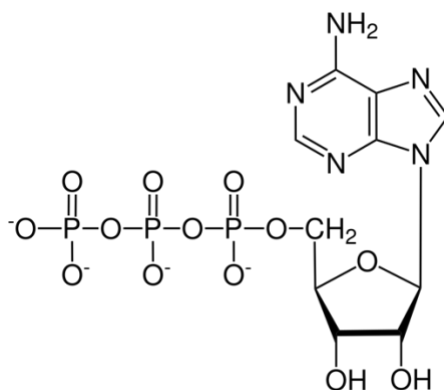


SI #7 LIFE 1010-01

- 1) Discuss with your group what about ATP's structure makes it such a great energy molecule. Reference diagram below.

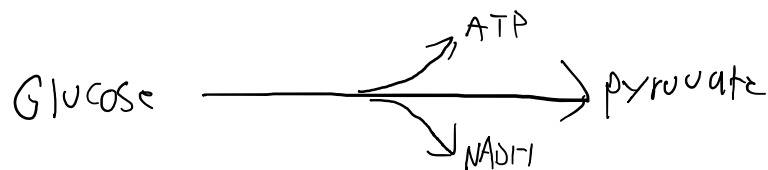


- 2) Is Cellular Respiration an endergonic or exergonic reaction? Justify your reasoning.

- 3) Complete the table below. Try to complete without referencing your notes.

	Start with	End with	Produce
Glycolysis			
Pyruvate Processing			
TCA Cycle			
ETC and OX Phos			

- 4) What is the enzyme at the end of cellular respiration that is responsible for the majority of ATP production. What needs to be present for this enzyme to function?
- 5) What is the difference between substrate level phosphorylation and Oxidative phosphorylation?
- 6) After a workout where you focused on exercising your biceps femoris, semitendinosus, and the semimembranosus, you began to feel sore. What is causing this soreness and where does it come from?
- 7) Complete the diagram below to show the pathway of fermentation.



- 8) Fermentation produces a very small amount of ATP. Why is this an acceptable yield?

9) Where do each of the 4 steps of respiration take place within the cell/mitochondria?

10) Use what you know to draw a diagram of the entire cellular respiration process. At each step, include reactants and products.

Medical Matters

Checking the airway, quality of breathing, and circulation (the ABC's) in your patient is one of the most important steps in providing proper EMS. Relating back to current biology material, why do you think each of the ABC's are critical to patient survival?