

Nervsystemet

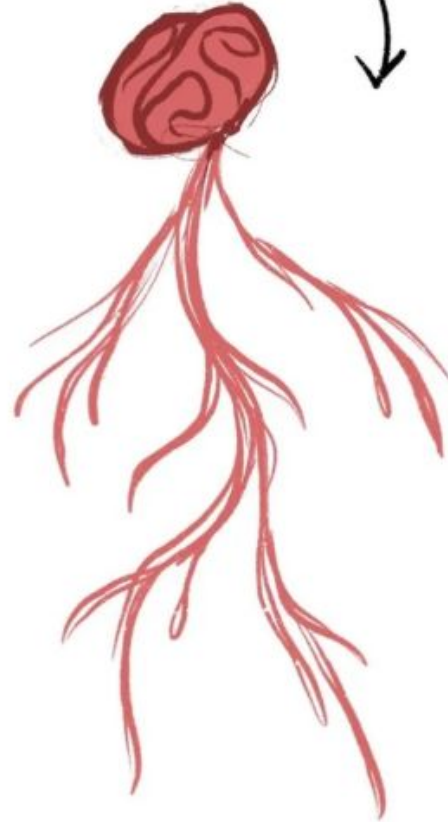
Kråka Larsen VFU Vt 2025



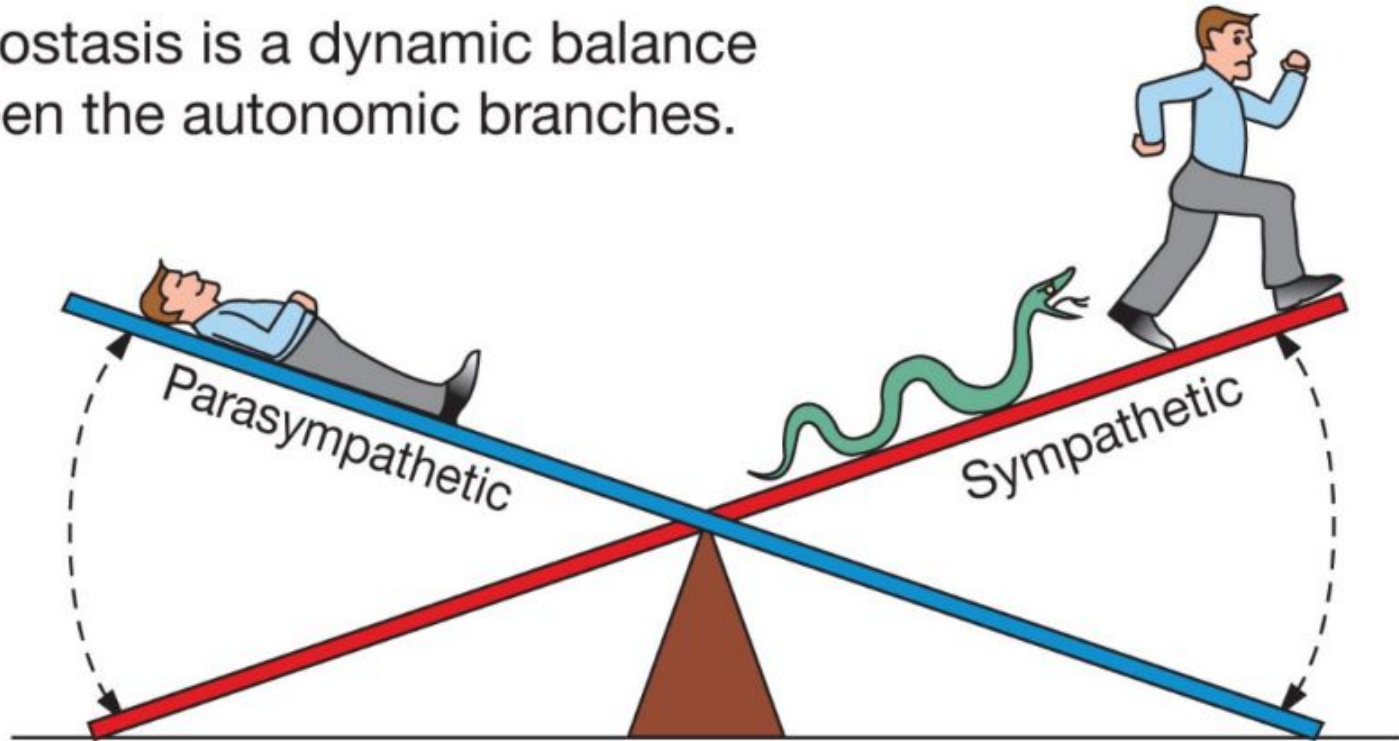
ME IN MY
MEAT SUIT



MY TRUE
FORM



Homeostasis is a dynamic balance between the autonomic branches.

