

Anatomy of The Spine

Spinal Membranes

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There are three membranes referred to as meninges, which surround the spinal cord. They provide protection and support to the spinal cord. The three membranes from most superficial to deep are named the dura mater, arachnoid membrane and the pia mater.

The primary function of these membranes is to protect the spinal cord.

The dura mater, is the outer most layer of the spinal cord meninges. It is a tough fibrous sheath that provides an imposing physical barrier. The dura mater has sensory nerve endings and therefore is pain sensitive. The dura mater is highly pain sensitive to numerous nerve endings and special nerve receptors in it. The dura mater can be a source of pain in the presence of a disc bulge or protrusion, which effaces and deforms the adjacent dura.

The next or middle meningeal layer is referred to as the arachnoid mater. It is nearly contiguous with the inner surface of the dura mater. Cerebrospinal fluid fills the subarachnoid space providing biochemical and immunological support as well as protection to the central nervous system. During spinal movements, pressure shifts in the CSF and pulsation in the subarachnoid arteries contribute to up and down flow of the cerebrospinal fluid along the spine. The pia mater represents the inner most meningeal membrane. It encases the small blood vessels on the cord surface.