Isabel Ramos-Cervantes
BIOL 125 - 20895
Lab Day: Thurs
09/28/2023

Physiology Lab Report #8-

Lab 8: Hormonal Activity: The Glucose Tolerance Test

Purpose

- In this lab we did an experiment to understand the role of insulin, a hormone secreted by the pancreas, in the transport of glucose across cell membranes. This lab explores the effects that insulin has on blood glucose levels, known as hyperglycemia and hypoglycemia. By studying these effects, we can gain insights into the causes and symptoms of diabetes mellitus.

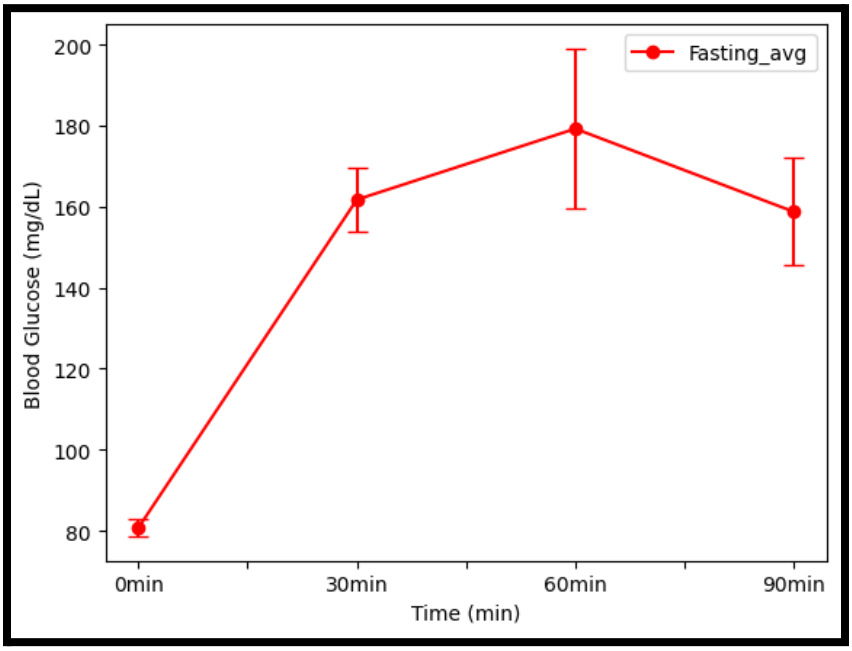
Procedures

1. In this lab six student volunteers who haven't eaten for 10-12 hours will come to the lab in a fasted state.
2. Each student will use a glucometer test strip to check their fasting blood glucose level. They'll clean their finger with alcohol, use a sterile lancet to get a drop of blood, and test it. If one student helps another, they'll follow safety precautions.
3. Next, each student will drink a lemon-flavored solution called Tru-Glu, which contains 25% glucose. The amount of solution will be based on their body weight (1g of glucose per kg of body weight).
4. After drinking the glucose solution, the students will repeat the blood testing every 30 minutes for 1 1/2 hours or until the lab period ends.
5. Then, we'll record and graph the average blood glucose results for the whole class.
6. Finally, we'll compare the results with the normal glucose tolerance test curve and describe the graphs in terms of absorptive and postabsorptive states.

Results

Group	Fasting 1	Fasting 2	Fasting 3	Fasting 4	Fasting 5	Fasting 6	Fasting 7	Fasting avg	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	7.845988

90 min	151	141	133	210	170	185	191	158.75	13.210 295



Discussion

- In this lab we learned how well our body processes and regulates sugar. It was interesting to me how my blood sugar started off low, hit a peak after drinking the Tru-Glu, and then began to regulate after a while. I felt the same all throughout, but it was neat to see that my body was working hard to process the sugar. It was nice to see that my body effectively handles glucose. I honestly thought that I would feel weird after having sugar after not eating all day, but I felt fine and I am glad to know my body is not insulin resistant!

Conclusion

- The basis of this experiment was for us to understand how different people's bodies respond to an influx of glucose. It was meant for us to understand how our body responds to glucose. It's a good way to test the effectiveness of our body's response to sugar or if there is any insulin resistance present.