Mariah Hall

Bio 125

Tuesday Lab

10/1/2023

Laboratory 8- Hormonal Activity: Glucose Tolerance Test

Purpose: The purpose of this lab is to be able to see how glucose affects our body. It explains and teaches us about the pancreas and how it produces insulin in response to higher glucose in the blood. It also goes over what makes an individual diabetic and the inability for the pancreas to secrete higher amounts of insulin when the blood sugar is elevated/

Procedure:

1.Six student 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.

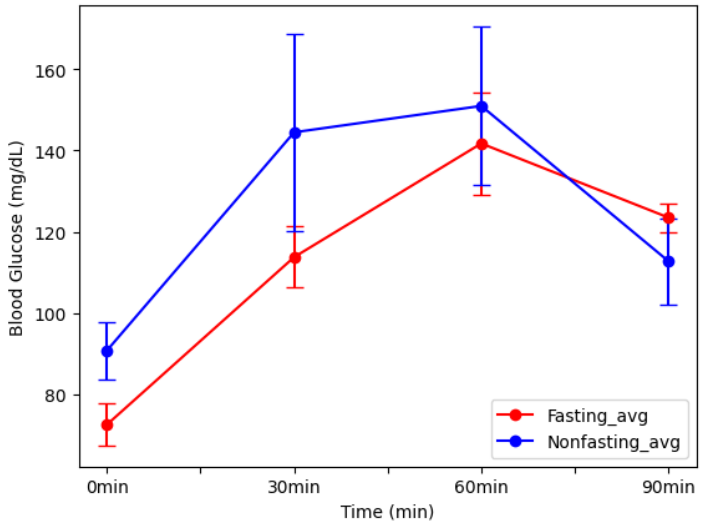
2.Each student's normal fasting blood glucose level will be determined using the test strips for the glucometer assigned to each student. Each volunteer will clean a finger with 70% alcohol, then use a sterile lancet to obtain a drop of blood for the test. **If a student is helping another obtain a blood sample, gloves and universal precautions will be followed.

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

4.After ingesting the glucose, the subject will repeat the blood testing procedures every 30 minutes. Testing will continue in this manner for 1 1/2 hours or until the end of the lab period.

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

Results:



Discussion:

I volunteered to be one of the students that fasted. It was an extremely long day of not eating and I didn't realize that even after getting to lab I still couldn't eat for another 90 minutes. Drinking the glucose drink was just like drinking flat sprite. The worse part of this lab was having to prick my finger so many times, I used the same finger for all the pokes and my finger was sore for like 3 days. It was interesting to see my changing in readings after time passed.

Conclusion:

-The pancreas secretes insulin in response to a rise in blood sugar.

-Initially in a fasting individual the intake of glucose should cause a rise in blood sugar but then over time fall back down to normal range if their pancreas is working properly and releases more insulin in response to the elevated blood sugar which would indicate that this person is not diabetic.

-With a diabetic individual after ingestion of glucose their blood sugar rises very high and takes longer to fall back down to normal range because of the inability of the pancreas to secrete additional insulin in response to a higher glucose level.