

## LMRT Review: Spine Basics (Cervical, Thoracic, Lumbar, Sacrum)

### **Weight Bearing in the Spine**

- The lumbar spine bears the most weight
- Located in the lower back
- Designed with large vertebral bodies for support

### **Cervical Spine (C1–C7)**

#### Number of Cervical Vertebrae

- 7 cervical vertebrae

#### Atlas (C1)

- Supports the skull
- Allows nodding (flexion and extension)
- Has no body or spinous process

#### Axis (C2)

- Has a unique structure called the dens (odontoid process)
- The dens allows rotation of the head (“no” motion)

#### Odontoid (Dens)

- Located on C2 (axis)
- Best demonstrated with:
  - Open-mouth (odontoid) projection
- Used to evaluate fractures and alignment

#### Intervertebral Foramina

- Openings located between adjacent vertebrae
- Allow passage of:
  - Spinal nerves

### **Thoracic Spine (T1–T12)**

#### Thoracic Articulation

- The thoracic spine articulates with the ribs
- Provides attachment for the rib cage

#### Lumbar Spine (L1–L5)

#### Number of Lumbar Vertebrae

- 5 lumbar vertebrae

#### Scotty Dog Sign

- Seen on oblique lumbar spine images
- Used to evaluate spondylolysis
- Associated with the lumbar spine

## Sacrum

- Formed by 5 fused vertebrae
- Located between the hip bones
- Transfers weight from the spine to the pelvis

## Quick Memory Tips

- Most weight-bearing = Lumbar
- Cervical vertebrae = 7
- Lumbar vertebrae = 5
- Axis (C2) = Dens
- Intervertebral foramina = Spinal nerves
- Thoracic spine = Ribs
- Scotty dog = Lumbar
- Best dens view = Open-mouth
- Atlas (C1) = Supports skull + nodding
- Sacrum = 5 fused bones