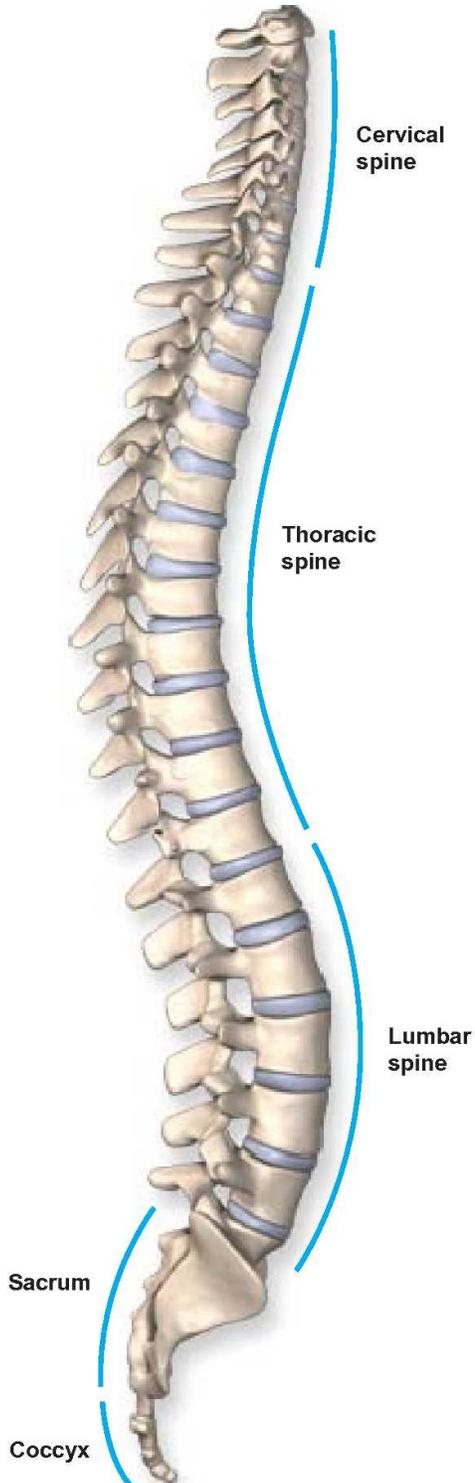




## Anatomy of the Spine

### Overview

The body's main support structure - the spinal column - is comprised of thirty-three bones (vertebrae) divided into five regions: cervical, thoracic, lumbar, sacral and coccygeal.



### Cervical Region (Neck and Upper Back)

The cervical region consists of seven vertebrae labeled C1 to C7. The first two cervical vertebrae are called the atlas and the axis. Their union forms the joint that connects the spine to the skull and allows the head to swivel and nod.

### Thoracic Region (Upper and Mid Back)

The thoracic region consists of twelve vertebrae (T1 to T12) that primarily serve as attachment points for the ribcage.

### Lumbar Region (Low Back)

The lumbar region, consisting of five vertebrae labeled L1 to L5, is the main weight-bearing section of the spinal column.

### Sacral region

The sacral region consists of five fused vertebrae (S1 to S5). These vertebrae form the sacrum to which the pelvis attaches.

### Coccygeal Region (Tailbone)

The coccygeal region consists of four small vertebrae that may be separate or fused. They form the coccyx, which supports the body when seated and is an attachment point for various muscles, tendons and ligaments.

## Vertebrae

The spine's vertebrae support the body's weight and protect the spinal cord and its nerve roots. Each individual vertebra has a complex set of structures necessary to the overall function of the spine.

## Vertebral Body

The main vertebra structure is the vertebral body, a cylinder-shaped section of bone at the front of the vertebra. It is the main weight-bearing section of the vertebra.

## Vertebral Canal

Behind the vertebral body is the vertebral canal that, for the entire spinal column, form a channel in which lies the spinal cord.

## Pedicles

Both sides of the vertebral canal have pedicle bones that connect the vertebral body to the lamina.

## Lamina

The lamina create the outer wall of the vertebral canal, to cover and protect the spinal cord.

