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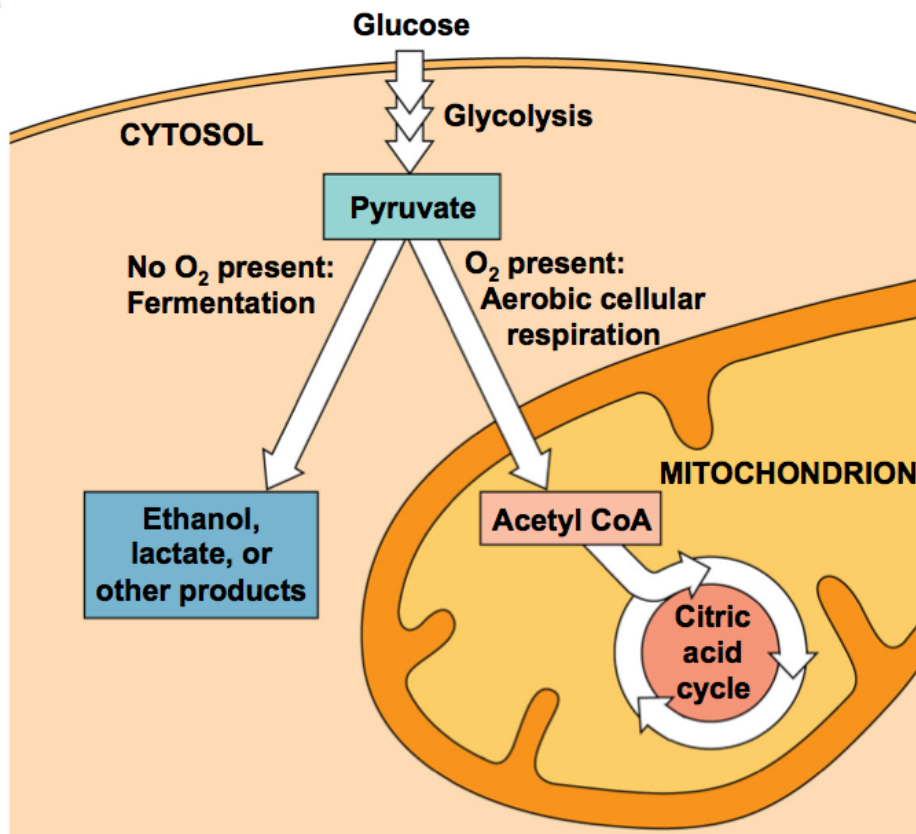
Why must energy be initially invested in breaking down glucose?

What is the role of NAD⁺ in glycolysis?

As we learned yesterday, glycolysis does not require oxygen, but the rest of aerobic cellular respiration does. Predict what might happen if oxygen is not available.

anaerobic respiration

Figure 9.18



Anaerobic Cellular Respiration-What cells do after glycolysis when there is no oxygen available.

