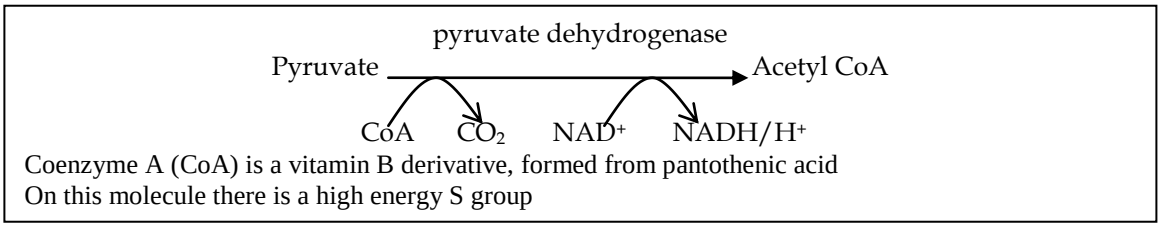
reTCA (Krebs) Cycle
(Citric Acid Cycle)

- Tricarboxylic Acid (TCA) cycle begins with acetyl-CoA
- It will allow us to get more "energy" from Pyruvate (i.e. our original glucose)
- Central pathway for lipid, carbohydrate (CHO) and protein oxidation
- Several components of the citric acid cycle serve as precursors for biomolecules
- Occurs in the mitochondrial matrix

Two important points:

1. Glycolysis ends at pyruvate, TCA begins with acetyl-CoA, pyruvate dehydrogenase is the link



Coenzyme A (CoA) is a vitamin B derivative, formed from pantothenic acid
On this molecule there is a high energy S group

2. Amino acids, CHO's and lipids can all form acetyl-CoA, so all of them can use TCA to get energy

Basics:

Start with a 2 carbon molecule and a 4 carbon molecule
Release 2 CO^2s and end with a 4C molecule
Form 3 NADH
Form 1 FADH
Form 1 GTP – which can form 1 ATP
**Cycle is completes 2 times for each molecule of glucose because 2 pyruvate are formed from 1 glucose