



L8 Spinothalamic Tract (Anterolateral)

Dr. zaineb Adil

Physiology Department

College of Medicine\ University of Basrah

objectives

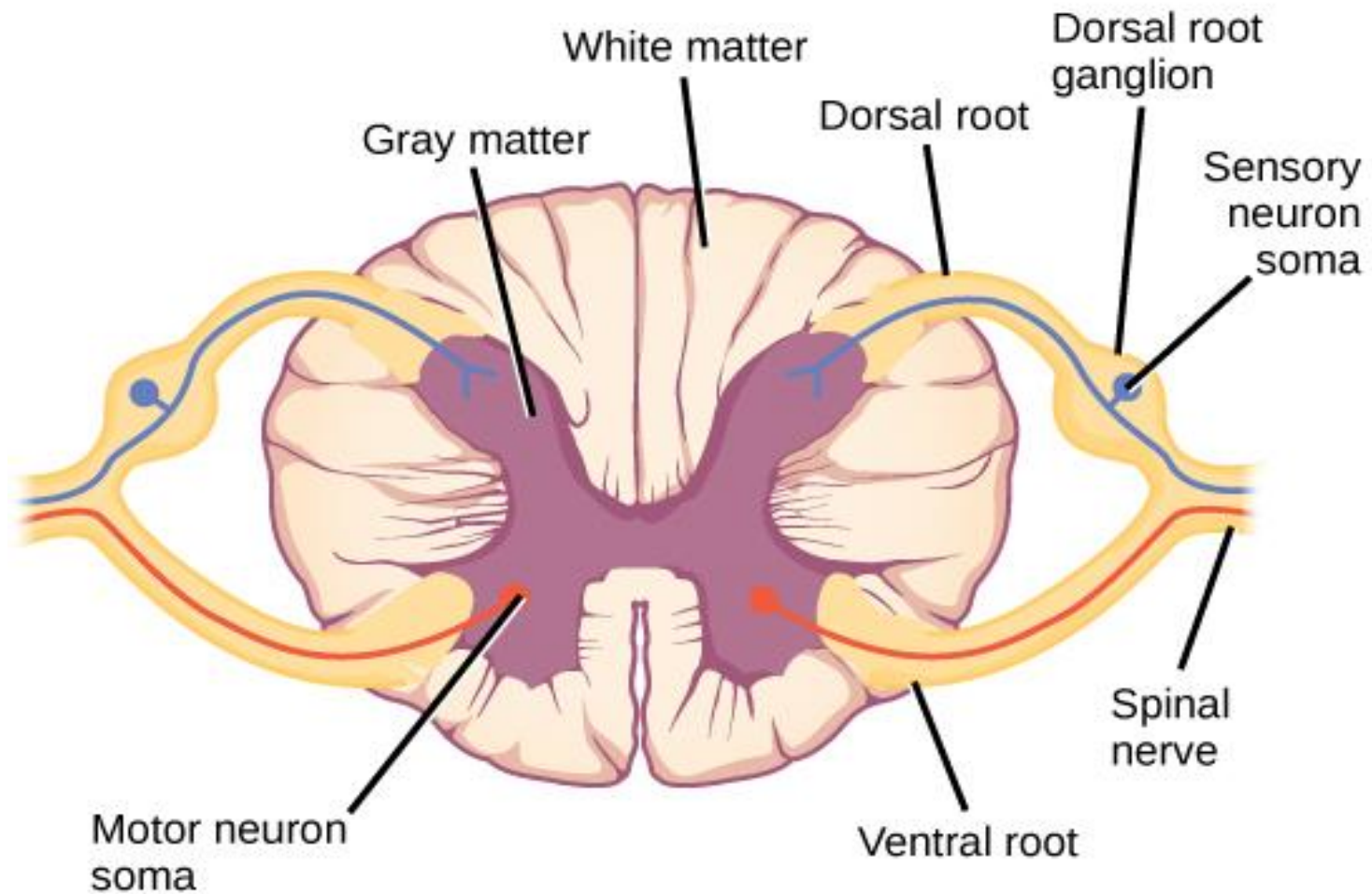
1. Pathway of anterolateral (spinothalamic) tract
2. First, second and third order neuron location.
3. Brown-Séquard Syndrome?

