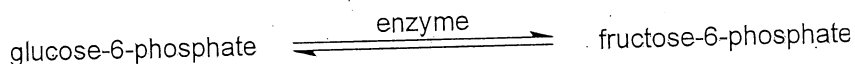
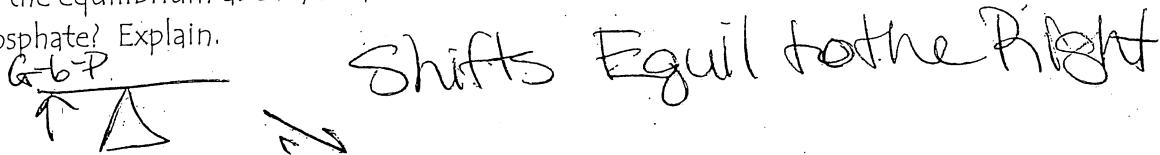


# Carbohydrates Part 2

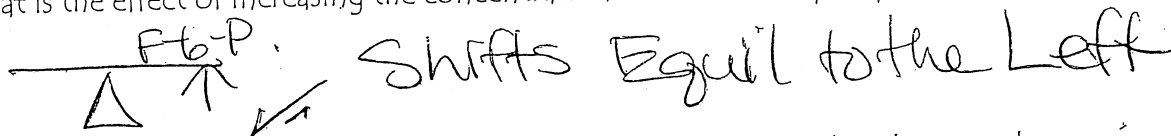
1. One step in glycolysis involves the reversible conversion of glucose-6-phosphate into fructose-6-phosphate.



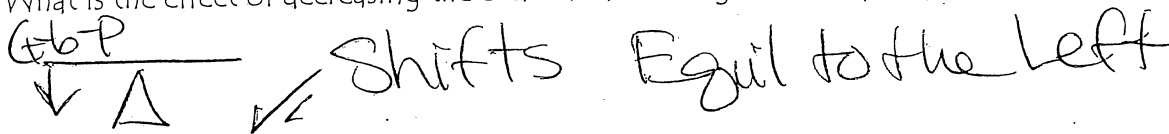
- a) For the equilibrium above, what is the effect of increasing the concentration of glucose-6-phosphate? Explain.



- b) What is the effect of increasing the concentration of fructose-6-phosphate? Explain.



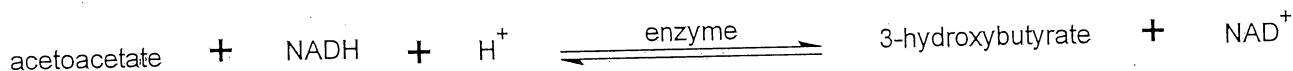
- c) What is the effect of decreasing the concentration of glucose-6-phosphate? Explain.



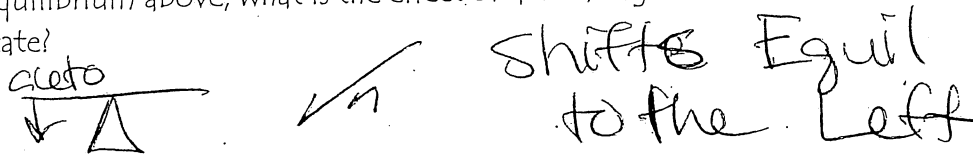
- d) Name the principle that is used to predict these effects.

Le Chatelier's

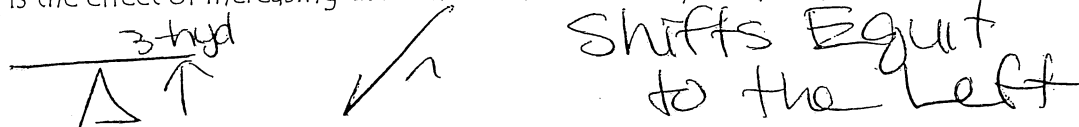
2. Starvation, severe diets, and poorly controlled diabetes can result in the production of excess ketone bodies. The reversible reaction shown here involves the reduction of the ketone body, acetoacetate, by NADH to form the ketone body, 3-hydroxybutyrate.



- a) For the equilibrium above, what is the effect of decreasing the concentration of acetoacetate?



- b) What is the effect of increasing the concentration of 3-hydroxybutyrate?



- c) What is the effect of increasing the concentration of NADH?

