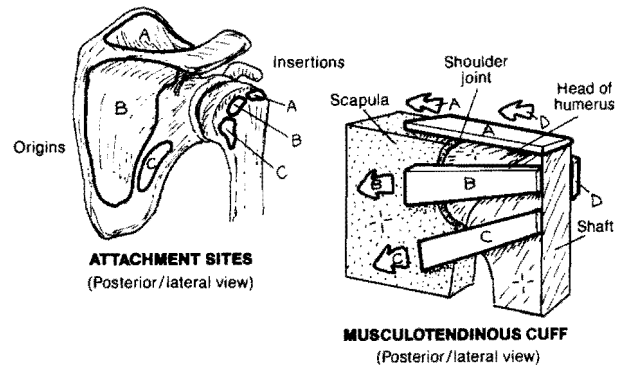
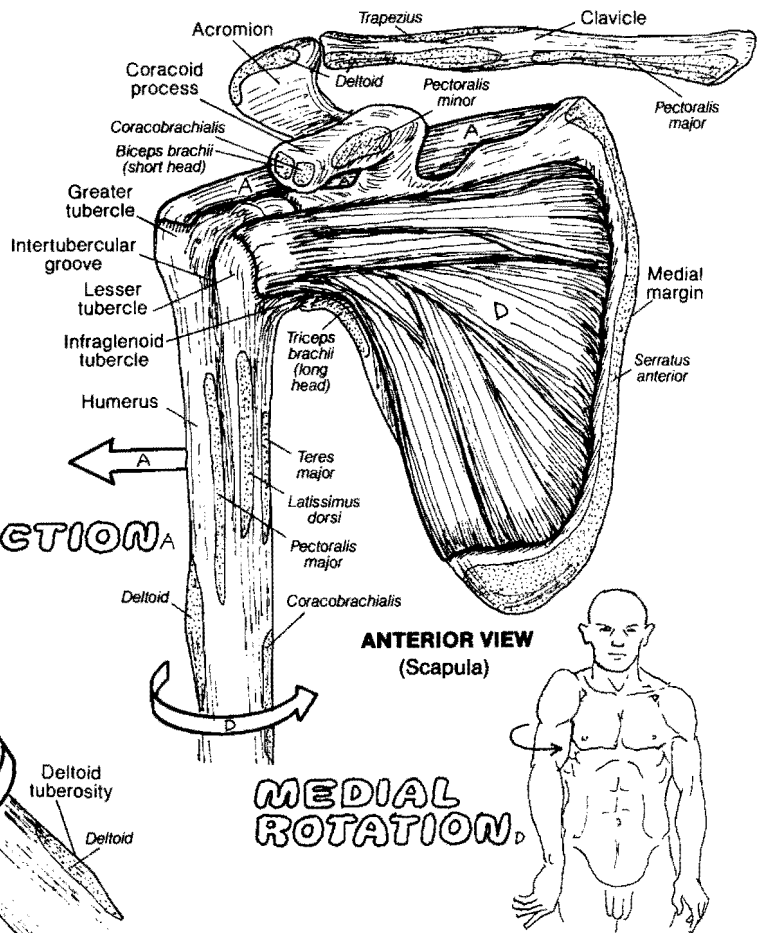
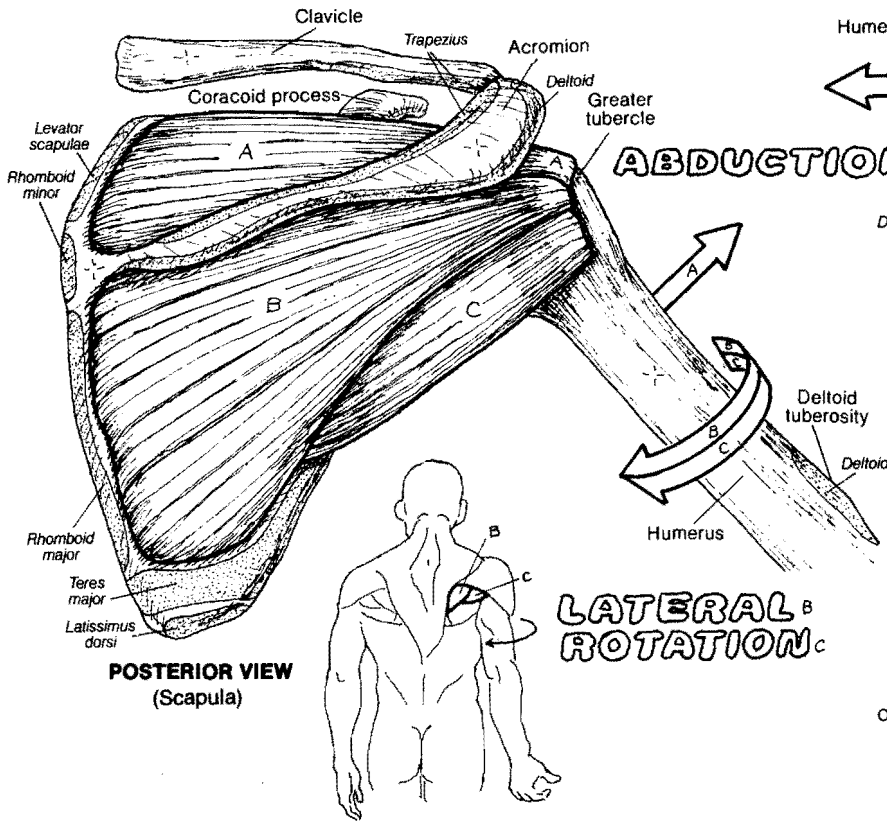


