Lab 8- Hormonal Activity: The Glucose Tolerance Test

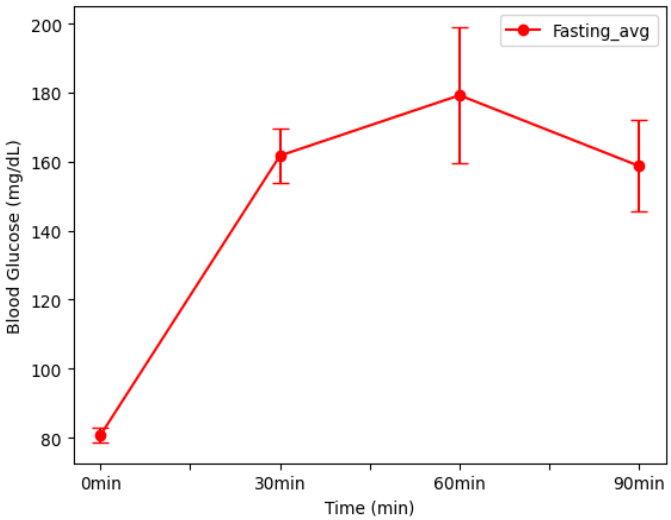
Purpose:

The purpose of this lab is to test the body's response to excess ingestion of Glucose. This test also shows how in a healthy individual the glucose level should rise to high levels and in time slowly go back to normal. If the glucose level does not reach normal glucose levels, this might be an indicator of Diabetes.

Procedure:

Procedure1.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. 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.6.Compare the results with the normal glucose tolerance test curve. Describe the graphs in terms of absorptive and post-absorptive states.

Results:



Discussion:

This lab was a very fun lab to do. It was very difficult to abstain from eating anything since I was one of the volunteers. It was such a long day without having anything to eat. It was fun to see how my body responded to an increase of glucose. My personal results showed a spike in my glucose levels, then eventually they went back to normal. The only concern was that it took a little longer for my body to reach homeostasis. I worry that I might be pre diabetic.

Conclusion: In conclusion to this data, the overall class average had a huge spike in glucose levels, then they eventually fell back to normal. This shows how the body works hard to keep equilibrium by releasing Insulin in the pancreas.