

Responses to a Changing Environment

- Blood sugar high = insulin, glucose into glycogen. Blood sugar low = glucagon, glycogen into glucose.
- Type 1 diabetes = don't produce insulin.
- Type 2 diabetes = cells desensitised to insulin. Diet, exercise, injections.
- Hormone = chemical messenger released by an endocrine gland and transported in the bloodstream to its target organ.
- Homeostasis = maintenance of a stable internal environment.
- Hypothalamus. Negative feedback = increase causes a decrease.
- Too hot = sweat evaporates. Vasodilation.
- Too cold = shivering releases thermal energy. Hairs pulled up by erector muscles. Vasoconstriction.
- Osmoregulation monitors water and ion content. ADH.
- Dendrons – cell body – axon. Sensory = short axon. Motor = long axon. Myelin sheath is fatty tissue that insulates the axon.
- Stimulus, receptor, sensory neuron, CNS, motor neuron, effector, response.
- Synapses = gaps between neurons. Neurotransmitters diffuse across.
- Reflex bypasses brain and goes to spinal cord as CNS.
- Auxins = growth hormones.
- Response = tropism. To light = phototropism. To gravity = gravitropism.
- Speeds up growth in shoots and slows down growth in roots.
- Shaded side = cells elongate.
- Bottom side = cells don't elongate.
- Gibberellins = another group of plant hormones.
- Selective weedkillers (A&G), rooting powder (A), controlling ripening (G), seedless fruit (G).