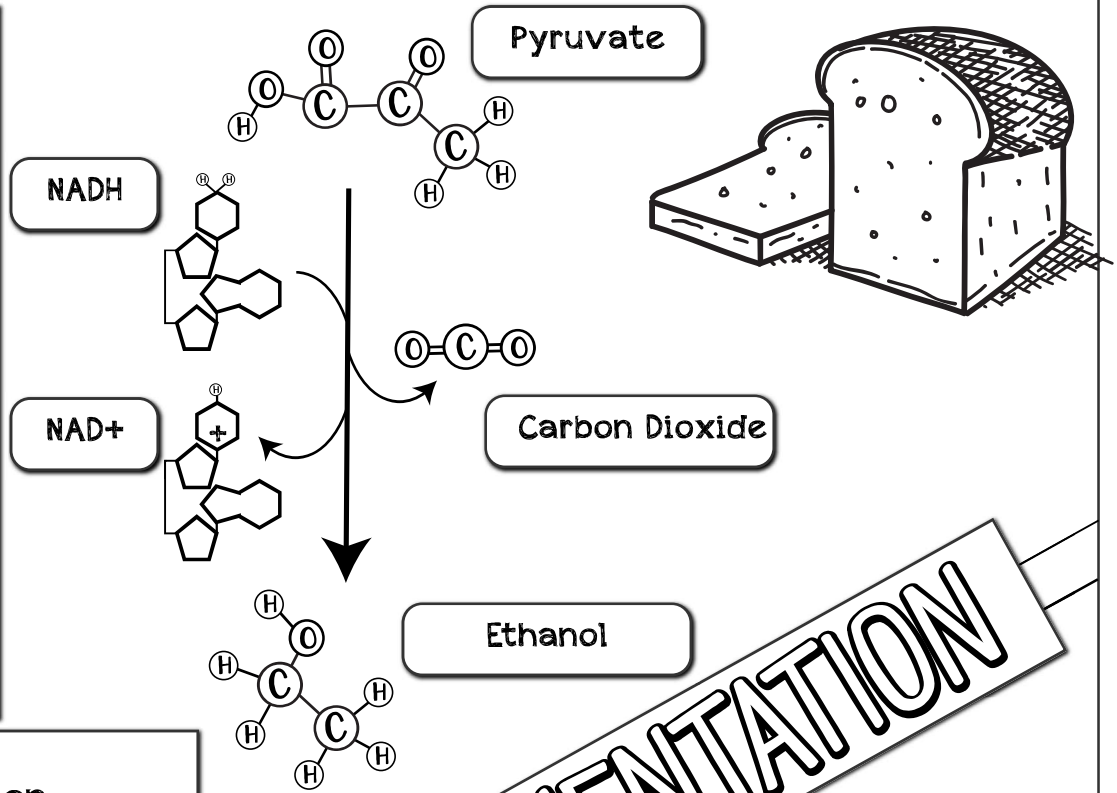


When yeast cells run low on oxygen

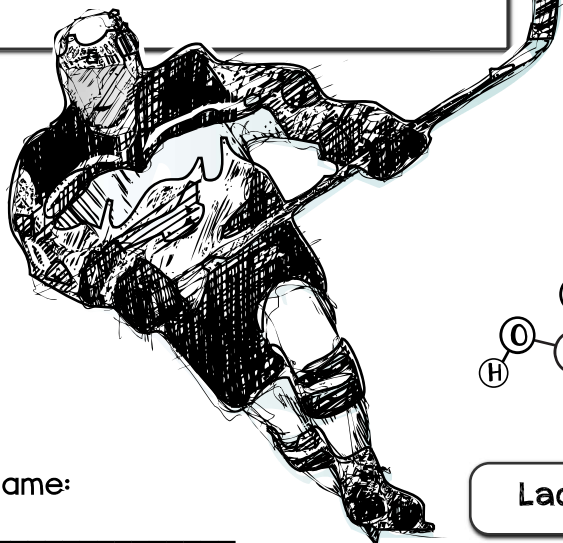
- Ethanol and carbon dioxide are made during fermentation in yeast cells
- NADH is oxidized to form NAD⁺.
- Bread rises when yeast inside the bread produces carbon dioxide.



FERMENTATION

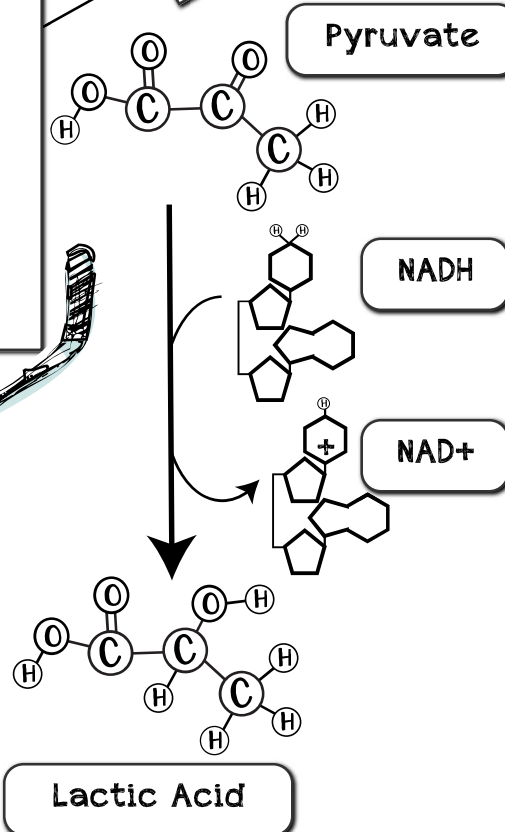
Why cells need fermentation when oxygen is low?

- Glycolysis can be performed without oxygen.
- Cells need NAD⁺ so that they can continue to perform glycolysis.
- Without oxygen, cells need a way to oxidize NADH to form NAD⁺.
- Fermentation takes place in the cytoplasm.



When human cells (like muscles) run low on oxygen

- Lactic acid is made during fermentation in human muscle cells.
- NADH is oxidized to form NAD⁺.
- Lactic acid can build up in muscles and cause soreness.
- Lactic acid is transported by the blood stream to the liver and can be converted into glucose.



Name: _____