

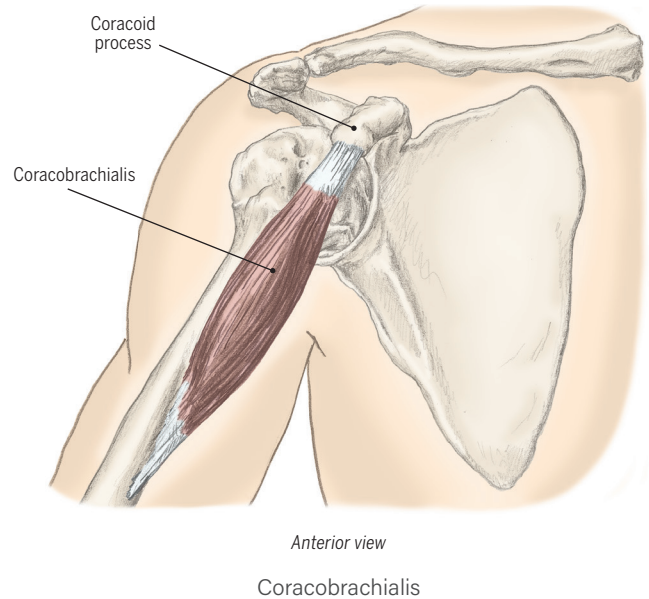
ADDENDUM

Scapulohumeral Muscles *(continued)*

Coracobrachialis

The **coracobrachialis** is classified as a scapulohumeral muscle along with the muscles of the rotator cuff and deltoid and supplies force for shoulder flexion and adduction. With the humerus abducted, the muscle can be palpated as the tight band of tissue that forms the anterior aspect of the armpit, deep to the pectoralis major.

CORACOBRACHIALIS	
Purposeful Activity	
P	Placing groceries in a refrigerator, carrying a laundry basket
A	Flex the shoulder (GHJ) Adduct the shoulder (GHJ)
O	Coracoid process of the scapula
I	Medial surface of midhumeral shaft
N	Musculocutaneous C6 and C7



Axiohumeral Muscles

Pectoralis major

Latissimus dorsi

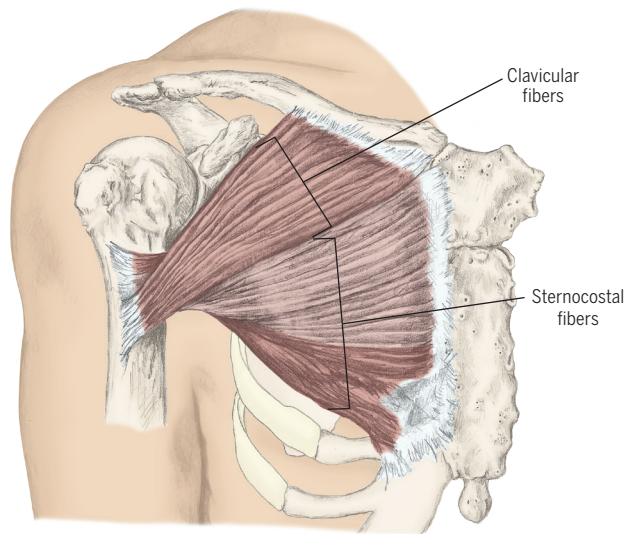
There are two muscles that link the axial skeleton and humerus directly—the pectoralis major and latissimus dorsi. Classified as *axiohumeral muscles*, their broad attachment sites on the chest and back anchor the arm to the trunk and amplify force for many shoulder movements.

Pectoralis Major

The muscle fibers of the **pectoralis major** are divided into clavicular and sternocostal segments that converge to attach to the humerus. All fibers of this muscle contribute to adduction and internal rotation of the shoulder—for example, when giving someone (or yourself) a hug.

The clavicular fibers are active for shoulder flexion, as when putting on a pair of glasses, and horizontal adduction, as when turning a steering wheel or reaching for a seat belt. The sternocostal fibers are mainly horizontally oriented. They can extend the flexed humerus to the side of the body, as when placing a dish retrieved from an overhead cabinet on a countertop, but they cannot extend the arm behind the body.

PECTORALIS MAJOR	
Purposeful Activity	
P	Reaching across the body into an overhead cabinet, putting on a seatbelt
A	All fibers: Adduct the shoulder (GHJ) Internally (medially) rotate the shoulder (GHJ) Assist to elevate the thorax during forced inhalation (with the arm fixed) Clavicular fibers: Flex the shoulder (GHJ) Horizontally adduct the shoulder (GHJ) Sternocostal fibers: Extend the shoulder (GHJ joint)
O	Medial half of clavicle, sternum, and cartilage of first through sixth ribs
I	Crest of greater tubercle of humerus
N	Clavicular fibers: Lateral pectoral C5 to C7 Sternocostal fibers: Lateral and medial pectoral C6 to C8, T1



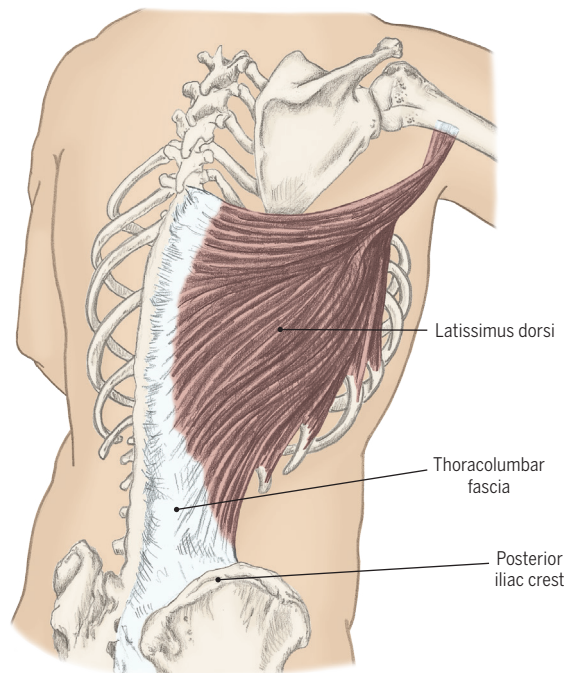
Anterior view
Pectoralis major

Latissimus Dorsi

The **latissimus dorsi** is a broad muscle that spans the pelvis, trunk, and humerus. It supplies powerful force for adduction and extension of the glenohumeral joint, particularly from an elevated position.

Consider the front crawl in swimming, the stroke that swimmers use for freestyle because it is the fastest, with the body prone and the arms pulling through the water. As the arm reaches forward, crashing into the water, the shoulder forcefully extends from a flexed position to propel the body forward. The latissimus dorsi and pectoralis major work together for this movement; however, the latissimus dorsi can extend the arm behind the

body, whereas the pectoralis major cannot. With a fixed scapula and clavicle, as when pushing up from the arms of a bedside commode, or rock climbing, the latissimus dorsi can also help elevate the pelvis and trunk.



Lateral/posterior view

Latissimus dorsi

LATISSIMUS DORSI	
Purposeful Activity	
P	Wheelchair mobility (propelling a manual wheelchair forward), standing from sitting (pushing downward on the arms of a chair)
A	Extend the shoulder (GHJ) Adduct the shoulder (GHJ) Internally (medially) rotate the shoulder (GHJ)
O	Inferior angle of scapula, spinous processes of last six thoracic vertebrae, last three or four ribs, thoracolumbar fascia, and posterior iliac crest
I	Intertubercular groove of the humerus
N	Thoracodorsal C6 to C8