### Figure 2.5 Diagram of insulin actions and the consequences of a lack of insulin.

**2.3.7 Glucagon**

Glucagon is another hormone produced by the pancreas.

- Can you recall which cells make glucagon?
- It is produced by the \( \alpha \) cells of the islets of Langerhans in the pancreas (see Figure 2.2).

Glucagon causes an *increase* in the blood glucose level. The glucagon level in the blood tends to decrease as the glucose level increases and increases when the level of glucose decreases. It works in the opposite direction to insulin. It stimulates the liver to break down glycogen (its glucose store) and release glucose.

You may wonder why the body needs a hormone to increase glucose levels. Besides having to avoid circumstances where blood glucose is too high, the body also needs to be protected from glucose levels that are too low, as the brain will not function properly in these circumstances, as you saw above. There are lots of hormones that increase glucose levels, and glucagon is one of the most important.

You have been reading about some very complex processes in the body. Try Activity 2.3 to see if your knowledge of the processes involved in diabetes has increased.