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Discuss The somatosensory pathways

Transcript

The somatosensory tracts (also referred to as the somatosensory system or somatosensory pathways) process information about somatic sensations such as pain, temperature, touch, position, and vibration. This information is received through receptors inside or at the surface of the body. It is then processed by one of a number of complex systems of neurons and pathways, depending on what information has been received.​​​.

A somatosensory pathway will typically consist of three neurons: primary, secondary, and tertiary.

1. In the periphery, the primary neuron is the sensory receptor that detects sensory stimuli like touch or temperature. The cell body of the primary neuron is housed in the dorsal root ganglion of a spinal nerve or, if sensation is in the head or neck, the ganglia of the trigeminal or cranial nerves.
2. The secondary neuron acts as a relay and is located in either the spinal cord or the brainstem. This neuron’s ascending axons will cross, or decussate, to the opposite side of the spinal cord or brainstem and travel up the spinal cord to the brain, where most will terminate in either the thalamus or the cerebellum.
3. Tertiary neurons have cell bodies in the thalamus and project to the postcentral gyrus of the parietal lobe, forming a sensory homunculus in the case of touch. Regarding posture, the tertiary neuron is located in the cerebellum.