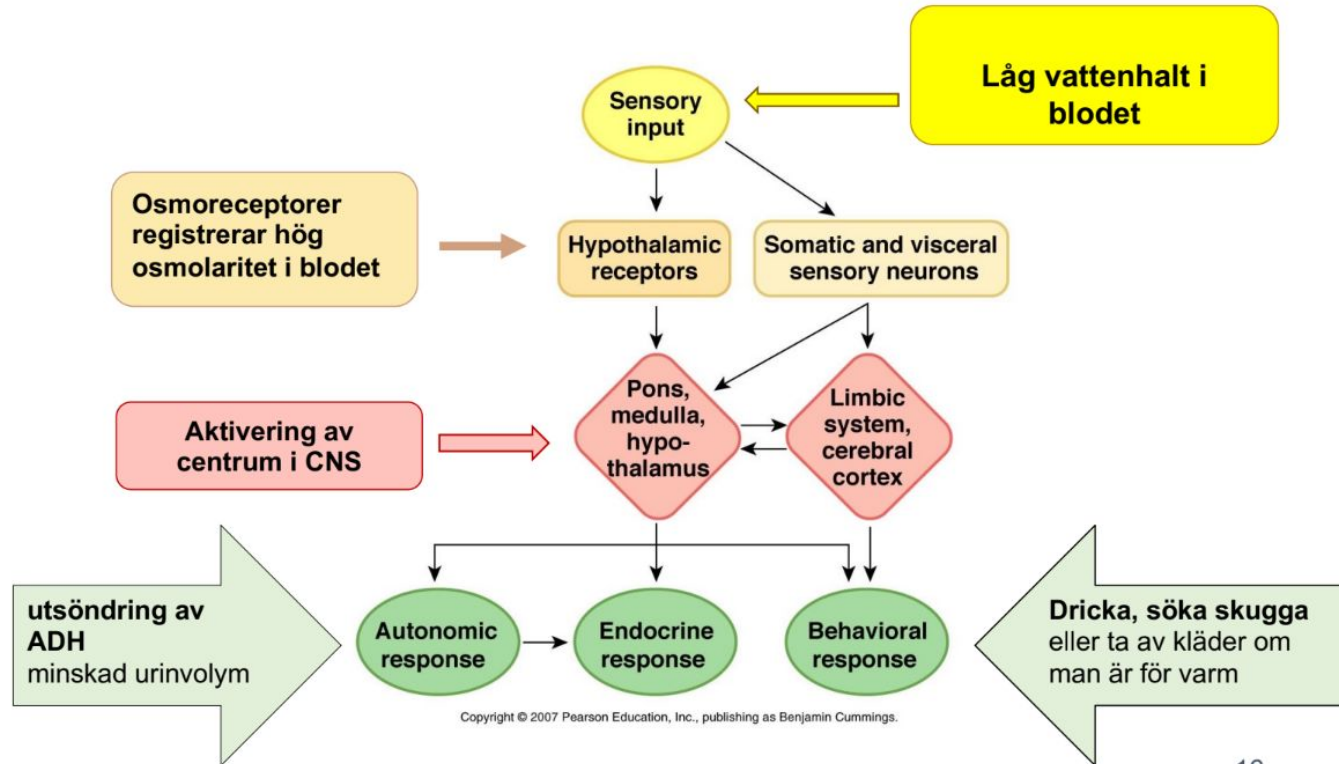


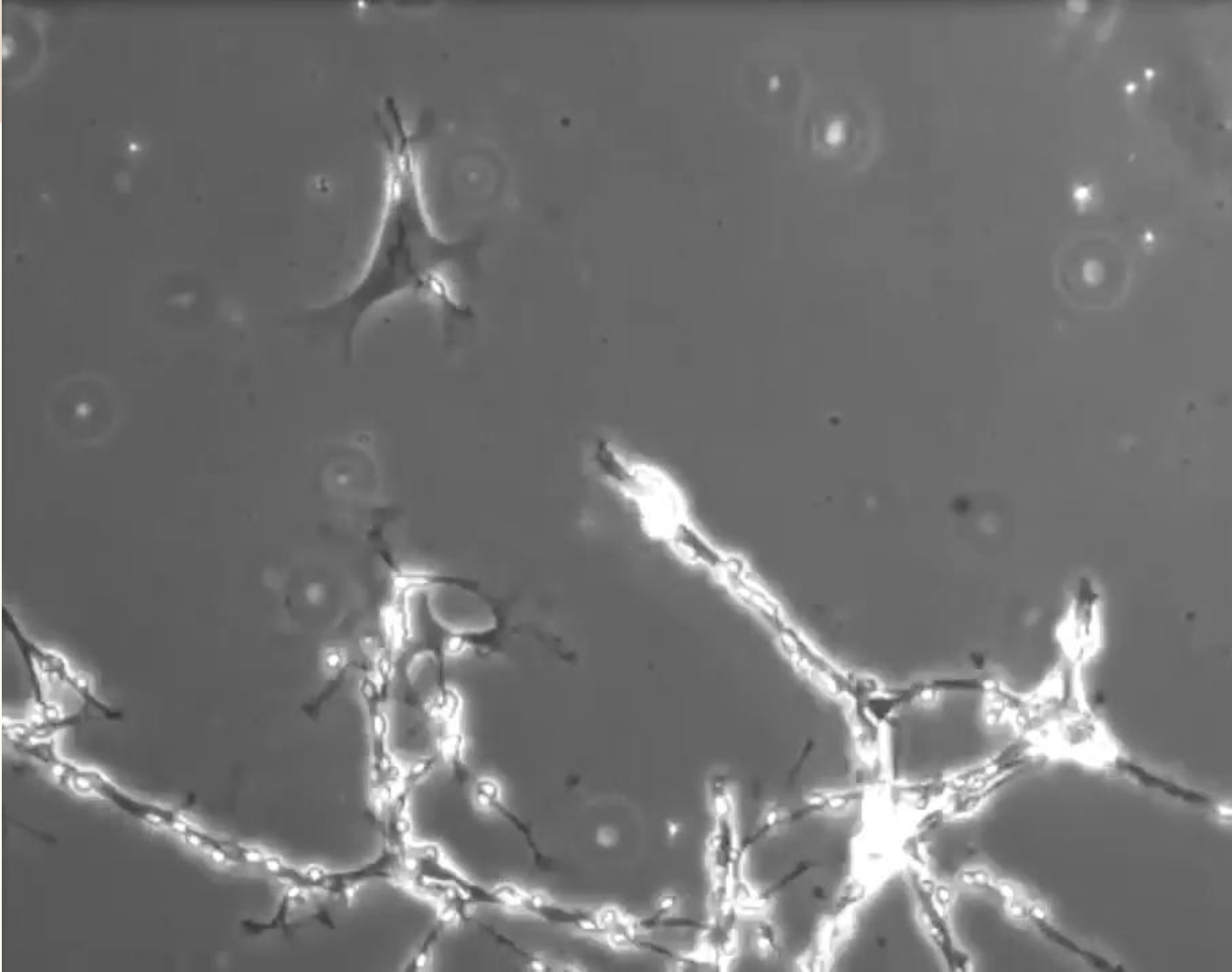
Rest-and-digest:
Parasympathetic
activity dominates.

Fight-or-flight:
Sympathetic activity
dominates.

Figure 11-1

ANS och reglering av vätskebalans

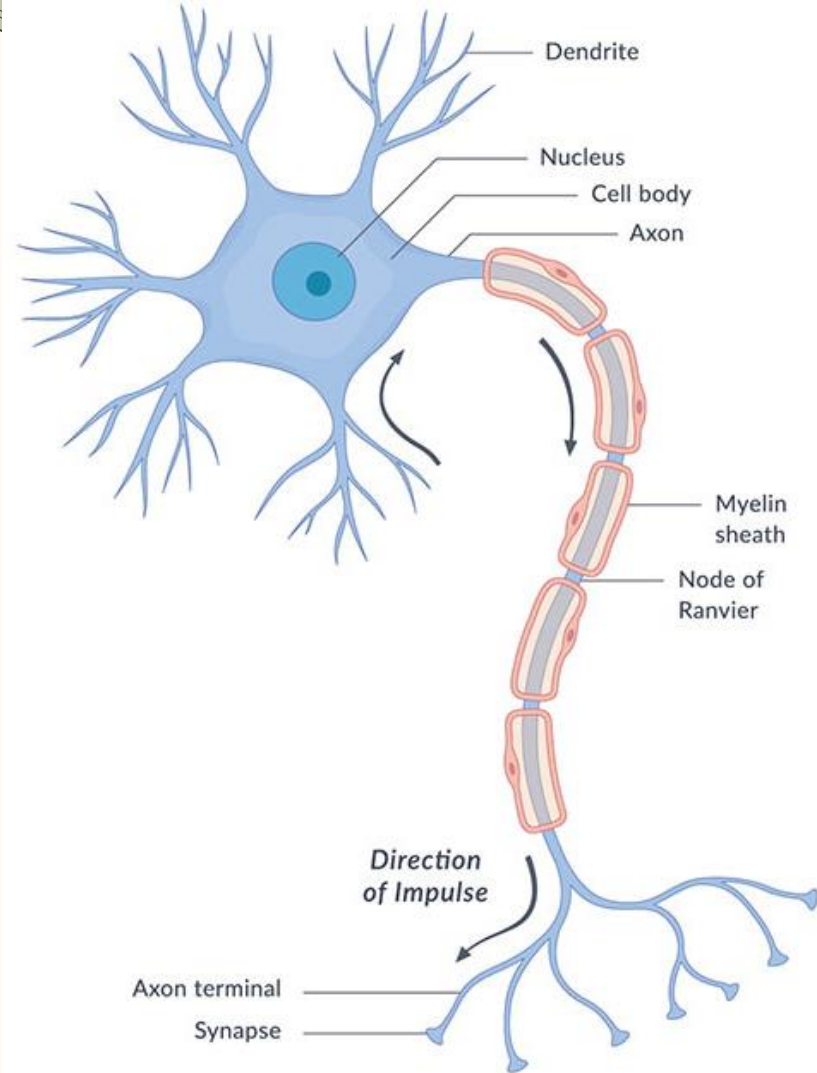




En neuron

Viktiga strukturer:

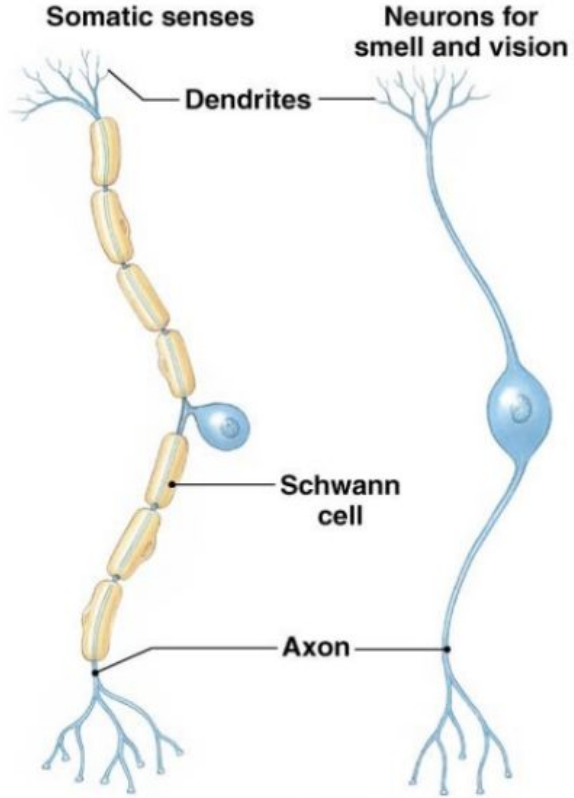
- Dendriter
- Axon
- Axonterminal/Terminalblåsa
- Synaps



