

# Testing Times: A Diabetes Case Study



## Sam's story

Sam is 11 years old and has recently discovered he has Type 1 Diabetes. Diabetes is a disease where you are unable to keep your blood sugar within safe limits.

Before being diagnosed he was a keen sportsman representing his county at cross country, as well as playing central midfield for his local football team.

His doctor explained that in order to stay fit and healthy he needs to regularly monitor his blood sugar levels, otherwise he may develop longer term health problems when he is older, which could affect his feet, eyes and kidneys.

Sam has been given a blood glucose meter so he can test himself every morning and night. Sam's uncle has had diabetes for over 30 years but has never controlled his blood sugar and as a result, has some of the long term problems associated with diabetes. His parents are worried about Sam performing blood tests on his own but realise that regular checks on blood glucose levels are necessary to help prevent problems later on in life.

Blood glucose may be measured in two ways:

- Visiting your GP or local hospital and having a blood sample taken from your vein and sent directly to the lab for analysis.
- Point of care testing using a portable blood glucose meter where a finger prick sample of blood is placed on a test strip and the result is instantly available.

## Discussion Issues

1. What factors need to be considered when deciding how Sam should check his blood glucose levels?
2. What are the possible advantages to self testing? Are there any disadvantages?
3. How would you feel about taking responsibility for your own test results?
4. What impact do you think self-testing will have on Sam's day-to-day life?

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Sam is now 14 years old and has been managing his diabetes effectively. His blood sugar level is within safe limits. He's still running for his county and is playing centre forward for his local football team.

Recently his glucose meter was replaced with a new one, and since then the meter appears to show his blood sugar at consistently dangerous levels. Sam still feels fit and well, and assures the doctor he is still taking all his medication, as well as monitoring his blood sugar daily. A blood sample taken recently at the hospital showed his blood glucose to be within safe limits..

## Discussion Issues

1. Which result do you think is correct?
2. How would you explain the discrepancy in the results?
3. Who do you think should ensure tests performed outside the lab are at an appropriate standard?