

## Anatomy & Physiology: Muscles—Semispinalis, of transversospinalis group.

### STRUCTURE.

- Semispinalis Capitis
  - Origin: transverse processes of C7-T6, articular processes of C4-C6.
  - Insertion: occipital bone between the superior and inferior nuchal lines.
- Semispinalis Cervicis
  - Origin: transverse processes of T1-T5.
  - Insertion: spinous processes of C2-C5.
- Semispinalis Thoracis
  - Origin: transverse processes of T6-T10.
  - Insertion: spinous processes of C6-T4.

### FUNCTION.

- Concentric action: head, neck, and trunk extension; lateral flexion of head, neck, and trunk; rotate head to side opposing contracting muscle.
- Reverse mover action: lower spine extension; lower spine lateral flexion; ipsilateral rotation of the lower spine.
- Eccentric action: controls/restrains/slows flexion and contralateral lateral flexion of head, neck, and trunk; ipsilateral rotation of neck and trunk; contralateral rotation of the lower spine.
- Isometric action: stabilization of spine and head.
- Innervation: cervical and thoracic spinal nerves.
- Arterial supply: occipital artery, dorsal branches of posterior intercostal arteries, deep cervical artery.

CLINICAL SIGNIFICANCE.

## References

Biel, A. (2015). *Trail guide to the body: A hands-on guide to locating muscles, bones and more.*

Cedars-Sinai. (2018). Vertebrae of the spine. Retrieved from <https://www.cedars-sinai.org/health-library/diseases-and-conditions/v/vertebrae-of-the-spine.html>

Clark, M., Lucett, S., Sutton, B. G., & National Academy of Sports Medicine. (2014). *NASM essentials of corrective exercise training.* Burlington, MA: Jones & Bartlett Learning.

Jenkins, G., & Tortora, G. J. (2012). *Anatomy and Physiology: From Science to Life, 3rd Edition International Stu.* John Wiley & Sons.

Muscolino, J. E. (2017). *The muscular system manual: The skeletal muscles of the human body.*