

HUMAN ANATOMY & PHYSIOLOGY (ER20-12T)

UNIT-1: SKELETAL SYSTEM

Case Study Puzzle 1: *The Fragile Fall*

Scenario

A 68-year-old postmenopausal woman slips at home and sustains a fracture of the neck of femur after a minor fall. X-ray shows reduced bone density.



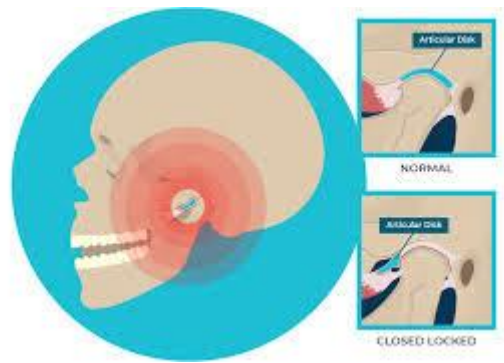
Puzzle Questions

1. Which **type of bone tissue** is primarily affected?
2. Which **skeletal function** is compromised?
3. Name the **most likely disorder**.
4. Why are postmenopausal women at higher risk?

Case Study Puzzle 2: *The Locked Jaw*

Scenario

A 25-year-old man presents with pain and difficulty opening his mouth after a blow to the face. Movement of the jaw is restricted.



Puzzle Questions

1. Identify the **joint involved**.
2. Classify this joint structurally and functionally.
3. What movements are normally allowed by this joint?

Case Study Puzzle 3: *The Stiff Morning Walk*

Scenario

A 55-year-old patient complains of early-morning stiffness and knee pain that improves with movement. X-ray shows narrowing of joint space.



Puzzle Questions

1. Which **joint** is affected?
2. Classify this joint.
3. Name the **likely disorder**.
4. Which structure within the joint is degenerating?

Case Study Puzzle 4: *The Young Athlete's Shoulder*

Scenario

A volleyball player experiences recurrent shoulder dislocations during matches.



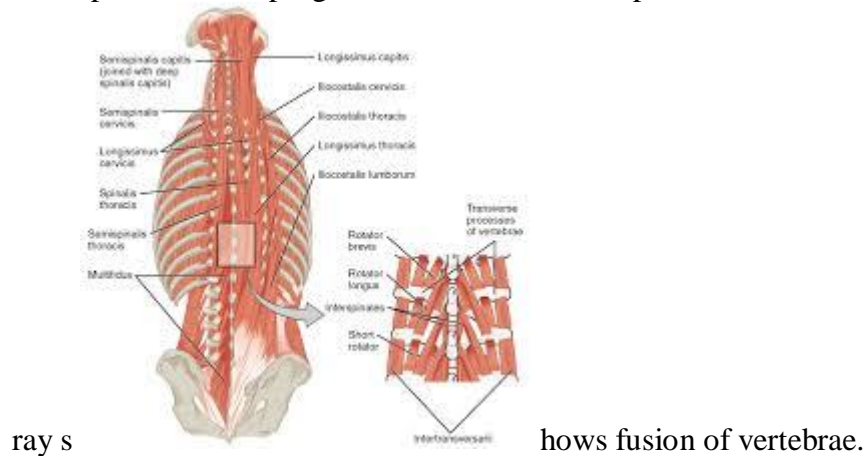
Puzzle Questions

1. Identify the **joint involved**.
2. Classify the joint.
3. Why is this joint prone to dislocation?
4. Name one **advantage** and one **disadvantage** of this joint type.

Case Study Puzzle 5: *The Rigid Spine*

Scenario

A 30-year-old man presents with progressive stiffness of the spine and reduced flexibility. X-



Puzzle Questions

1. Which part of the skeleton is affected?
2. What **type of joints** connect vertebral bodies?
3. Name the **likely joint disorder**.
4. What function of the skeleton is impaired?