

Hormones and temperature control

Give three differences between nervous and hormonal communication.

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What is a hormone?

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Source and role of adrenaline?

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Source and role of insulin?

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Source and role of testosterone?

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Source and role of oestrogen?

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Source and role of progesterone?

Hormones and temperature control **Biology only**

What does ADH do?

A chemical messenger secreted by a gland into the blood, which affects a target organ.

Nervous: electrical impulses, fast, short-lived. Hormonal: chemicals in the blood, slower, longer-lasting.

Pancreas. Lowers blood glucose: cells take up glucose and the liver stores it as glycogen.

Adrenal glands. Prepares the body for fight or flight: raises heart rate and blood glucose.

Ovaries. Female secondary sexual characteristics; builds up the uterus lining.

Testes. Male secondary sexual characteristics and sperm production.

Released by the pituitary gland. Makes collecting ducts more permeable to water, so more water is reabsorbed.

Ovaries. Maintains the lining of the uterus.

Hormones and temperature control **Biology only**

What do FSH and LH do?

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Name two skin responses when the body is too hot.

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What is vasoconstriction?

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How does sweating cool the body?

Sweating, and vasodilation (blood vessels near the surface widen).

Both from the pituitary. FSH makes an egg mature and stimulates oestrogen; LH stimulates ovulation.

Sweat evaporates from the skin and takes heat with it.

Blood vessels supplying the skin narrow, so less blood flows near the surface and less heat is lost.