

Rubrospinal Tract

The **rubrospinal tract** is a descending motor pathway that originates in the **red nucleus** of the midbrain and plays a role in **facilitating flexor muscle tone**, particularly in the upper limbs. Though prominent in quadrupeds, its role in humans is limited and partially redundant with the corticospinal tract.

Origin

- **Red nucleus (nucleus ruber)**, specifically its magnocellular part, located in the **midbrain tegmentum**.

Course

- Fibers **decussate immediately** in the **ventral tegmental decussation**. - Descend **contralaterally** through the **lateral funiculus** of the spinal cord, anterior to the lateral corticospinal tract. - Most projections are to **cervical and upper thoracic levels**.

Termination

- Synapses primarily in **laminae V-VII** of the spinal cord gray matter. - Influences **interneurons** and **motor neurons** controlling flexor muscles of the upper extremity.

Function

- Facilitates **flexor tone** and inhibits extensor tone (especially in upper limbs). - Involved in **fine motor control**, though minimal in humans. - May contribute to **motor recovery** post-stroke via plastic reorganization.

Clinical relevance

- **Redundant with corticospinal tract** in humans. - Its function may become more relevant in **compensatory plasticity** after corticospinal damage. - Damage rarely produces isolated clinical signs but may be involved in **decorticate rigidity**.

Comparative anatomy

- **Highly developed in quadrupeds**, contributing to limb coordination in locomotion. - In humans, **vestigial** but potentially important in motor plasticity.

Related entries

- [Lateral Corticospinal Tract](#)
- [Vestibulospinal Tract](#)
- [Reticulospinal Tract](#)

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