

What is the Vertebral Column?

Worksheet

The vertebral column is a segmented chain of 26 bones (33 before some fuse) in an adult, divided into cervical, thoracic, lumbar, sacral and coccygeal regions, that supports the trunk and shields the spinal cord.

Questions

1. How many vertebrae are in the adult vertebral column?
A) 24
B) 26
C) 33
D) 12
2. Which region of the vertebral column has 12 vertebrae?
A) Cervical
B) Lumbar
C) Thoracic
D) Sacral
3. What structure cushions adjacent vertebrae?
A) Ligamentum flavum
B) Intervertebral disc
C) Spinous process
D) Vertebral foramen
4. Which vertebra is known as the 'axis'?
A) C1
B) C2
C) T1
D) L1
5. How many vertebrae does an adult have after fusion, and how is that number reached?
6. A patient has damage at vertebral level T6. Which region and approximate rib pair is involved?
7. Why can C1 and C2 allow the head to rotate about 80 while other vertebrae cannot?
8. Define: How many vertebrae in the adult vertebral column?
9. Define: What is the main function of the vertebral column?
10. Define: What sits between adjacent vertebrae?

Answer Key

1. B) 26 - 33 vertebrae fuse down to 26 bones: 5 sacral fuse into the sacrum and 4 coccygeal fuse into the coccyx.
2. C) Thoracic - The thoracic region has 12 vertebrae (T1-T12), each articulating with a rib pair.
3. B) Intervertebral disc - Intervertebral discs are fibrocartilage pads that absorb shock between vertebral bodies.
4. B) C2 - C2, the axis, has a bony dens that C1 pivots around, enabling head rotation.
5. Start with 33 vertebrae in a child: 7 cervical + 12 thoracic + 5 lumbar + 5 sacral + 4 coccygeal The 5 sacral vertebrae fuse into 1 sacrum, and the 4 coccygeal vertebrae fuse into 1 coccyx $7 + 12 + 5 + 1 + 1 = 26$ bones in the adult spine
6. T = thoracic region, so this is the 6th thoracic vertebra Each thoracic vertebra articulates with a corresponding rib pair T6 corresponds roughly to the 6th rib pair, near the middle of the rib cage
7. C1 (atlas) has no vertebral body and cradles the skull like a ring C2 (axis) has a bony peg (the dens) that the atlas pivots around This atlantoaxial joint is a pivot joint, unlike the limited gliding joints of C3-C7
8. 26 - 7 cervical, 12 thoracic, 5 lumbar, 1 sacrum (5 fused), 1 coccyx (3-5 fused).
9. It supports body weight, protects the spinal cord, and enables flexible movement.
10. Intervertebral discs - fibrocartilage pads that absorb shock and allow slight movement.

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