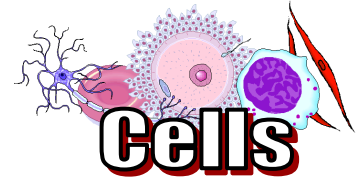
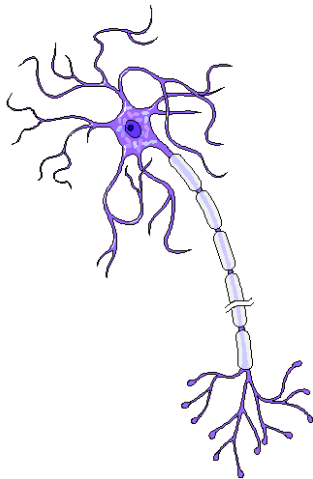


# Nerve Cell



Nerve cells are part of the nervous system. They are designed to carry electrochemical messages to and from the brain. Nerves allow us to monitor the world around us using our senses and control how we react to these conditions.



### Labels

- Nucleus
- Dendrite
- Cell body
- Node of Ranvier
- Axon
- Myelin
- Presynaptic terminal

### Key Words

- |                 |                    |
|-----------------|--------------------|
| Neuron          | Ecstasy            |
| Synapse         | Serotonin          |
| Messages        | Multiple Sclerosis |
| Demyelination   | Action potential   |
| Electrochemical | Motor neurone      |
| Potassium       | Sodium             |
| Chloride        |                    |

### Research Ideas

- What length are the largest and smallest nerve cells?
- In which direction do messages pass down the cell?
- Describe how signals pass from nerve cell to nerve cell.
- How can the drug 'ecstasy' cause permanent nerve damage?
- How is nerve cell damage thought to cause multiple sclerosis?

### Advanced Research

- Why is the myelin insulation necessary?
- Which ions are present within the axon?
- Explain what is meant by 'action potential'.
- What other illnesses are caused by damaged nerve cells?

### Presentation Ideas

Design a wall display with diagrams and facts. Make sure your titles are big and bold, and that your work is as neat as possible.

Give a talk to your class. Prepare some diagrams (maybe on overheads) to help illustrate your presentation.

### Internet Search Terms

(we recommend "google.com")

- "nerve cells"
- "the longest nerve is"
- synapse + "nerve cell"
- ecstasy + "nerve cell"
- "multiple sclerosis" + "nerve cell"

### Websites

- <http://faculty.washington.edu/chudler/cells.html>
- <http://faculty.washington.edu/chudler/ap.html>
- [http://en.wikipedia.org/wiki/Cell\\_\(biology\)](http://en.wikipedia.org/wiki/Cell_(biology))
- [http://en.wikipedia.org/wiki/Nerve\\_cell](http://en.wikipedia.org/wiki/Nerve_cell)
- [http://en.wikipedia.org/wiki/Spinal\\_cord](http://en.wikipedia.org/wiki/Spinal_cord)
- [http://en.wikipedia.org/wiki/Parkinson%27s\\_disease](http://en.wikipedia.org/wiki/Parkinson%27s_disease)