V. MUSCULAR SYSTEM / UPPER LIMB

MUSCLES OF MUSCULOTENDINOUS CUFF

CN: (1) In addition to the four muscles, color the arrows and titles describing their actions. (2) Color the muscular attachment sites and the diagram of the function of the cuff muscles at mid-right. (3) Do not color the problem spot numerals in the lower illustration. They are there to identify locations discussed in the text.

SUPRASPINATUS_A
INFRASPINATUS_B
TERES MINOR_C
SUBSCAPULARIS_D

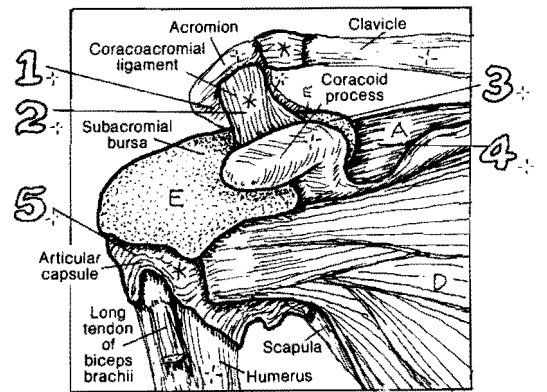


The socket at the glenohumeral joint (glenoid fossa) is too shallow to offer any bony security for the head of the humerus. As ligaments would severely limit joint movement, muscle tension must be employed to pull the humeral head in to the shallow scapular socket during shoulder movements. Four muscles fulfill this function: *supraspinatus*, *infraspinatus*, *teres minor*, and *subscapularis* ("SITS muscles"). These muscles form a musculotendinous ("rotator") cuff around the head of the humerus, enforcing joint security. Especially effective during robust shoulder movements, they permit the major movers of the joint to work without risking joint dislocation.

The SITS muscles have come to be known as the "rotator cuff" muscles, in spite of the fact that one of them, *supraspinatus*, is an abductor of the shoulder joint and not a rotator. Independent of their collective function, all of these muscles are important movers of the joint.

The shoulder joint and rotator cuff muscles are subject to overuse and early degeneration. A common problem arises from repeated contact (impingement) at the undersurface of the acromion (1), the coracoacromial ligament (2), and the underside of the distal clavicle with the subacromial bursa (3), *supraspinatus* tendon (4), and shoulder joint capsule (5). Progressive rubbing contacts can induce bursal irritation and inflammation (bursitis) and a tear in the *supraspinatus* tendon ("rotator cuff rupture"). Bony spurs can form on the underside of the acromion, or prior acromioclavicular dislocation can put the distal clavicle closer to the *supraspinatus* tendon, irritating the latter (*supraspinatus* tendinitis).

PROBLEM SPOTS IN THE SHOULDER REGION (Anterior view)



BURSAE
LIGAMENT*

ANTERIOR VIEW