Lab 8 Hormonal Activity: The Glucose Tolerance Test

Bio125

Rosalba Navarro

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Purpose

The purpose of this activity was to measure and monitor the blood sugar levels and how the body processes it. It consisted in measuring the glucose levels every 30 minutes for 1 ½ hours.

Specifics

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.

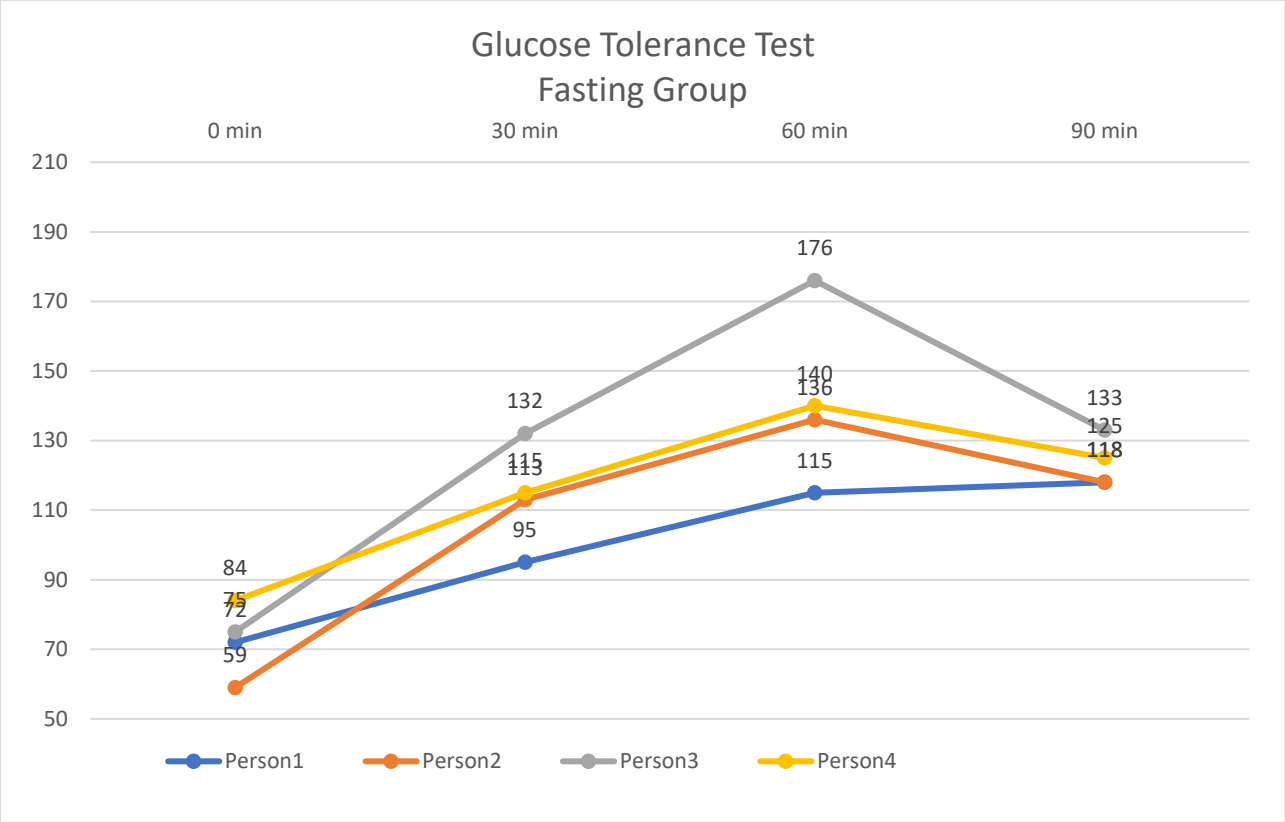
2.Each student's normal fasting blood glucose level will be determined using the test strips for the glucometer assigned to each student. Each volunteer will clean a finger with 70% alcohol, then use a sterile lancet to obtain a drop of blood for the test. **If a student is helping another obtain a blood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

