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|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <p>Neural signalling</p> <p><b>Neuron</b></p>                                  | <p>Neural signalling</p> <p><b>Axon vs dendrites</b></p>                               |
| <p>Neural signalling</p> <p><b>Sodium-potassium pump</b></p>                   | <p>Neural signalling</p> <p><b>Three reasons the resting potential is negative</b></p> |
| <p>Neural signalling</p> <p><b>Nerve impulse</b></p>                           | <p>Neural signalling</p> <p><b>Why is a nerve impulse electrical?</b></p>              |
| <p>Neural signalling</p> <p><b>Two factors that increase impulse speed</b></p> | <p>Neural signalling</p> <p><b>Coefficient of determination (<math>R^2</math>)</b></p> |

Axon: one long single fibre. Dendrites: multiple shorter fibres. Both project from the cell body.

A cell within the nervous system that carries electrical impulses.

More positive ions pumped out than in;  $K^+$  leaks out faster than  $Na^+$  leaks in; negatively charged proteins stay inside.

Uses ATP to pump 3  $Na^+$  out and 2  $K^+$  in, establishing and maintaining concentration gradients.

It involves movement of positively charged ions ( $Na^+$  and  $K^+$ ) across the membrane.

An action potential propagated along a nerve fibre.

r squared: the proportion of variation in the dependent variable explained by variation in the independent variable.

Larger axon diameter and myelination.

Neural signalling

## Synapse

Neural signalling

## Role of calcium ions at a synapse

Neural signalling

## Excitatory postsynaptic potential

Neural signalling

## Where is acetylcholine used as a neurotransmitter?

Enter the presynaptic neuron on depolarization and act as a signal for vesicles to release neurotransmitter by exocytosis.

A junction between neurons or between a neuron and an effector cell.

At many types of synapse, including neuromuscular junctions, where it triggers contraction of muscle fibres.

Depolarization of the postsynaptic membrane when a neurotransmitter such as acetylcholine binds receptors and positive ions enter.