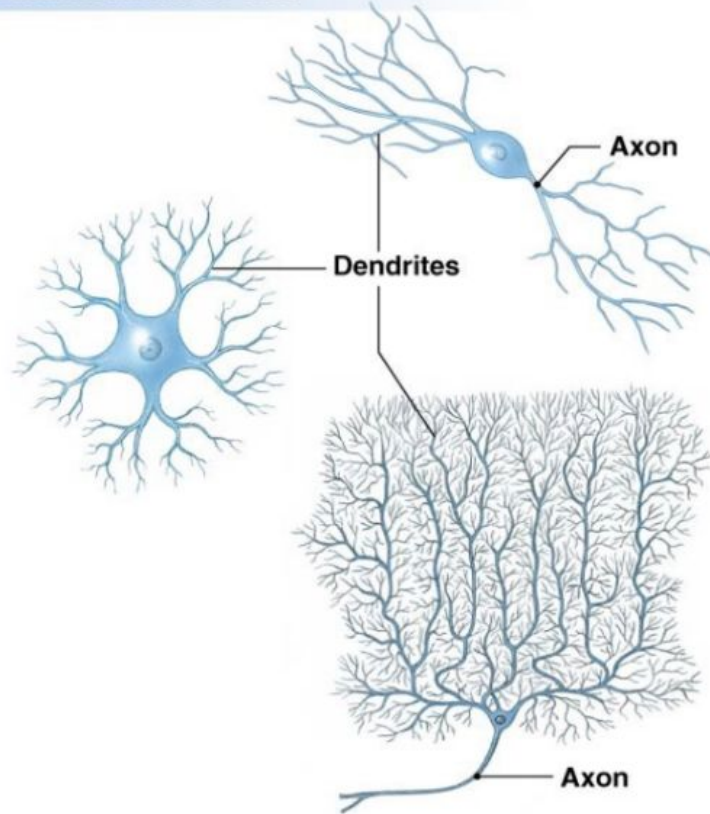
Functional Categories

Sensory Neurons

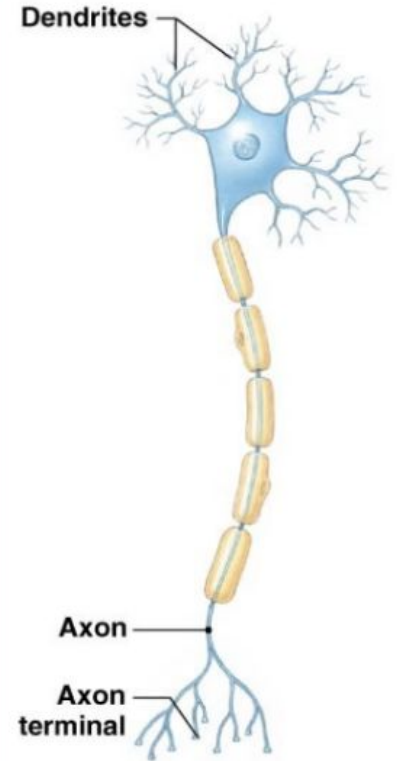
afferent



Interneurons of CNS

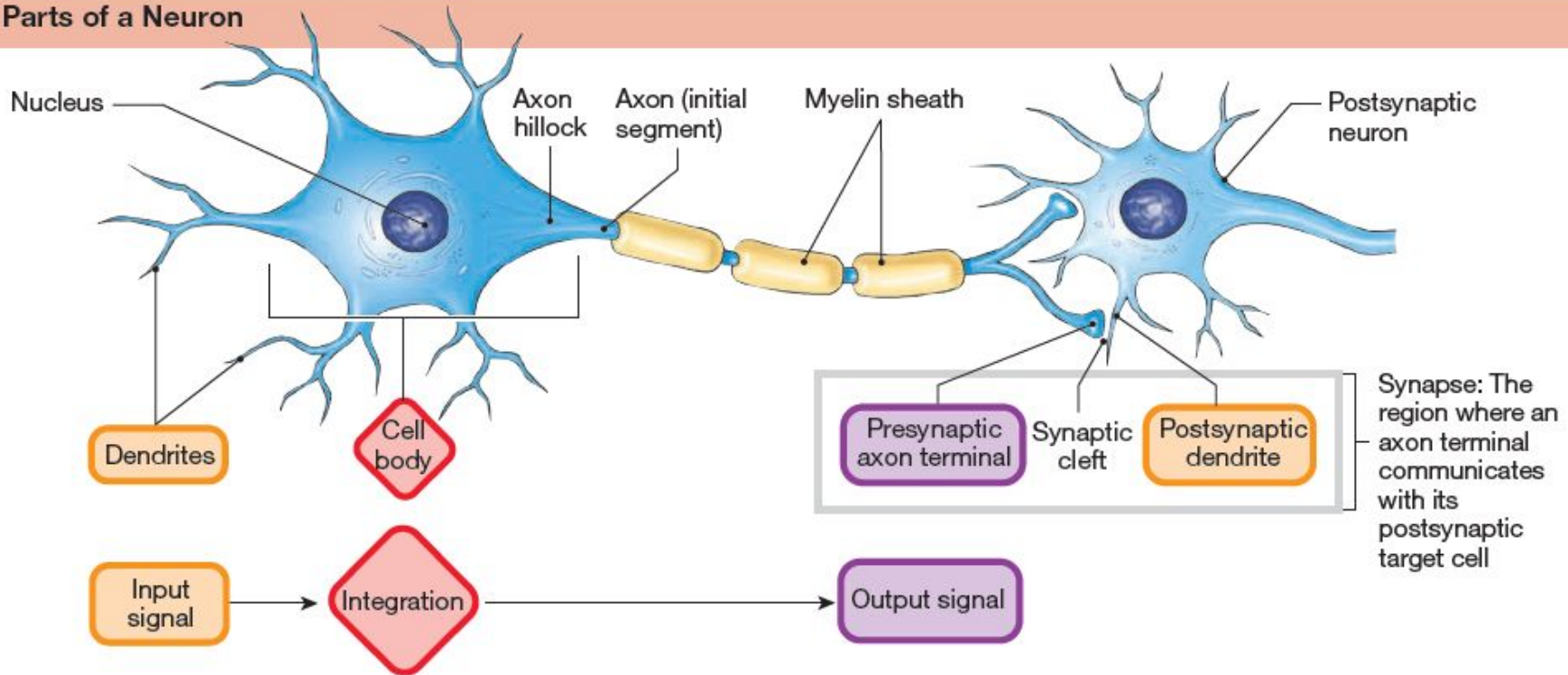


Efferent Neurons



Synapser och Dendriter

(f) Parts of a Neuron



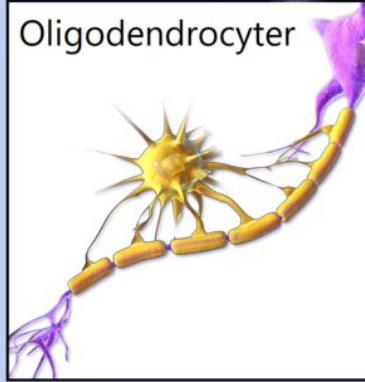
Typer av gliaceller

Centrala nervsystemet

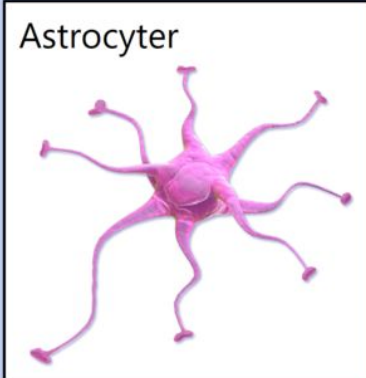
Ependymala celler



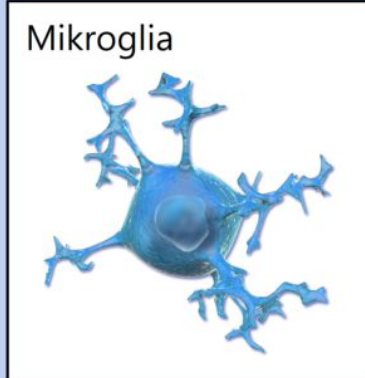
Oligodendrocyter



Astrocyter

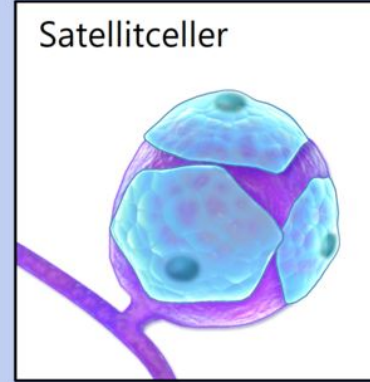


Mikroglia

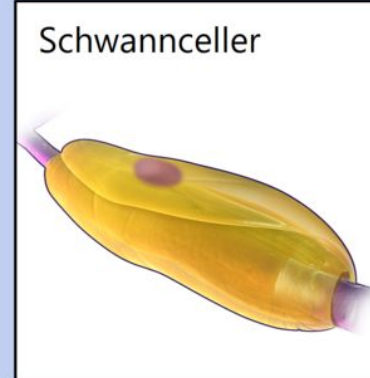


Perifera nervsystemet

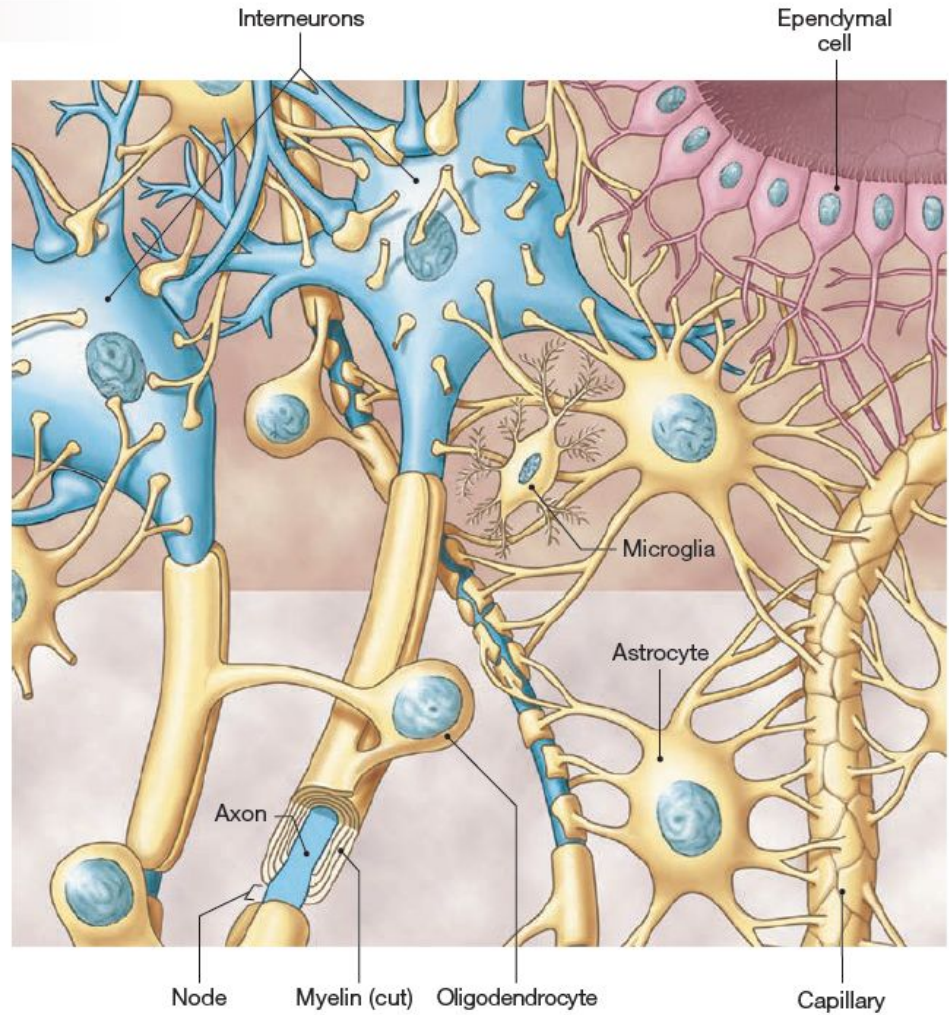
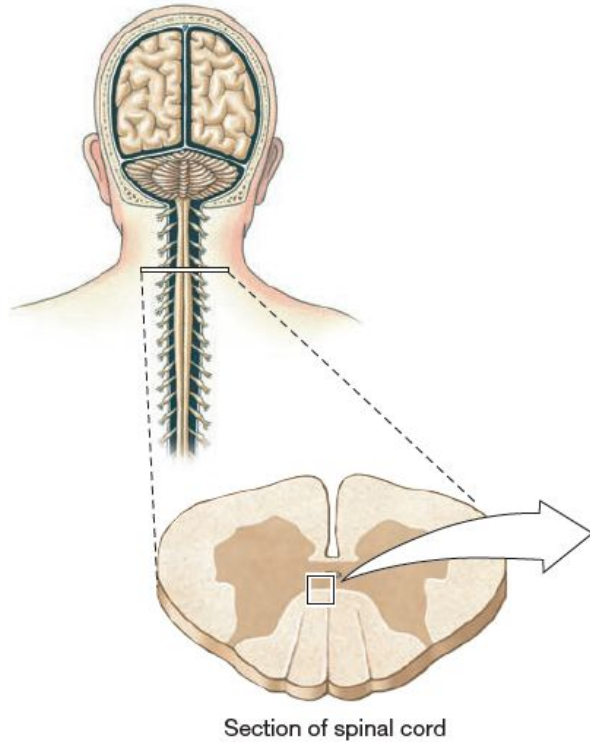
Satellitceller