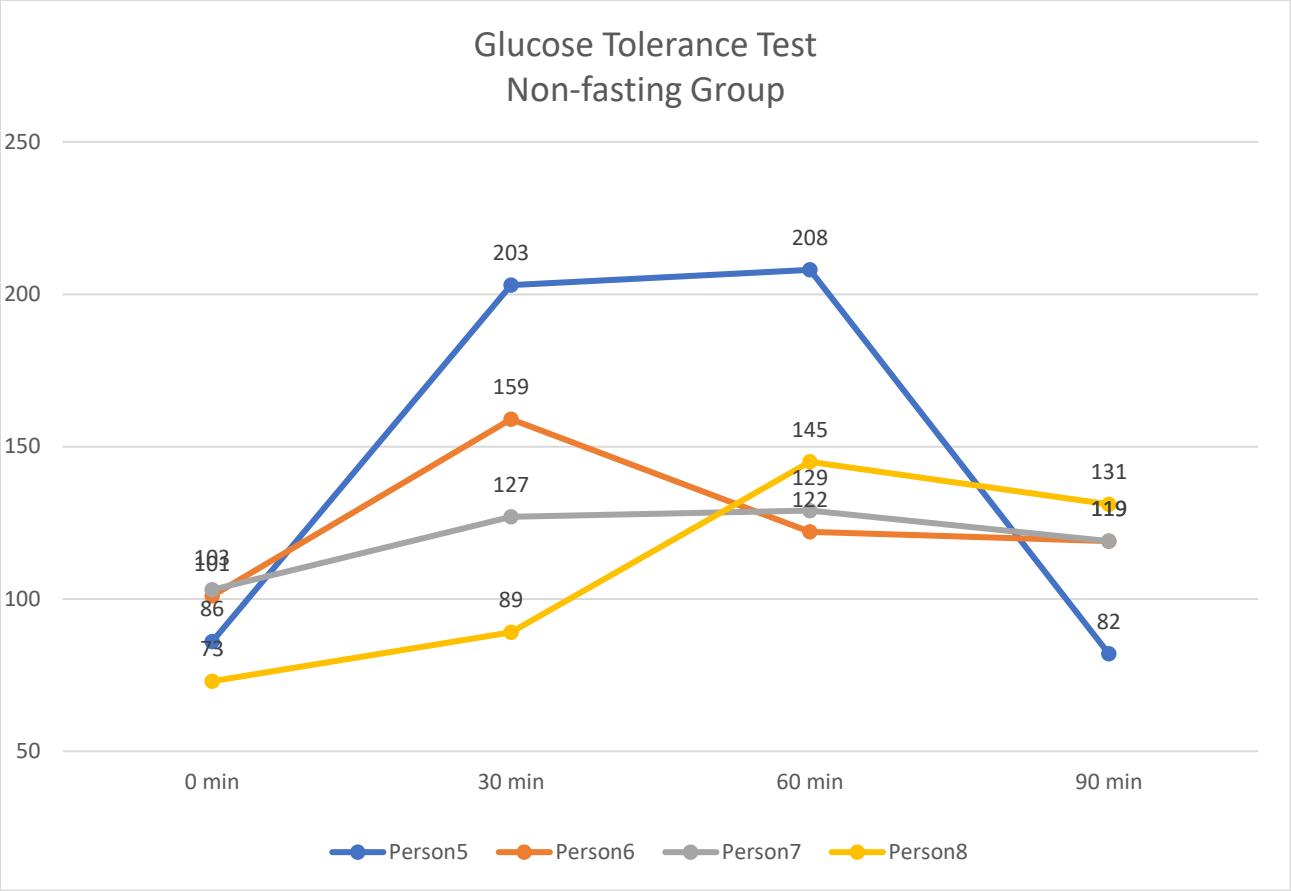
3.Each subject will then drink a lemon-flavored solution (Tru-Glu) of 25% glucose. The quantity of solution will be based on 1 g of glucose per kilogram of body weight. To determine body weight in kilograms, the weight in pounds will be divided by 2.2.

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


Glucose Tolerance Test
Fasting Group
0 min
30 min
60 min
90 min
210
190
170
150
130
110
90
70
50
176
132
140
136
133
125
118
115
113
115
95
84
75
72
59
Person1
Person2
Person3
Person4



Discussion

I really enjoyed this activity. Besides pricking my fingertips, it was interesting monitoring how my sugar levels increased and how they went back to normal.

Conclusion

After this activity I had a better understanding about glucose levels and how the body responds after the ingestion of glucose. After comparing the blood sugar levels from each of the groups, the results showed similar outcomes between the fasting and non-fasting group. Blood sugar levels increased and after minutes, blood sugar levels then started to decrease due to the production of insulin, from the pancreas, which absorbs blood sugar.

Bio125/Lab8Glucose.ipynb at main · RosalbaN/Bio125 (github.com)