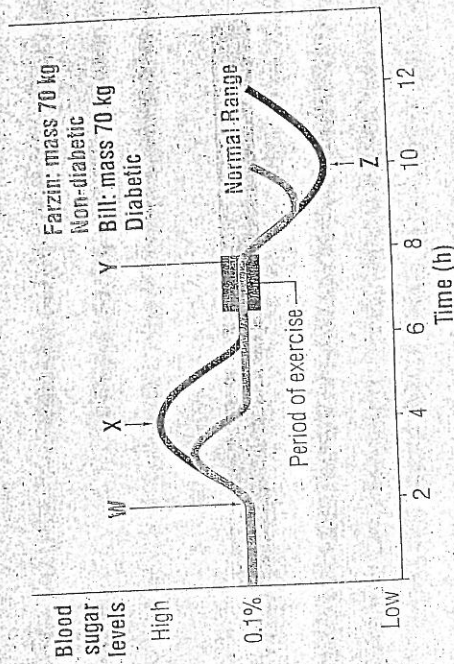


CASE STUDY

THE EFFECTS OF HORMONES ON BLOOD SUGAR

Objective

To use experimental data to investigate the effects of various hormones on blood sugar levels.



Procedure

Blood sugar levels of a diabetic and a nondiabetic patient were monitored over a period of 12 h. Both ate an identical meal and performed 1 h of similar exercise. Use the data in the graph to answer the Case-Study Application Questions.

Case-Study Application Questions

- 1 Which hormone injection did Bill receive at the time labelled X? Provide your reasons.
- 2 What might have happened to Bill's blood sugar level if hormone X had not been injected? Provide your reasons.
- 3 Explain what happened at time W for Bill and Farzin?
- 4 Explain why blood sugar levels begin to fall after time Y?
- 5 What hormone might Bill have received at time Z? Explain your answer.
- 6 Why is it important to note that both Farzin and Bill had the same body mass?
- 7 What differences in blood sugar levels are illustrated by the data collected from Bill and Farzin.
- 8 Why do Bill and Farzin respond differently to varying levels of blood sugar? ■