Anterolateral System

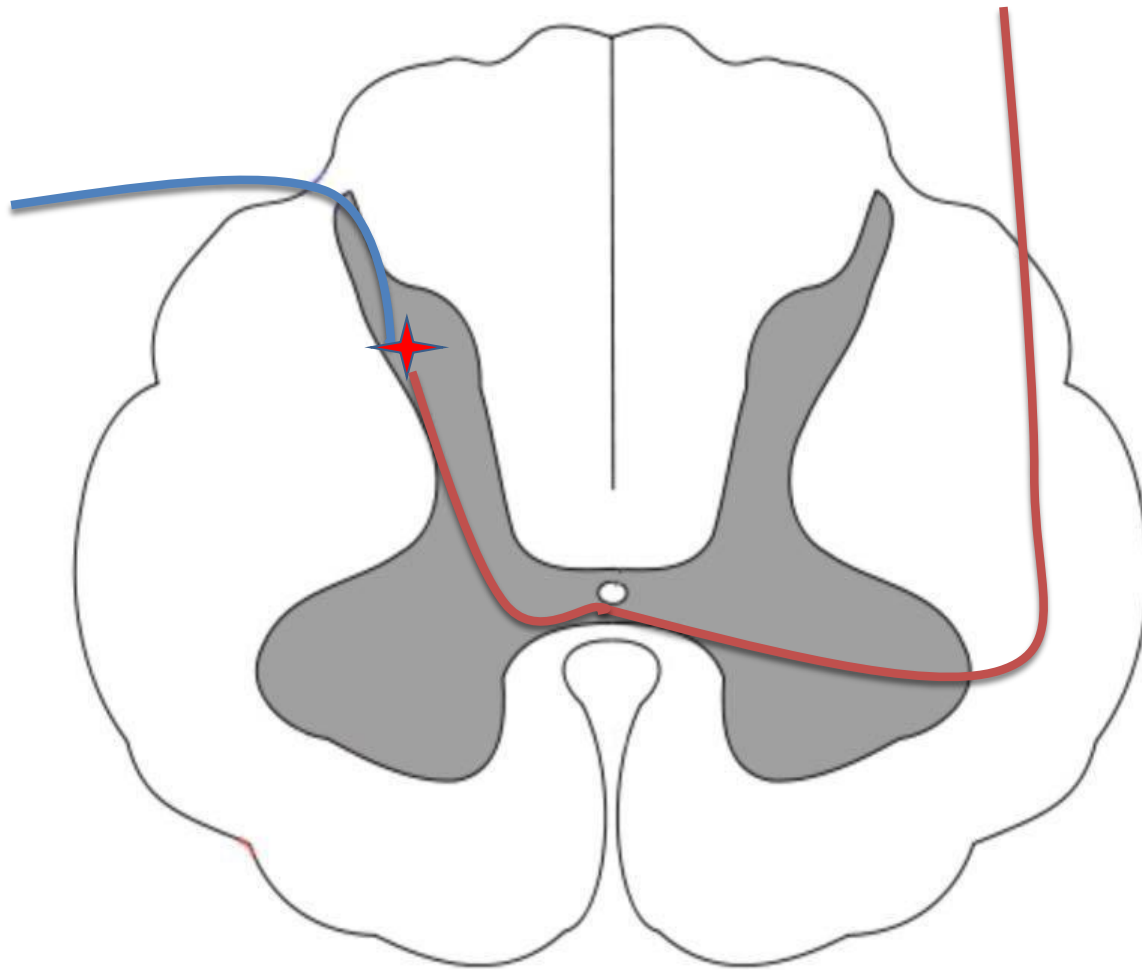
it is the principal direct pathways to the cerebral cortex for pain, temperature and crude touch

The types of sensations transmitted in the anterolateral system include:

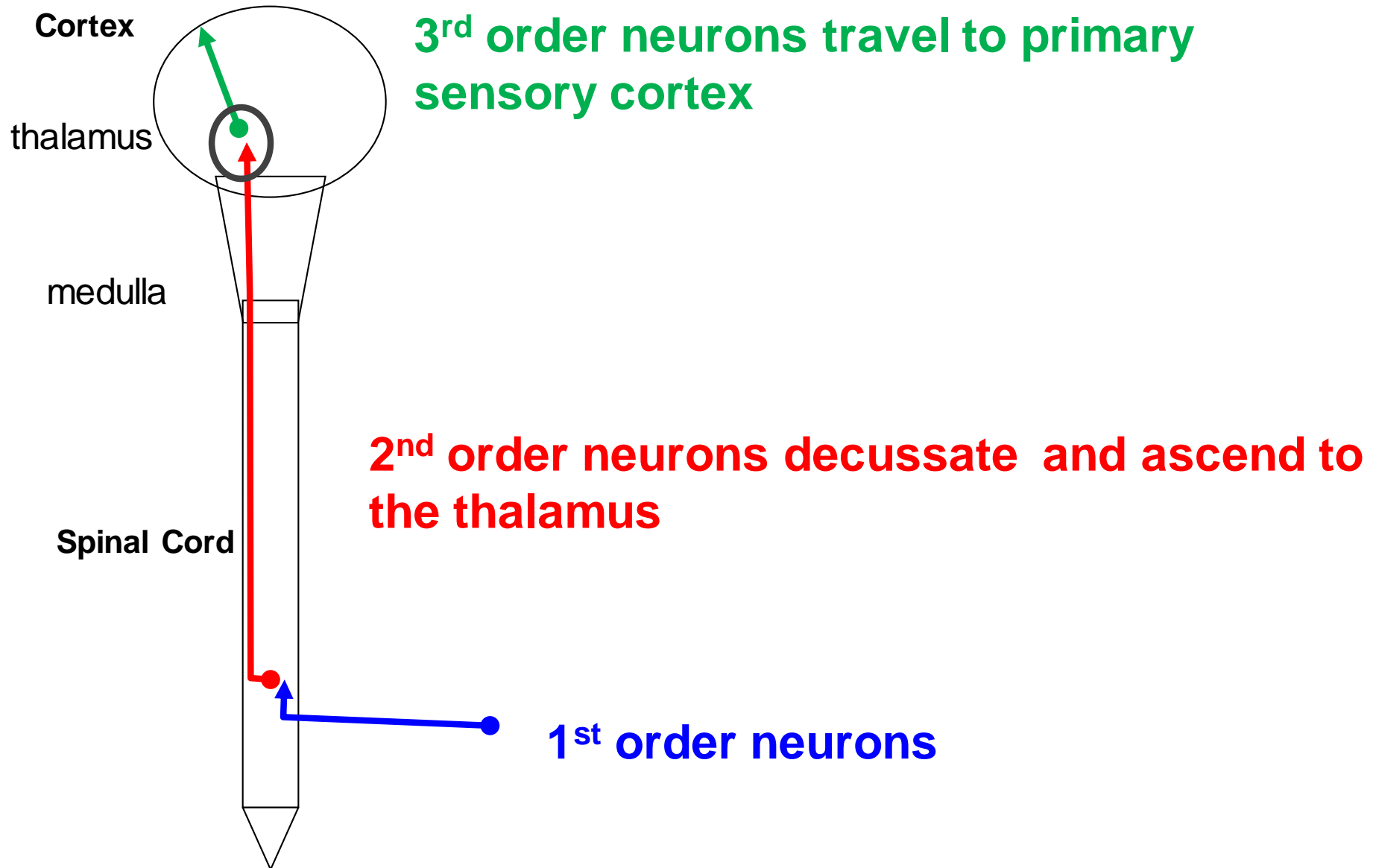
1. Pain.
2. Thermal sensations
3. Crude touch : crude localizing ability on the surface of the body.
4. Tickle and itch sensations.
5. Sexual sensations.

