

Articulations for Bio 250

Where rigid elements of the skeleton meet.

Joins

- Articulations of bones
- Functions of joints
 - Hold bones together
 - Allow for mobility
- Ways joints are classified
 - Functionally
 - Structurally

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Functional Classification of Joints

- Synarthroses – immovable joints
- Amphiarthroses – slightly moveable joints
- Diarthroses – freely moveable joints

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Structural Classification of Joints

- Fibrous joints
 - Generally immovable
- Cartilaginous joints
 - Immovable or slightly moveable
- Synovial joints
 - Freely moveable

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Fibrous Joints

- Bones united by fibrous tissue
- Examples
 - Sutures
 - Syndesmoses
 - Allows more movement than sutures
 - Example: distal end of tibia and fibula

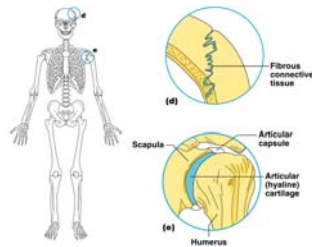


Figure 5.27d, e

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Cartilaginous Joints

- Bones connected by cartilage
- Examples
 - Pubic symphysis
 - Intervertebral joints

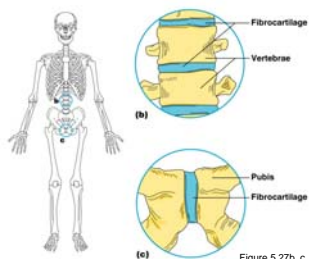


Figure 5.27b, c

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Synovial Joints

- Articulating bones are separated by a joint cavity
- Synovial fluid is found in the joint cavity

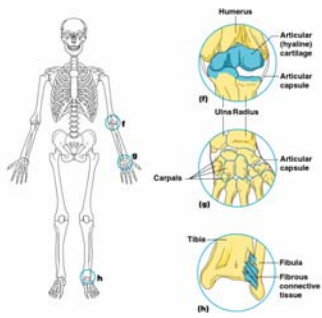


Figure 5.27f-h

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Features of Synovial Joints

- Articular cartilage (hyaline cartilage) covers the ends of bones
- Joint surfaces are enclosed by a fibrous articular capsule
- Have a joint cavity filled with synovial fluid
- Ligaments reinforce the joint

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Structures Associated with the Synovial Joint

- Bursae – flattened fibrous sacs
 - Lined with synovial membranes
 - Filled with synovial fluid
 - Not actually part of the joint
- Tendon sheath
 - Elongated bursa that wraps around a tendon

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The Synovial Joint

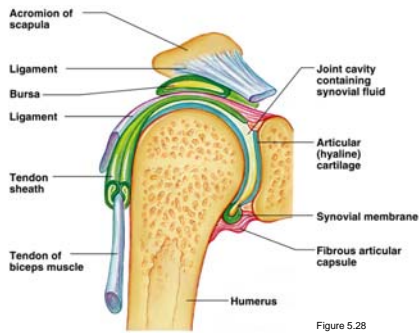


Figure 5.28

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Types of Synovial Joints Based on Shape

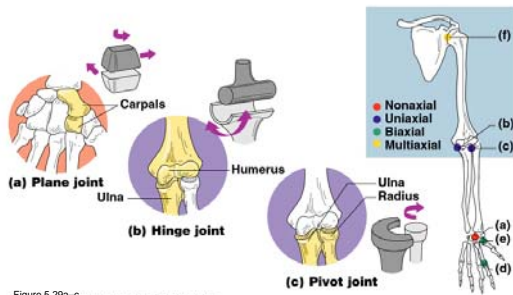


Figure 5.29a-c

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Types of Synovial Joints Based on Shape

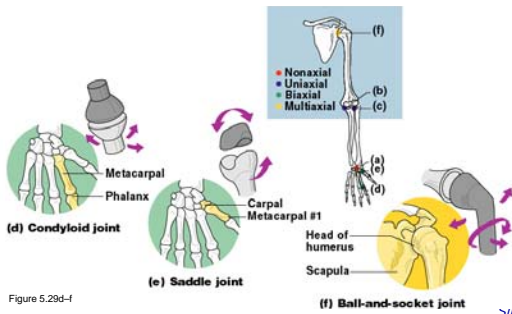


Figure 5.29d-f

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Inflammatory Conditions Associated with Joints

- Bursitis – inflammation of a bursa usually caused by a blow or friction
- Tendonitis – inflammation of tendon sheaths
- Arthritis – inflammatory or degenerative diseases of joints
 - Over 100 different types
 - The most widespread crippling disease in the United States

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Joints

- Choose your favorite joint-see textbook and other references.
- Summarize the type of joint, soft tissues involved, muscles, skeletal elements and movements.
- 1 page, + 1 illustration
- Due on the test.
