

Blood Glucose Control

Biology

Insulin, glucagon, and the two directions of the loop.

Glucose high → insulin

- From beta cells in the islets
- Increases uptake into cells
- Promotes glycogenesis in the liver
- Inhibits gluconeogenesis
- Blood glucose falls

Glucose low → glucagon

- From alpha cells
- Promotes glycogenolysis
- Promotes gluconeogenesis
- Releases glucose to the blood
- Blood glucose rises

THE DIFFERENCE THAT MATTERS

Type 1 diabetes: beta cells destroyed, no insulin produced. Type 2: cells become insulin resistant.

Educational reference. Adrenaline also raises blood glucose, which is why stress can affect diabetic control.