**SPINAL ANATOMY MIDTERM**

1. What is the joint classification of Z-joints?

Diarthrodial Arthrodial (Planar)

1. What is the joint classification given to two adjacent vertebral bodies and disc?

Amphiarthrosis Symphysis

1. What is the joint classification of intersacral joints?

Synarthrosis Synchondrosis

1. What is the approximate length of an adult lumbar spine?

7 inches

1. Where are the secondary ossification centers in the vertebral bodies?

Ring apophyses

1. At what age do the tips of the transverse processes fuse to the stalk?

16 years

1. At what age do the pedicles fuse to the vertebral body?

3-6 years

1. At what age do the lamina fuse?

By the end of the 1st year

1. Weight lifting increases bone density because of the principle of what law?

Wolff’s Law

1. A deficiency in vitamin C leads to

Scurvy

1. The sternum is part of the \_\_\_\_\_\_\_ skeleton.

Axial

1. The neural arch is composed of \_\_\_\_\_\_\_ and has \_\_\_\_\_\_\_ processes.

2 pedicles and 2 lamina, 7

1. Bone density diminishes 35-40% between the ages of \_\_\_\_\_ and \_\_\_\_\_.

20 to 80 years

1. Before 40 \_\_\_\_\_\_\_ bone carries the majority of the axial compressive load.

Cancellous

1. Osteoporosis

Does not lead to an increase in bone elasticity.

1. What is the approximate length of the adult male spine?

28 inches

1. The area on the lamina between the superior and inferior articular processes is called

Pars interarticularis

1. Identify the bulging disc.
2. Which is the false statement regarding the clinical importance of IVDs?

IVDs are not innervated, they are not the primary cause of back pain (FALSE).

1. Which is true regarding the Annulus Fibrosus?

It is made up of 12-20 fibrocartilage lamellae

1. What structures form the anterior aspect of the IVF?

IVD and vertebral body

1. What condition causes an increase in the height and width of the IVF?

Increasing height

1. What is the length of the IVF canal at L5-S1?

18mm

1. Is a kyphosis in the cervical spine considered normal or abnormal?

Abnormal

1. Lamina in the \_\_\_\_\_\_\_ region are considered “shingle”.

Thoracic

1. Failure of the laminae to fuse is called

Spina bifida

1. Scoliosis is classified based on all of the following except

Sex

1. Z-joints are synovial joints formed between adjacent

Articular processes

1. The orientation of lumbar Z-joints is approximately \_\_\_\_\_ degrees from horizontal.

90o

1. According to the tripod theory of weight bearing, in the lumbar spine the vertebral body bears \_\_\_\_\_ percent of the weight.

80%

1. The anterior aspect of Z-joints is covered by

Ligamentum flavum

1. The Occiput-C7 syndesmosis is formed by

Ligamentum nuchea

1. Type II sensory receptors of the joint capsule fire

Only during movement

1. Menisci which cover part of the Z-joint are formed by

Synovial folds of the joint capsule

1. Due to the orientation of facets, coupled motion occurs with lateral flexion. As a result, the \_\_\_\_\_\_\_ spine laterally flexes and the vertebral bodies rotate toward the \_\_\_\_\_\_\_.

Cervical; concavity

1. One function of the spinal ligaments is to

Provide proprioception

1. What ligament does not form the Axial-Occipital syndesmosis?

Ligamentum nuchae

1. Which cardinal ligaments are found within the vertebral canal?

PLL; Ligamentum Flavum

1. Which is not a cardinal ligament?

Apical Ligament

1. Which is false about IVDs?

They lack innervations

1. What best describes “made of both hyaline and fibrocartilage”?

Cartilaginous end plate (CEP)

1. Which is untrue about the CEP?

Contributes to pressure atrophy of vertebral bodies

1. Sitting with a flat back and hips at 90o puts the least strain on discs and back muscles.

FALSE

1. Tearing of the Annulus Fibrosus involving separation of adjacent lamellae is called

Circumferential tearing

1. IVD damage resulting in ruptured PLL is termed

Transligamentous extrusion

1. The Annulus Fibrosus experiences greatest tensile forces on its posterior aspect during \_\_\_\_\_\_\_ of the spine.

Flexion

1. When is the IVD most susceptible to increased intradiscal pressure?

Upon arising in the morning

1. Which is false about Schmorl’s nodes?

Primarily seen in patients over 50

1. The external arterial blood supply in the spine comes from

Deep local arteries

1. Which is false about the internal venous plexus?

It is separated from the dural venous sinuses