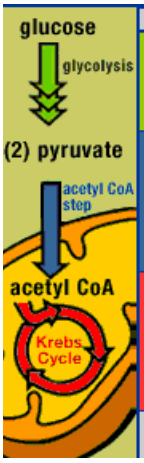
Biology Lecture Notes

Glycolysis and the Krebs Cycle

>> Key Concepts:

- The net energy output for one glucose molecule from **glycolysis** through the **Krebs cycle** is: 4 ATP, 10 NADH + H^+, and 2 $FADH_2$.
  - In glycolysis, two ATP were invested, and four ATP and two NADH + H^+ were produced.
  - In the conversion of pyruvate to acetyl CoA, two NADH + H^+ were produced.
  - In the Krebs cycle, two ATP, six NADH +H^+, and two $FADH_2$ were produced.



	ATP	NADH+H+	FADH2
glycolysis	2	2	0
acetyl CoA step	0	2	0
Krebs cycle	2	6	2
total	4	10	2

A net of four ATPs was produced from glycolysis through the Krebs cycle. More ATP will be produced from reduced coenzymes in the mitochondria during the **electron transport chain** and **oxidative phosphorylation**.