

pain explained

Pain Pathways and Medications

3 Thoughts, feelings and beliefs change the pain signals into the individual's experience of "PAIN".

Prefrontal Cortex

Anterior Cingulate Cortex

PAIN

Somatosensory Cortex

Insular Cortex

Thalamus

Amygdala

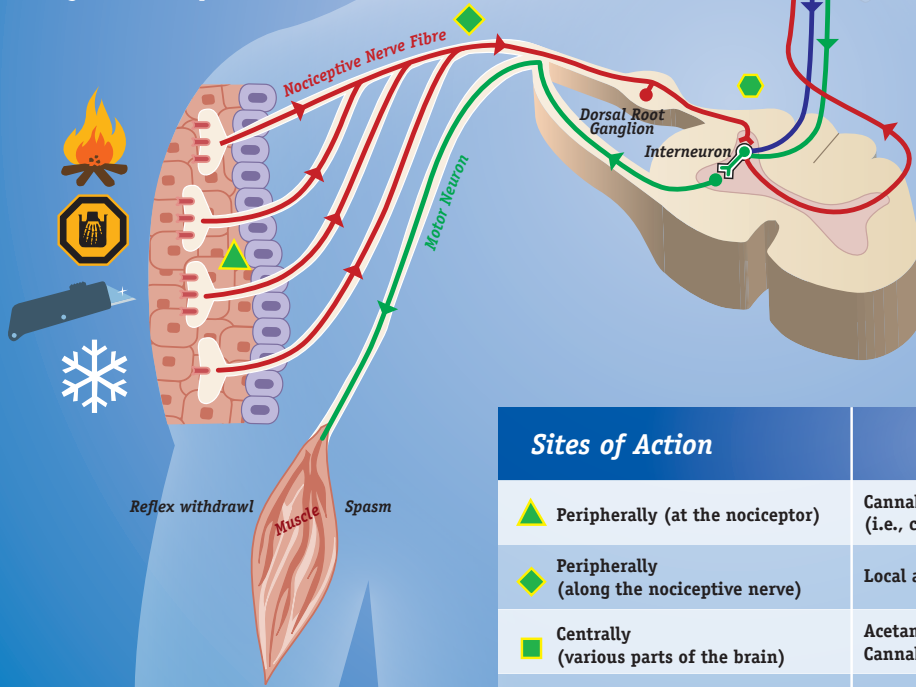
Psychological Treatments

1 Painful Stimuli or tissue damage activate specialized nerve cells (nociceptors), which in turn send pain signals to the spinal cord.

4 Certain parts of the brain generate signals that travel back down the **spinal cord** to reduce or increase pain signals at the interneuron.

- ➔ Ascending Pain Signal
- ➔ Descending Inhibitory Signal
- ➔ Descending Excitatory Signal

2 Pain signals enter the dorsal horn of the spinal cord, where some are increased or decreased by the interneuron before continuing up to the brain.



Sites of Action	Medications
▲ Peripherally (at the nociceptor)	Cannabinoids, NSAIDs, Opioids, Tramadol, Vanilloid receptor antagonists (i.e., capsaicin)
◆ Peripherally (along the nociceptive nerve)	Local anaesthetics, Anticonvulsants (except the gabapentinoids)
■ Centrally (various parts of the brain)	Acetaminophen, Anticonvulsants (except the gabapentinoids), Cannabinoids, Opioids, Tramadol
● Descending inhibitory pathway in the spinal cord	Cannabinoids, Opioids, Tramadol, Tricyclic antidepressants, SNRIs
⬢ Dorsal horn of the spinal cord	Anticonvulsants, Cannabinoids, Gabapentinoids, NMDA receptor antagonists, Opioids, Tramadol, Tricyclic antidepressants, SNRIs

For additional information, visit: