

Name:

D#: D40799244

Week 3 Assignment

1: A nutrient is a substance in food that is used by the body to promote normal growth, maintenance, and repair. During metabolism, substances inside body cells are constantly built up or broken down. Please define and do comparison of glycogenesis, glycogenolysis, gluconeogenesis, and lipogenesis. Which is (are) likely to be occurring (1) shortly after a carbohydrate-rich meal and (2) just before waking up in the morning? (15 points)

In Glycogenesis, the glucose molecules will form glycogen by combining together. Glycogenolysis is the biochemical breakdown of glycogen to glucose which is the opposite of glycogenesis. Through gluconeogenesis, our body will try to produce glucose from some non-carbohydrate molecules based on demand. In Lipogenesis, the body will synthesize the triglyceride to store and use later.

Glycogenesis is likely to occur after a carbohydrate rich meal because when you have carbohydrate rich meal, your body will try to use the glucose obtained to synthesize glycogen.

Gluconeogenesis will occur just before waking up in the morning as we need energy to sustain. As carbohydrates are not available, our body uses non-carbohydrate sources to synthesize the glucose.

