplasm. One atom is removed via and hydrogen is removed using .
- becomes attached to the remaining atoms, creating which enters the Krebs cycle.

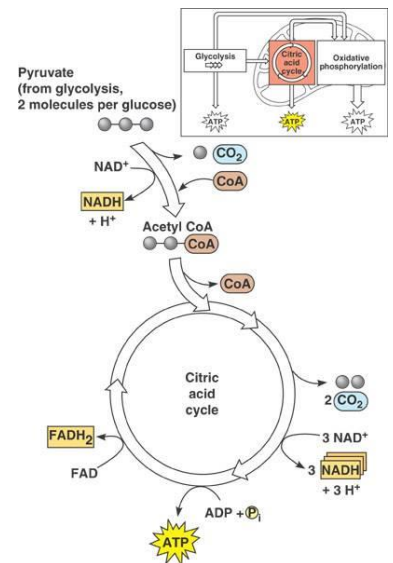


Krebs Cycle: The 8 Step Process

- Each step is by a specific .
- A cyclical process because , the **product** of step 8 is the of step 1.
- Cycle turns for every glucose molecule oxidized.

Let the Cycle Begin...

- enters the cycle and combines with to make the 6-carbon compound
- During the 8 steps of the Krebs cycle, undergoes a number of reactions, releasing and in a number of steps.
- is eventually converted into so it can be used again in the cycle.




The Krebs Cycle

Step 1: reacts with a molecules of to form . is released.

Step 2: is rearranged to

Step 3: is converted to by losing a and 2 atoms that reduce to

Step 4: is converted to . A is removed, is added and 2 atoms reduce to

Step 5: is converted to .  is formed by substrate level and is released.

Step 6: is converted to . is reduced to

Step 7: is converted to via the addition of

Step 8: is converted to and is reduced to

SUMMARY:

The Krebs cycle produces:

The Krebs Cycle

The Krebs Cycle