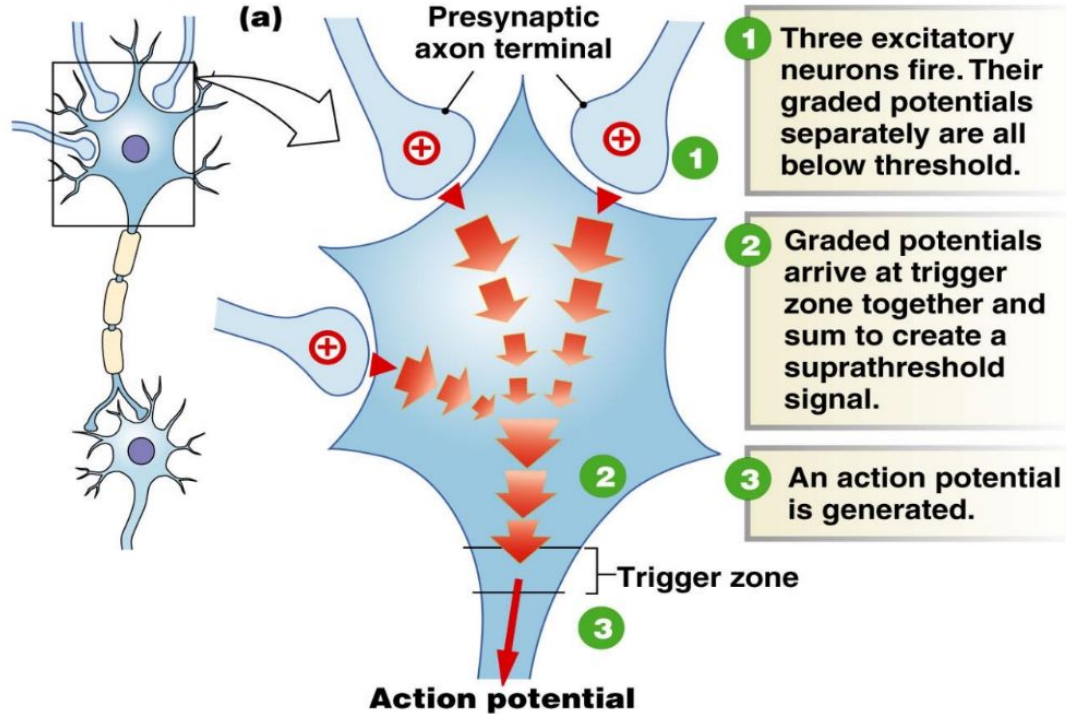
Schwannceller



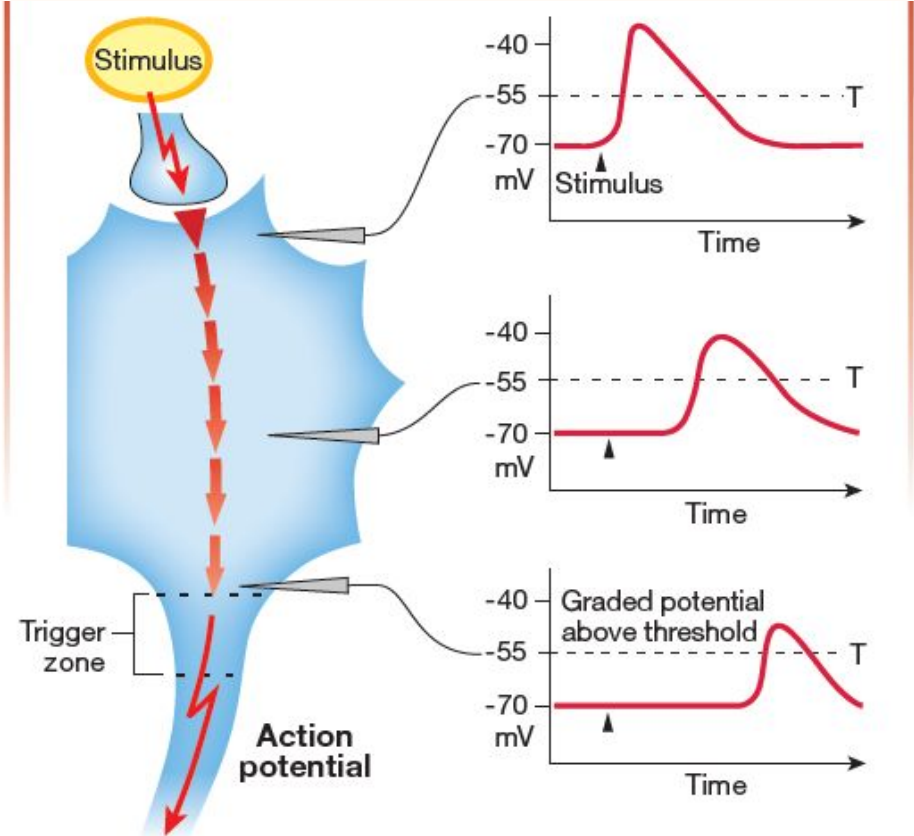
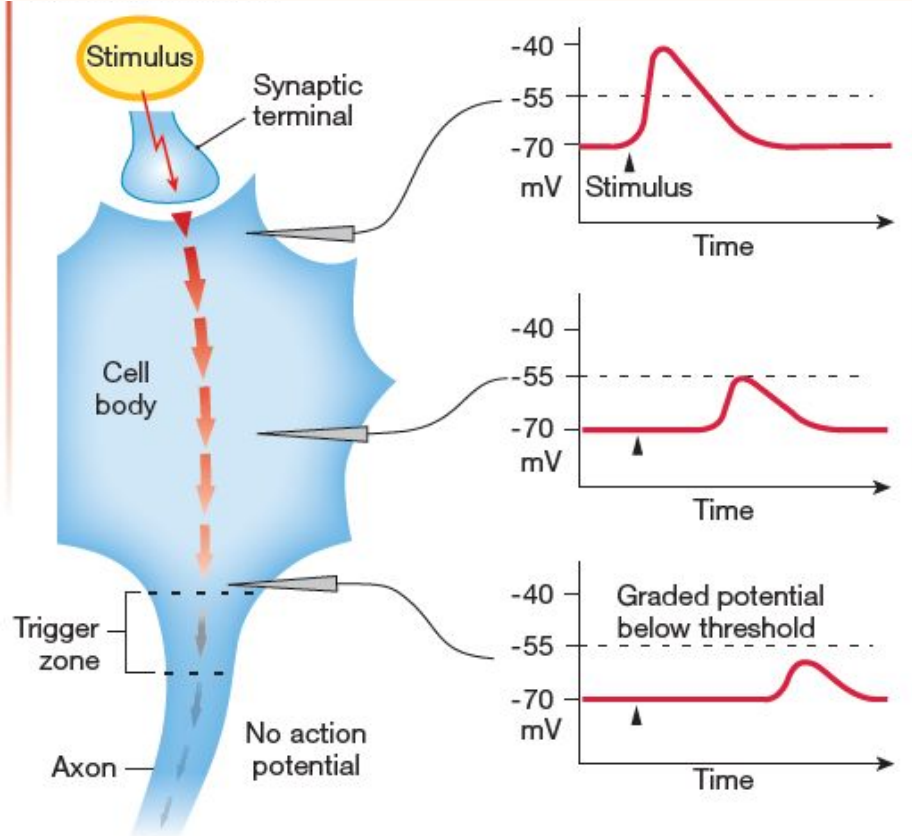
(b) Glial Cells of the Central Nervous System



