

Purpose: We will need to fast and do a glucose test for this lab. The test for glucose tolerance evaluates the body's reaction to high glucose levels. There are notable differences between the blood glucose levels of normal and diabetic individuals after consuming glucose. The blood glucose level in a healthy individual increases from roughly 90% to 149% in just one hour, then returns to normal in three hours or may even drop below normal as a result of the pancreas releasing too much insulin. When a diabetic exhibits a hyperglycemic response, their blood glucose level increases from 120–160 mg% to as much as 300 mg%, then after 5–6 hours, it gradually drops to the level required for fasting.

Procedure: #1) Six students volunteers will be selected for this experiment. These subjects should report to the lab in the fasted state- not having eaten for 10-12 hours

#2) Each student's normal fasting glucose level will be determined using the test strips for the glucometer assigned to each student. Each volunteer will clean a finger with 70% alcohol, then use a sterile lancet to obtain a drop of blood for the test.

#3) Each student will then drink a lemon-flavored solution of 25% glucose. The quantity of solution will be based on 1 g of glucose per kilogram of body weight. To determine body in kilograms, the weight in pounds will be divided by 2.2.

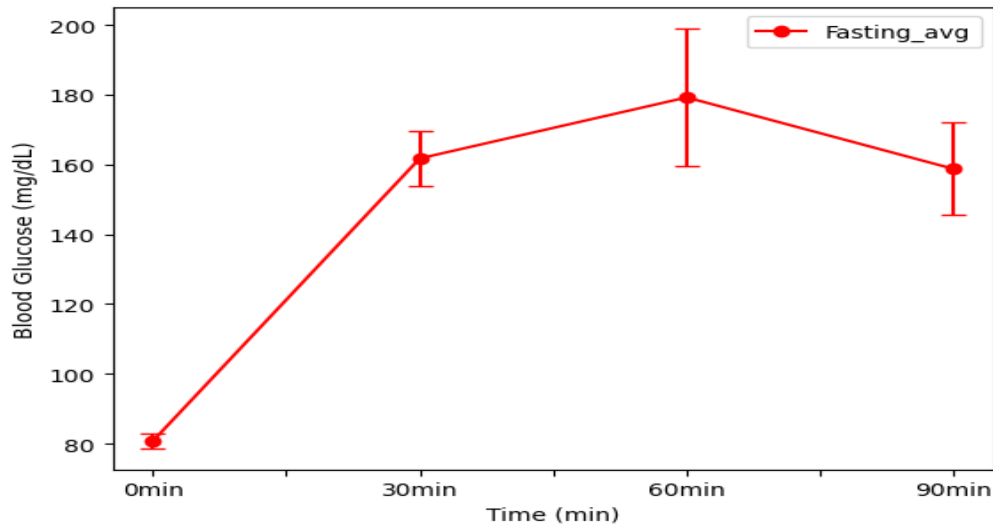
#4) After ingesting the glucose, the subject will repeat the blood testing procedure every 30 minutes. Testing will continue in this manner for 1 ½ hours or until the end of the lab period.

#5) Record and graph the average of the class results of the blood glucose tests.

#6) Compare the results with the normal glucose tolerance test curve. Describe the graphs in terms of absorption and post absorptive states.

Results:

Groups	1	2	3	4	5	6	7	Fasting VRG	Fasting SEM
0 min	75	77	85	86	103	81	83	80.75	2.101587
30 min	140	159	158	190	141	131	161	161.75	7.845988
60 min	154	135	174	254	171	152	180	179.25	19.773419
90 min	151	141	133	210	170	185	191	158.75	13.210295



Discussion: The outcomes displayed here are not those of any other person. This is because each person's body responds differently. The blood glucose levels began to rise after ingesting the solution throughout the first thirty minutes of the test, as we observed. The reason for the decline in blood glucose levels after sixty minutes is because the body has produced insulin from the pancreas to bring the levels back to normal. The hormone insulin, which regulates blood glucose levels (a kind of sugar), is produced by beta cells. The pancreas contains beta cells in islets, which are collections of cells. When a person has type 1 diabetes, their immune system accidentally kills beta cells.

Conclusion: In conclusion, Adenyl cyclase is an enzyme found in the cell membrane that becomes active when a hormone attaches itself to a certain target receptor. This facilitates the synthesis of cyclic AMP (cAMP). The secondary messenger is CAMP. It permeates the cell membrane and initiates a number of enzymatic processes that modify the body's chemistry. While nutrients are absorbed in the bloodstream and the food is digested during the absorptive phase, stored energy is used during the post-absorptive state. Therefore, insulin is created to prevent blood glucose from increasing too high, whereas glucagon prevents blood glucose from falling too low.