

Cervical Spine Anatomy

(An Introduction)

The Bones

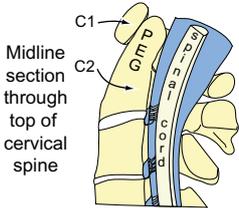
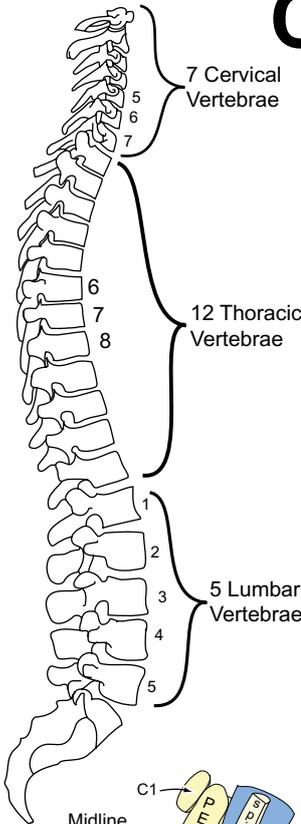
The spine is made up from regions that contain vertebrae (blocks of bone) which are stacked on top of one another. The cervical spine is made up of 7 Cervical vertebrae that are on top of the thoracic vertebrae. The cervical spine supports the head. Each Cervical vertebra has specific features that you will hear discussed when you are talking to your doctor. This leaflet aims to simplify these terms.

The block of bone at the front of the vertebra between the discs is called the vertebral body. Sticking out from the back are two pieces of bone called pedicles. Attached to the pedicles are the other parts of the vertebra such as the lamina and facet joints.

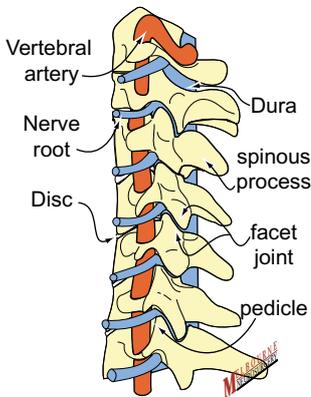
Note the shape of the top vertebrae. They are either called C1 and C2 or the Atlas(C1) and Axis(C2). The Vertebral body of C1 is actually part of C2 and is called the PEG. The top two vertebra are different to the rest to allow the head to have such freedom of motion.

To stop the normal vertebra rotating and slipping forward are special joints called facet joints. In the pictures from the side and behind you can see how they do this.

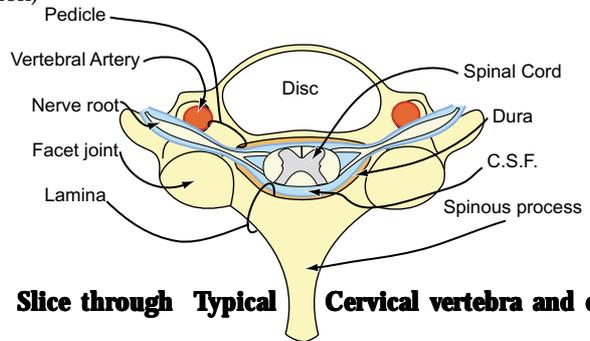
When the Vertebra are stacked on top of one another you can see that there is a space for a nerve to come out between the pedicles and behind the disc. Each nerve is numbered by the pedicle it comes out over (i.e. cervical root 5[C5] comes out over the pedicle of the 5th vertebra). Each nerve has a specific function in the control of arm movement.



Front **Back**

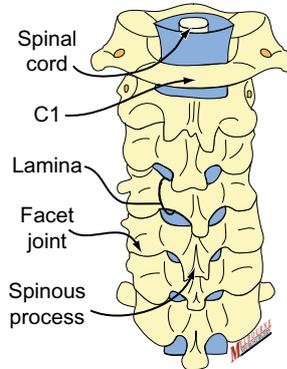


**Side
Picture
of
Spine**



Slice through Typical Cervical vertebra and disc

The bone attached to the pedicle bridges across the back to form a circular ring. When the vertebra are stacked on top of one another these rings form a tube called the spinal canal. This contains the spinal cord and from this the nerves leave. The spinal cord and nerves are protected by a lining of dura around them and by cerebrospinal fluid (C.S.F.) which bathes them. Every now and then a nerve leaves this and goes out through the foramen to supply the main nerves of the arm. These nerves are responsible for the bringing of sensation from the arm to the brain and taking the instructions from the brain to the muscles of the arm.



**Picture
of
Spine
from
behind**

The Disc

It is made up of two components. An outer capsule (anulus fibrosis) and a soft centre (nucleus pulposus). The capsule(made from laminated fibres) holds in the soft contents and this allows movement of the vertebrae on one another. It can be likened to a tube of toothpaste only the contents are much thicker and it is like soft rubber.

Disc cut in half



Side of disc

