

## Synapses

Watch the you tube clip on Synapse; <https://www.youtube.com/watch?v=VitFvNvRIIY>

What is a Synapse, describe its function and draw a labelled diagram of the Synapses

Describe the three factors of the speed of action potential in humans.

The eight step by step chemical transmission across the synapse:

1. The a\_\_\_\_\_ p\_\_\_\_\_ arrives at the synaptic bulb
2. The Calcium channels open in the presynaptic membrane, as a result calcium ions diffuse into the n\_\_\_\_\_ m\_\_\_\_\_ down a concentration gradient.
3. As calcium concentration increases, the s\_\_\_\_\_ v\_\_\_\_\_ containing n\_\_\_\_\_ move towards the p\_\_\_\_\_ membrane.
4. The V\_\_\_\_\_ fuse with the m\_\_\_\_\_ and release the chemicals into the s\_\_\_\_\_ cleft.
5. N\_\_\_\_\_ diffuse across the synaptic cleft, this is known as the synaptic delay because it is slower than an e\_\_\_\_\_ s\_\_\_\_\_ travels.
6. The n\_\_\_\_\_ binds to the p\_\_\_\_\_ cell membrane receptor sites on the sodium channels.
7. Some neurotransmitters open s\_\_\_\_\_ ch\_\_\_\_\_ in the membrane, causing s\_\_\_\_\_ ions to pass in. This creates ESP excitatory postsynaptic potential and makes the membrane receptive to the s\_\_\_\_\_ coming in. If this reaches the threshold, a\_\_\_\_\_ p\_\_\_\_\_ is generated.
8. The n\_\_\_\_\_ will excite the cell and, once it has acted on the m\_\_\_\_\_, enzymes act on the neurotransmitter to break them down.