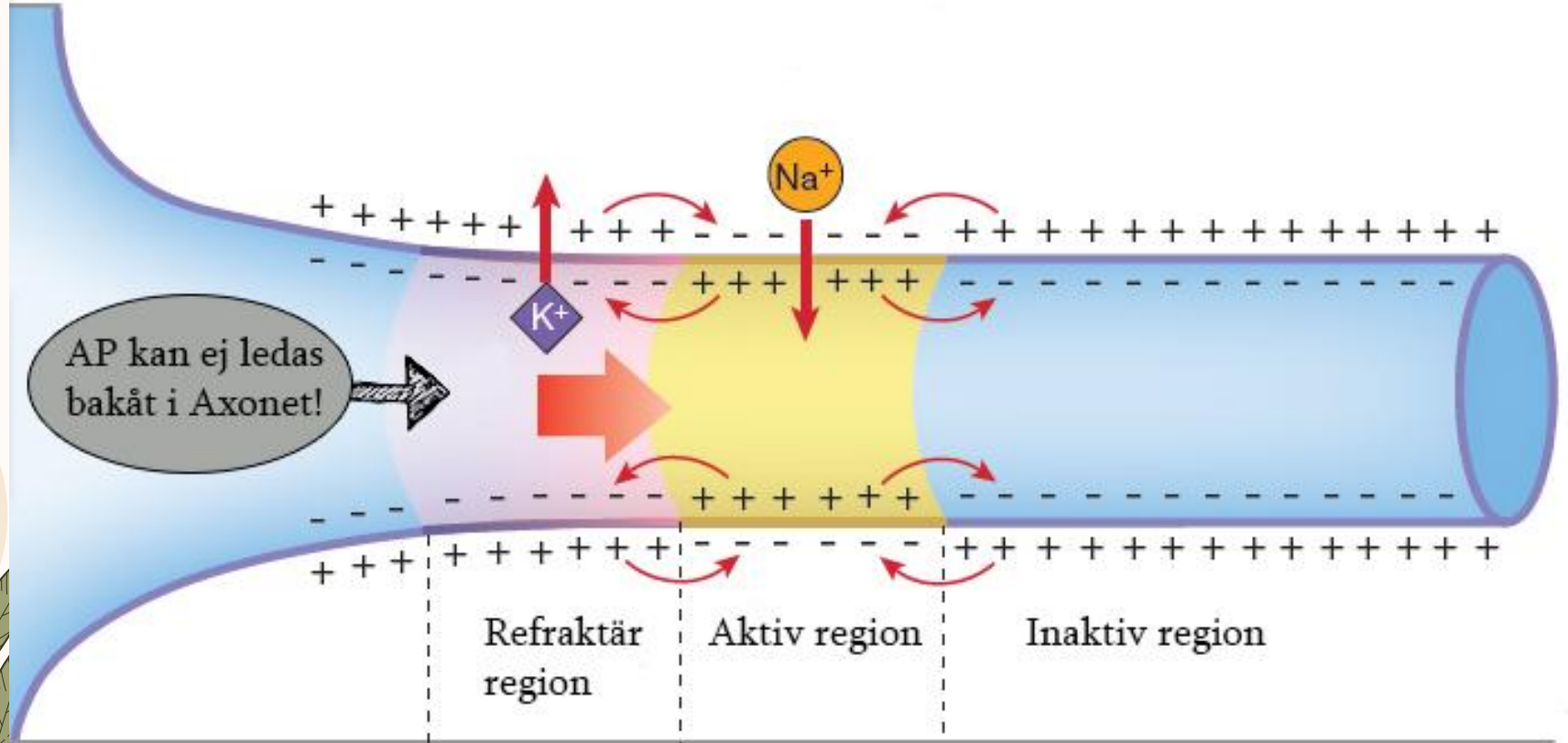
Graded potential



Aktionspotentialen

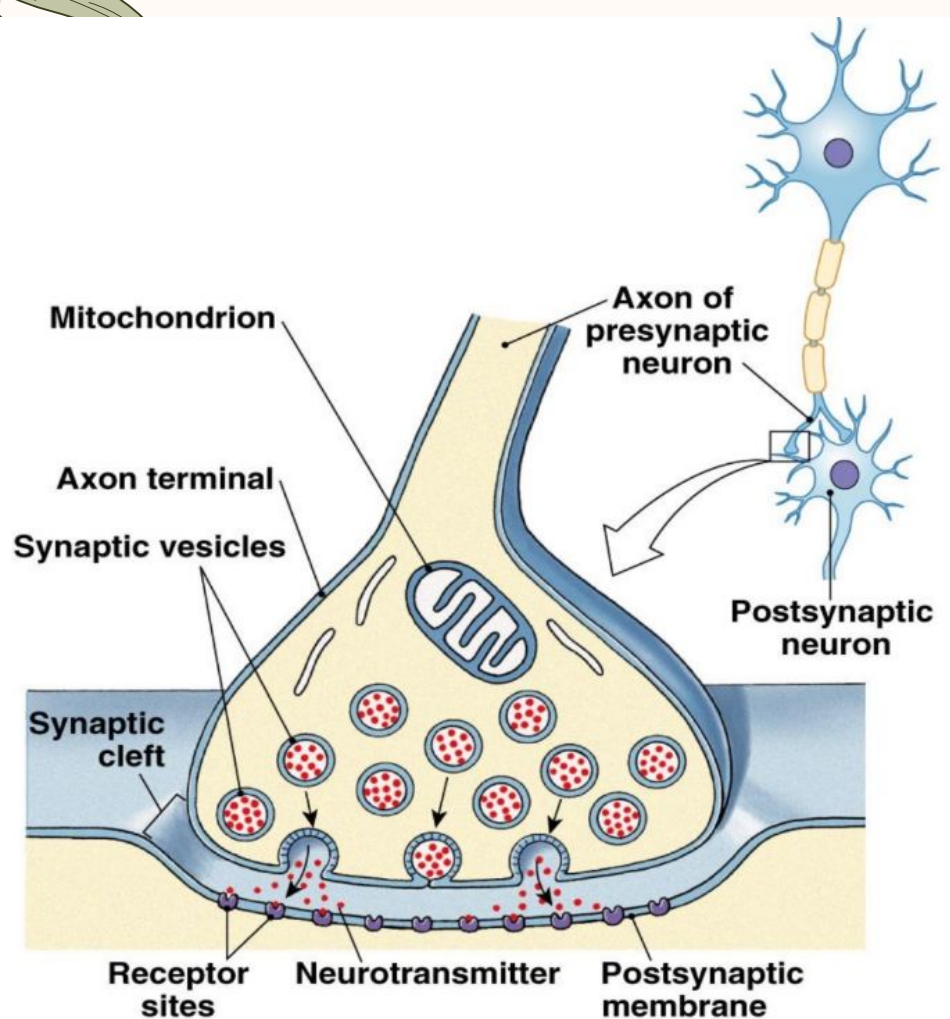


Aktionspotentialens färd via axonet

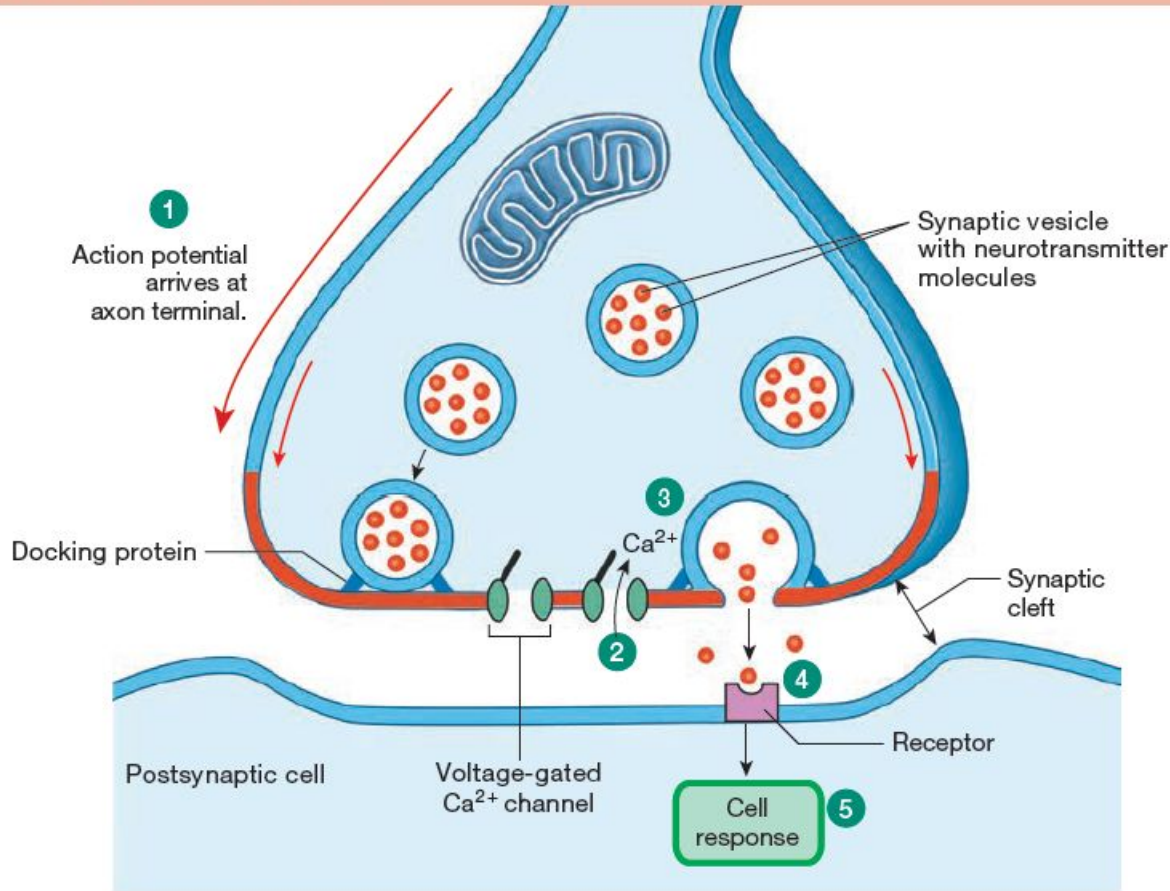


Synaps

- Kemisk och elektrisk signalering.
- Neurotransmittorer
- Presynaptiskt neuron
- Synaptisk klyfta