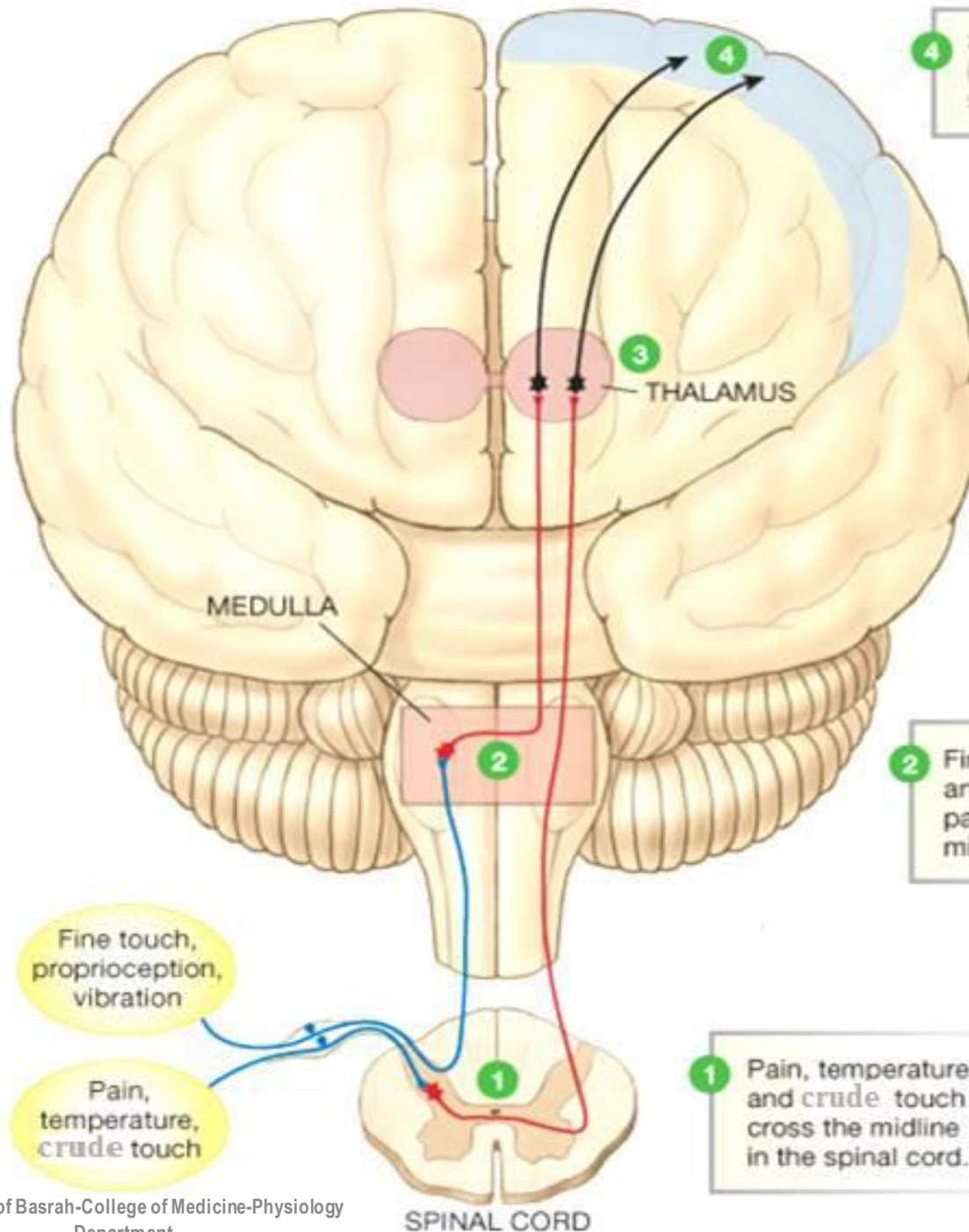


Cross Section of Spinal Cord



Spinothalamic Tract





4 Sensations are perceived in the primary somatic sensory cortex.

3 Sensory pathways synapse in the thalamus.

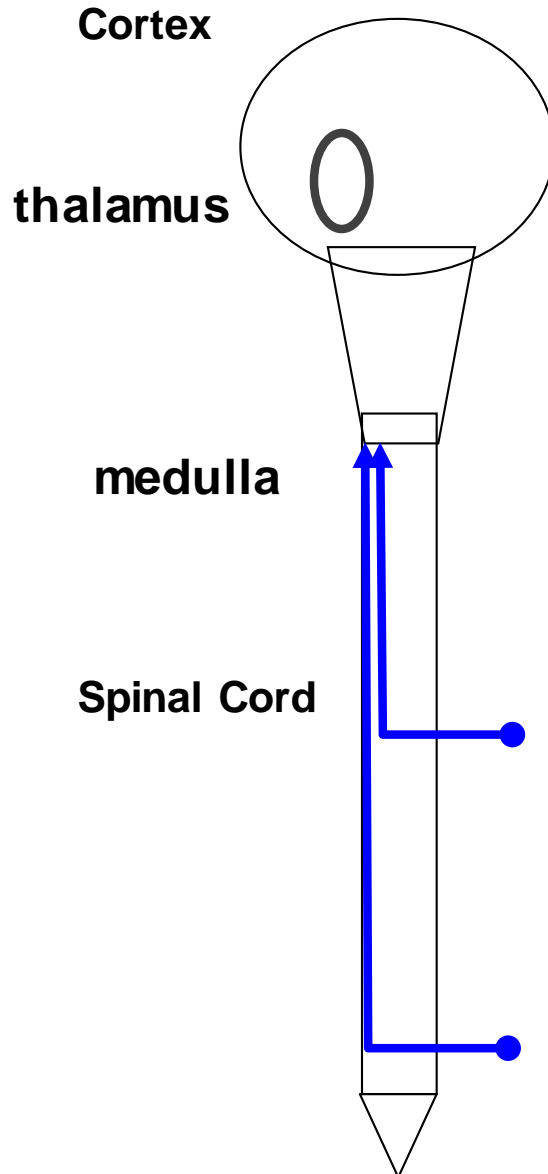
2 Fine touch, vibration, and proprioception pathways cross the midline in the medulla.

