Name(s)	Project Number
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Project Title

Consistency Counts: Comparing the Results of Blood Glucose Meters

Abstract

Objectives/Goals
The objective of this project is to determine how consistent blood glucose meters are when testing a range of blood glucose levels.

Methods/Materials
I tested my blood glucose ten times, on eleven different meters each time. I compared the results on the meters, and calculated the range and standard deviation of the data. I then calculated how much insulin would be needed to correct my blood glucose at each reading.

Results
I found that the higher the blood glucose readings were, the less consistent the meter readings were. The largest range of blood glucose results was 95 mg/dL. This result occurred when my blood glucose was the highest. The smallest range, 13 mg/dL, occurred on one of the tests when my blood glucose was the lowest.

Conclusions/Discussion
I check my blood glucose eight to ten times a day to manage my Type 1 Diabetes. It is important for me to have accurate blood glucose readings so that I know how much to compensate for a high or low glucose level. Overall, the meters were fairly consistent, but several of the inconsistent readings would have caused me to take either too much or too little insulin. This can have serious effects on my health.

Summary Statement

This project tests the consistency of blood glucose meters in a person with Type 1 Diabetes.

Help Received

My mother supervised my blood glucose testing and helped assemble my board.