- Postsynaptiskt membran



(a) Neurotransmitter Release



1 An action potential depolarizes the axon terminal.

2 The depolarization opens voltage-gated Ca^{2+} channels, and Ca^{2+} enters the cell.

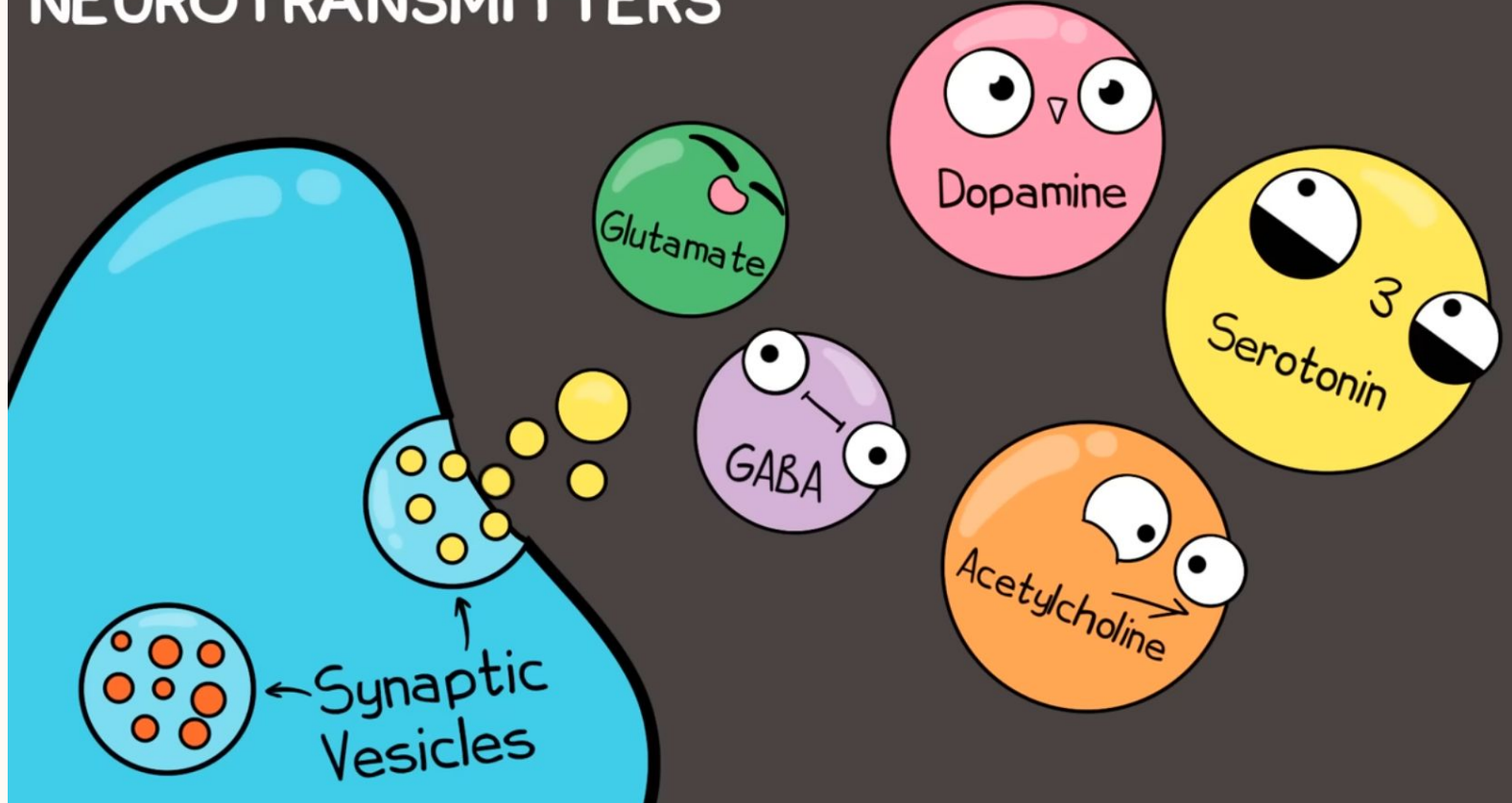
3 Calcium entry triggers exocytosis of synaptic vesicle contents.