## Spinous Process

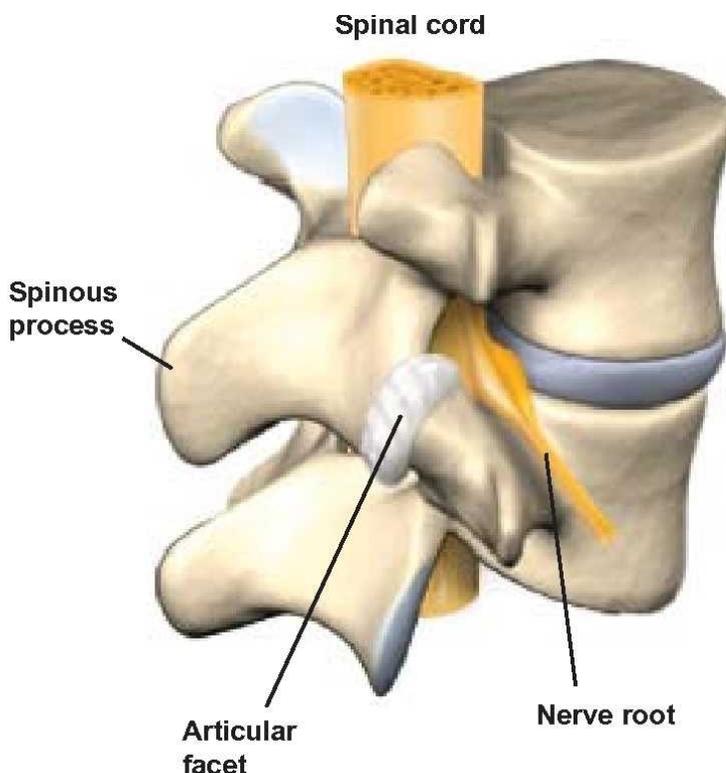
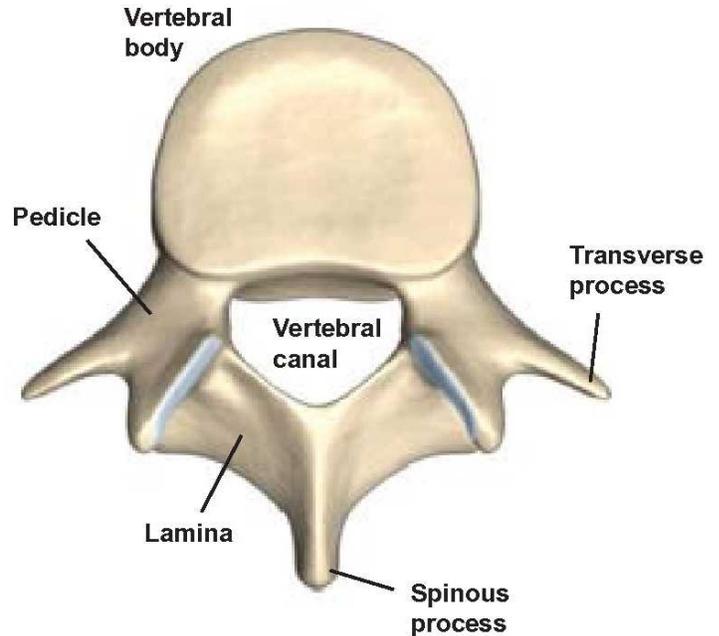
Protruding from the back of the lamina is the spinous process, to which attach the muscles and ligaments that move and stabilize the vertebrae.

## Transverse Processes

Transverse processes protrude from the sides of each vertebra and are additional attachment points for muscles and ligaments that move and stabilize the vertebrae.

## Spinal Cord

The spinal cord is the main bundle of nerve fibers that enables the rest of the body to communicate with the brain. The spinal cord ends near the L1 and L2 vertebrae, where it divides into bundles of nerve roots called the cauda equina.



## Nerve Roots

Thick nerve branches called nerve roots exit the sides of the spine and transmit signals between the spinal cord and the other parts of the body.

## Articular Facet

The vertebrae in the spinal canal attach to each other at the articular facet joints. Each vertebra has two superior facets and two inferior facets, all of which are covered with cartilage to allow for joint movement.

## Disc

## Intervertebral Disc

Between the vertebral bodies are the tough, elastic spinal discs. They provide a flexible cushion to absorb shock and allow the spinal column to bend and twist. Each disc has a tough outer wall called the annulus fibrosus and a soft interior called the nucleus pulposus.