ASCENDING TRACTS
Spinal Cord Cross Sections

Fiber Tracts

- Dorsal column system
- Gracile fasciculus
- Cuneate fasciculus
- Septomarginal fasciculus (oval bundle)
- Interfascicular (semilunar) fasciculus
- Lateral corticospinal (pyramidal) tract
- Rubrospinal tract
- Medullary (lateral) reticulospinal tract
- Pontoreticulospinal (medial reticulospinal) tract
- Vestibulospinal tract
- Anterior (ventral) corticospinal (pyramidal) tract
- Anterior (ventral) spinothalamic tract
- Spinocerebellar tract
- Spinothalamic tract
- Spinothalamic tract
- Fasciculi proprii
- Medial longitudinal (sulcomarginal) fasciculi
- Tectospinal tract

Ascending pathways

Descending pathways

Fibers passing in both directions
Anatomical organisation of ascending sensory pathway
Lateral spinothalamic tract
Anterior spinothalamic tract
Posterior column
Spinocerebellar tracts
Other ascending tracts
Area in which sensations of pain and temperature are lost
DESCENDING TRACTS
Descending motor pathway

Figure 4-15  Simple form of the descending motor pathway from the cerebral cortex to the skeletal muscle. Note the three neurons involved.
Corticospinal tract
Reticulospinal tract
Tectospinal tract
Rubrospinal tract
Vestibulospinal tract
Olivospinal tract

- Cerebral cortex
- Globus pallidus
- Red nucleus
- Descending tracts from higher centers
- Inferior olivary nucleus
- Ascending spino-olivary tract
- Olivospinal tract in anterior white column of spinal cord
- Lower motor neuron
Lateral corticospinal tract
Rubrospinal tract
Olivospinal tract
Vestibulospinal tract
Tectospinal tract
Anterior corticospinal tract
Lower motor neuron — the final common pathway
Fig. 21-11. Brown-Séquard syndrome with spinal cord lesion at right tenth thoracic level.

Lesion on this side

Total loss of all sensations—hypotonic paralysis

Loss of tactile discrimination, vibratory and proprioceptive sensations—spastic paralysis

Loss of pain and temperature sensations—impaired tactile sense