

The Spine

The spine is one of the most important components in the architecture of your body providing strength and support. Without the spine, it would be impossible to hold an upright position or stand. Additional to the structural support, it has the capability to provide flexibility and motion. The spine plays a unique role in our body's movement and function by protecting the spinal cord, a column of nerves that connects the brain to the body controlling such action.

To learn more about the spine, view our interactive animated library about anatomy, surgical procedures, non-surgical procedures, and conditions:

What is the spine?

Your spine is a column of twenty-four small bones known as vertebrae that lay on top of each other to form a protective shield around the spinal cord. The center of each vertebra is hollow and when the vertebrae are stacked together, they form a protected encasement or tube where the spinal cord and its nerve roots pass through. The mass of nerve tissue known as the spinal cord acts as a transmitter from the brain to the rest of your body providing stimulation for movement and function of your organs. Thirty-one pairs of nerve roots branch off from the spine on either side through spaces between the vertebrae known as neural foramen to aid in stimulating the body.

Between each of the vertebra is a soft, cushion called an intervertebral disc that acts as a shock absorber handling pressure and relieving friction between the bones. The disc prevents stress against the vertebrae which can lead to degeneration or fracture.

The vertebrae are additionally supported in position by both ligaments (which connect the spinal bones together) and tendons (which connect the spinal bones to muscles). In addition, facet joints, similar to your knee or elbow joints, enjoin the vertebrae offering the capability for movement and flexibility.

The spine is formed by three major segments: the cervical spine, the thoracic spine and the lumbar spine. The cervical spine is the upper portion of the spine made up of seven vertebrae between the base of the skull and the neck. The center portion of the spine containing twelve vertebrae is known as the thoracic spine. The lower portion of the spine with five, in some cases six, vertebrae is called the lumbar spine. Directly below the lumbar spine is the sacrum, a collection of specialized vertebrae that fuse together during development (before birth) to create one large vertebral bone that creates the base of the spine and center of your pelvis.