4 Neurotransmitter diffuses across the synaptic cleft and binds with receptors on the postsynaptic cell.

5 Neurotransmitter binding initiates a response in the postsynaptic cell.

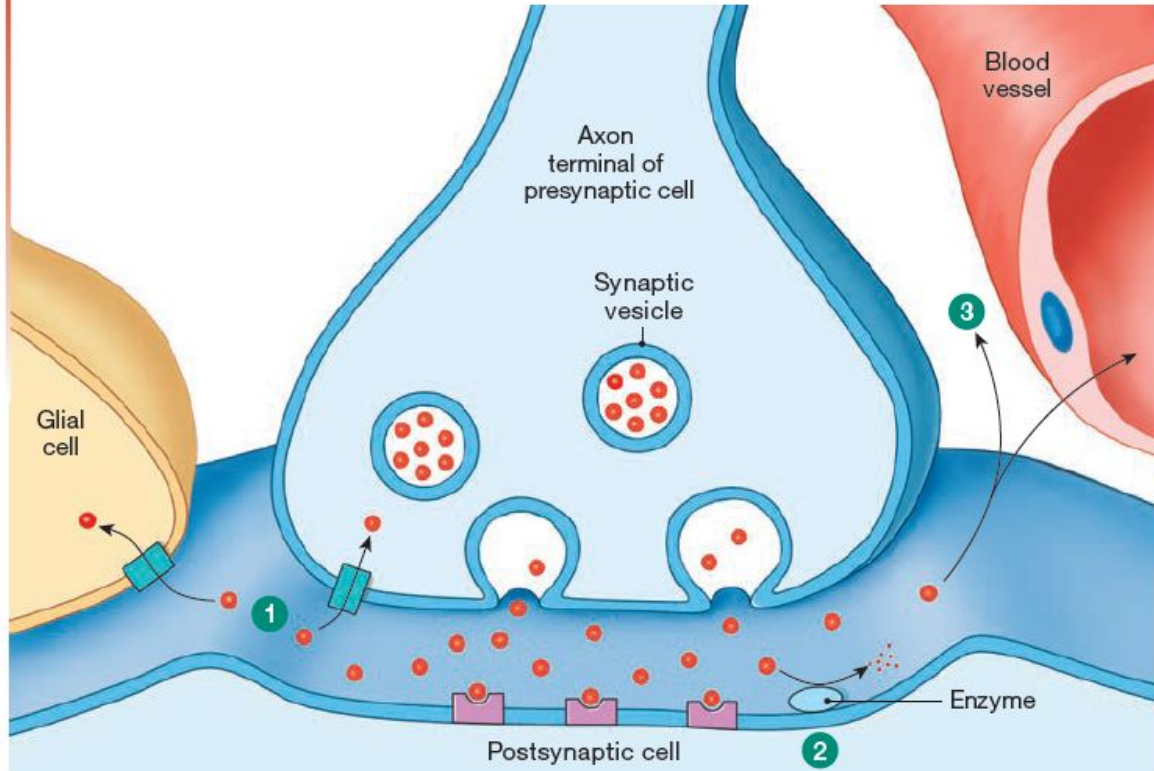
Transmittersubstanser

NEUROTRANSMITTERS



(b) Neurotransmitter Termination

Neurotransmitter action terminates when the chemicals are broken down, are taken up into cells, or diffuse away from the synapse.



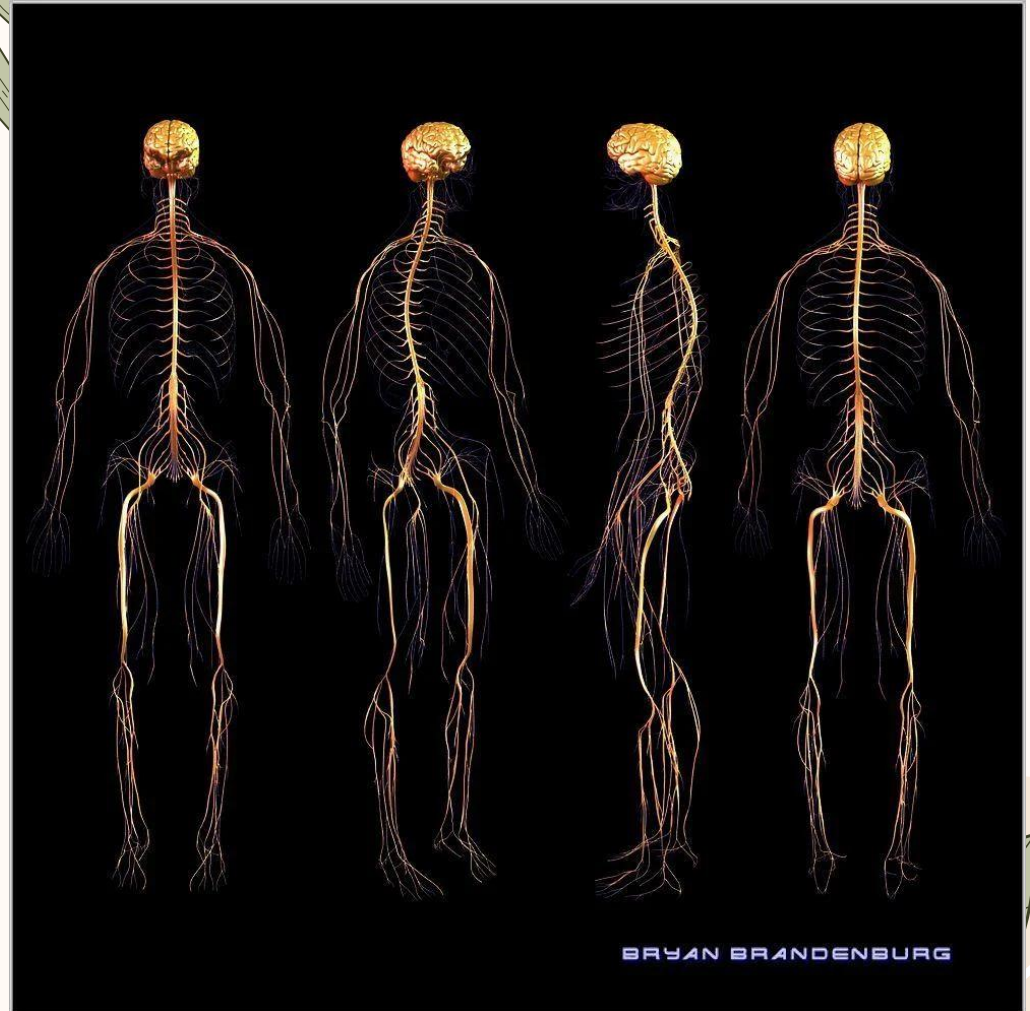
- 1 Neurotransmitters can be returned to axon terminals for reuse or transported into glial cells.
- 2 Enzymes inactivate neurotransmitters.
- 3 Neurotransmitters can diffuse out of the synaptic cleft.

Frågor?



Dagens fågel: *Gavia arctica*

Bonusmaterial - Nervensystemet



Vagus Nerve

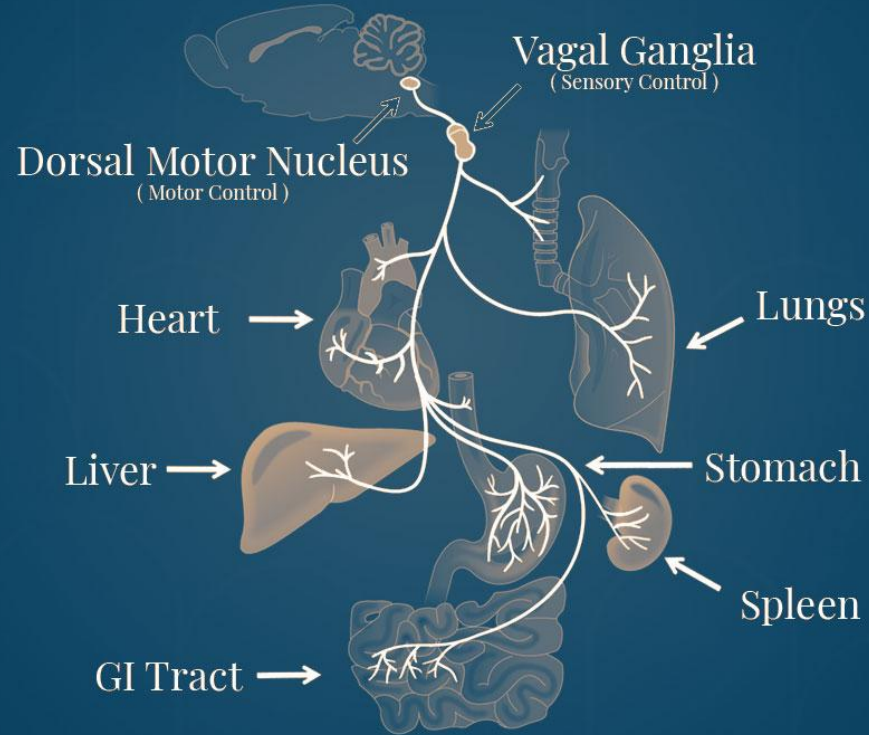


Image Adapted from Chang, Rui B (2019)

