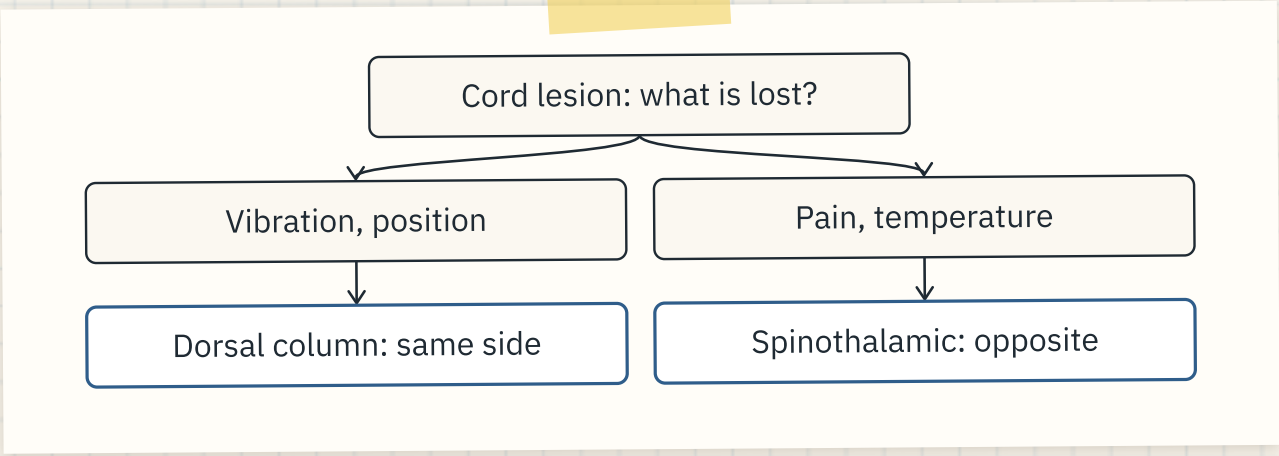
Dorsal column vs spinothalamic

Where each pathway crosses and what a lesion takes



Step by step

1. Three neurons: ganglion to cord or medulla, crossing neuron to thalamus, thalamus to postcentral gyrus.
2. Name the modality lost: vibration and position, or pain and temperature.
3. Dorsal column: uncrossed in the cord, crosses in the medulla.
4. Spinothalamic: crosses in the cord, within a segment or two.
5. Brainstem lesion: whichever pathway is hit, the loss is opposite.

	Dorsal column	Spinothalamic
Carries	Fine touch, vibration, position	Pain, temperature, crude touch
First synapse	Medulla (gracile, cuneate nuclei)	Dorsal horn of the cord
Crosses	Lower medulla	Cord, anterior white commissure
Cord lesion	Same side, below	Opposite side, about 2 levels below
Brainstem lesion	Opposite side	Opposite side

The two pathways

Rule of thumb

Dorsal column: same side in the cord

Spinothalamic: opposite side in the cord

Exam traps

- Spinothalamic loss starts about two levels below the lesion, not at it.
- Above the medullary crossing, either pathway's loss is on the opposite side.
- Ganglion neuron damage takes both pathways, not one.

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
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