-Doesn't need O

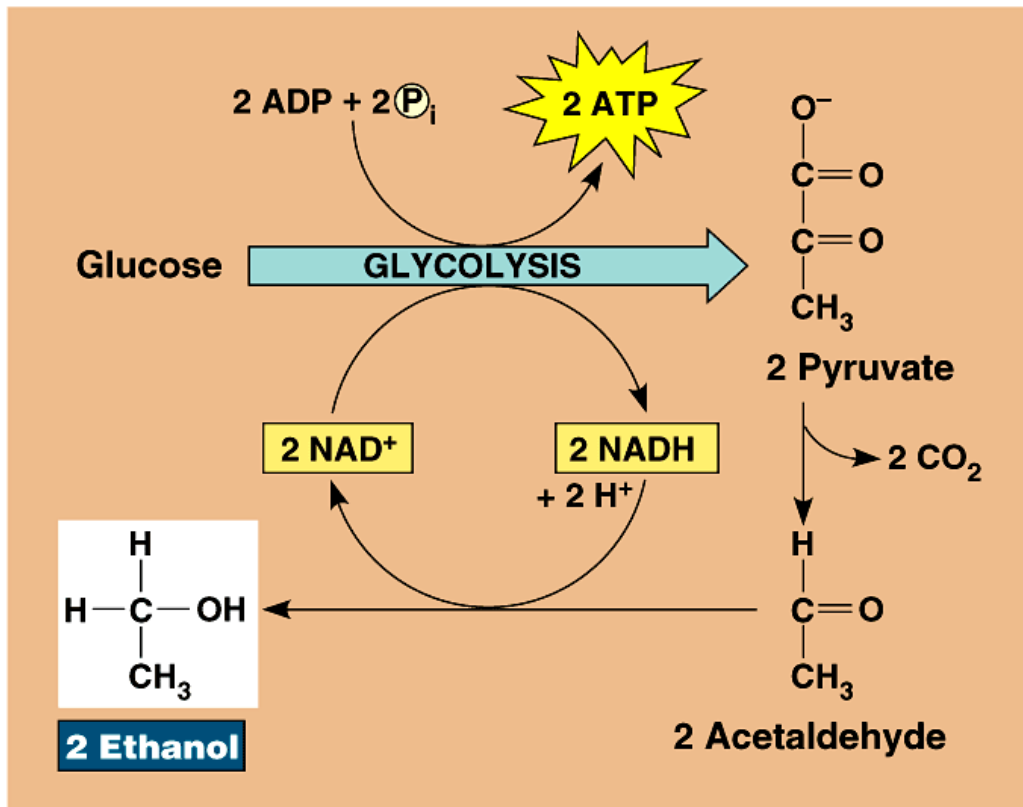
2

-Allows glycolysis to continue (2 ATP > 0 ATP) by

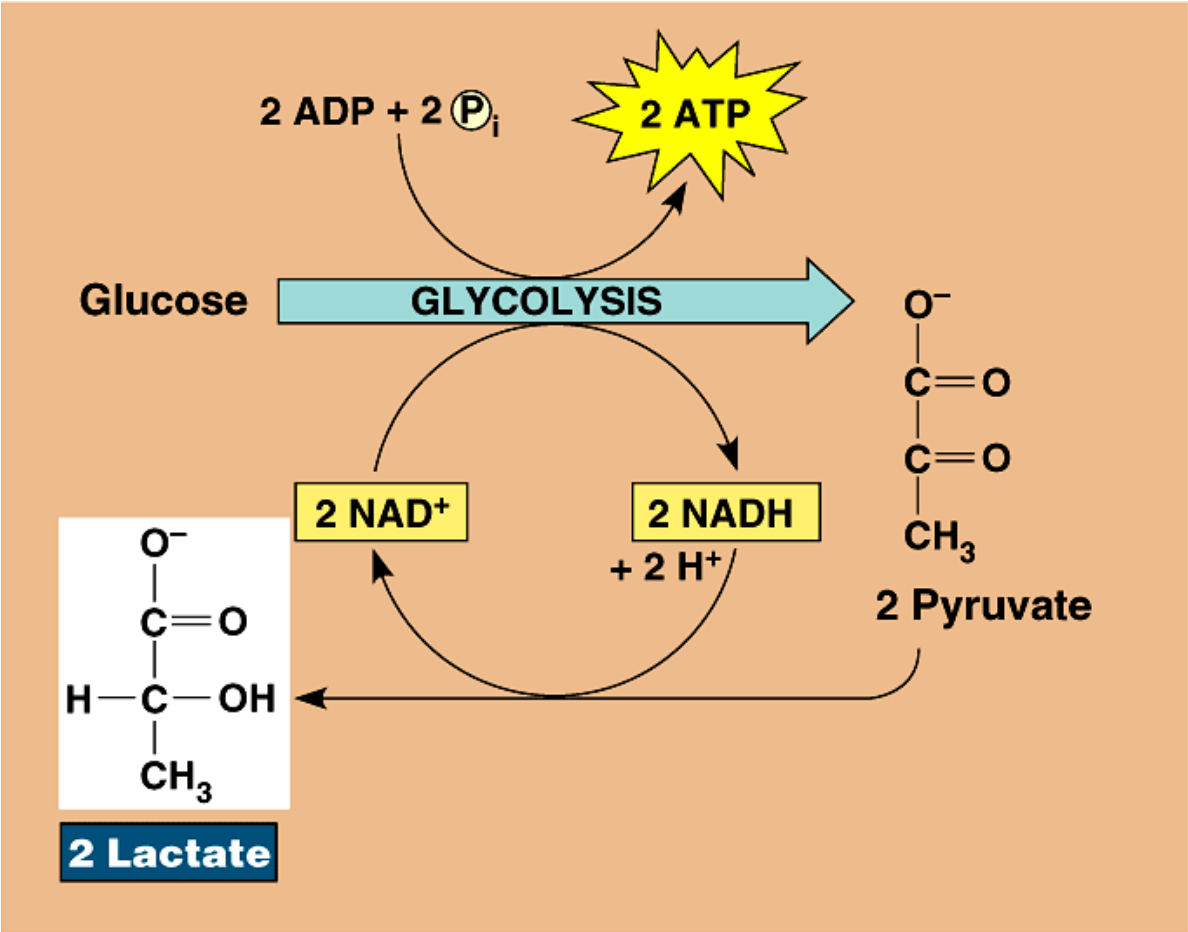
- replenishing the supply of NAD needed for glycolysis and,
- replenishing ADP needed for glycolysis and,
- preventing feedback inhibition of pyruvate.

-*Ethanol, in high concentrations, is toxic, so can not carry on with this process forever, also.... the small amount of ATP produced is not enough to sustain activity for very long.*

Plants and Fungi do Alcohol Fermentation



Animals do Lactic Acid Fermentation



Exit

What do aerobic and anaerobic respiration have in common?

How might you measure the rate of respiration?

List some variables that may affect respiration.

oxygen availability
temperature
product buildup.

Lab Problem Study:

Objective: *Investigate a variable that effects yeast respiration.*

You and your partner will use the [Scientific Research Protocol](#) to carry out your inquiry, and produce a full lab report.