1 Pain, temperature, and crude touch cross the midline in the spinal cord.

KEY

- First order neuron
- Second order neuron
- Third order neuron

Spinothalamic Tract

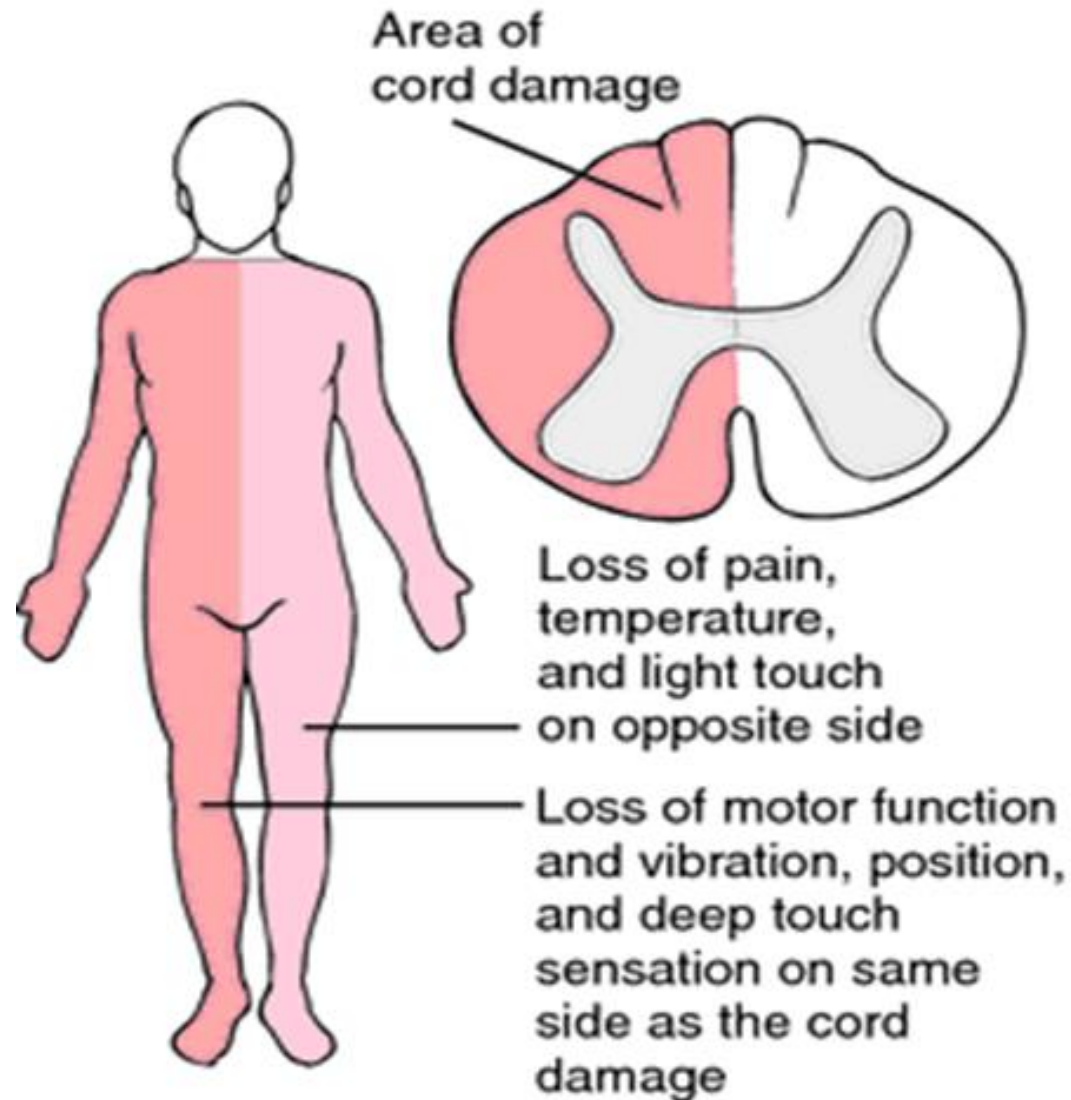


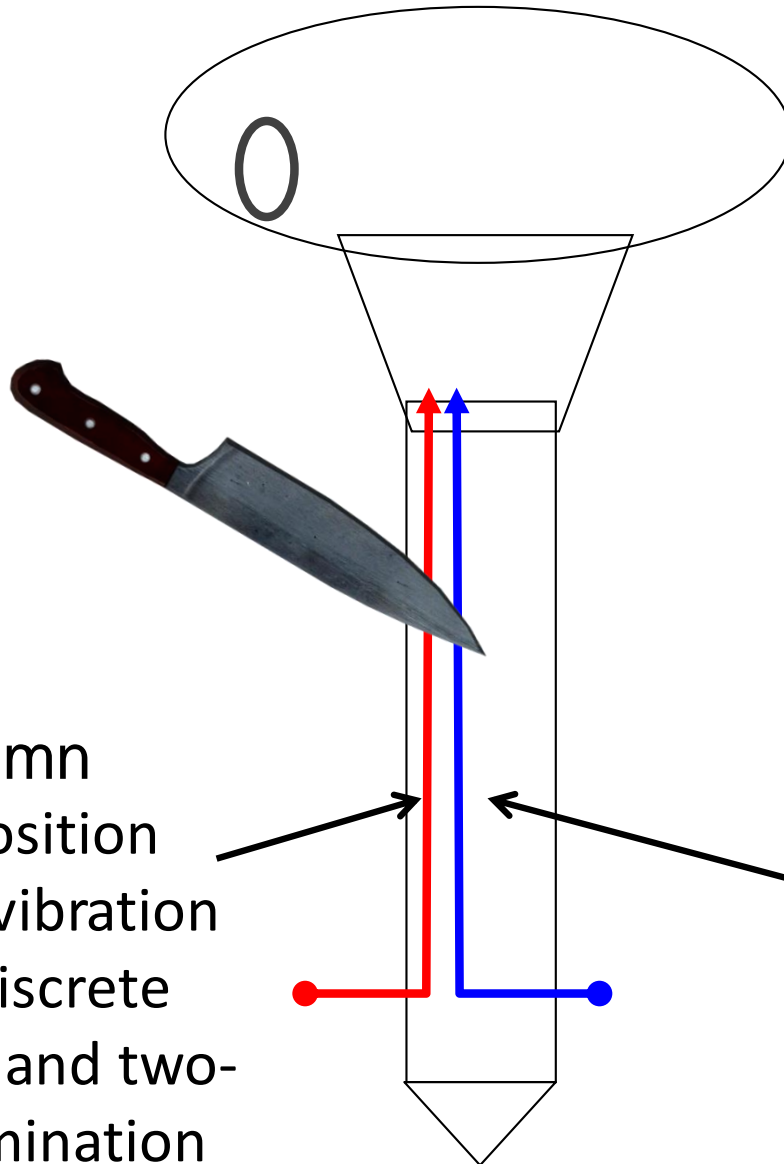
Arm

lower parts of the body represented laterally and upper parts medially.

Leg

Brown-Séquard Syndrome





Dorsal column
Transmit position
sensations, vibration
sensation, discrete
localization, and two-
point discrimination
from the right side

Spinothalamic
Tract Transmit
pain and thermal
sensations from
the left side

Recap

1. spinothlamic tract transmit (pain, temperature and crude touch
2. pathway from receptors up to the cortex
3. first, second and third order neuron .

**Thank
You**

