

Joint Anatomy and Actions

A Short Lesson in the Kinesiology of Exercise

The Shoulder Joint and Shoulder Girdle

The shoulder is the most freely movable of all the body's ball-and-socket joints. Because of this, the greatest variety and combination of movements at a joint can be executed by the arm from the shoulder joint.

The shoulder joint is formed by the articulation of the glenoid fossa of the scapula (shoulder blade) and the head of the humerus (upper arm bone). The shoulder joint consists of a shallow socket (glenoid cavity) into which the half-spherical head of the humerus fits. It should be noted that less than half of humerus is in the socket at any time. Because of this, the bony arrangement is very weak and therefore the strength of the musculature around the shoulder is very important for stability.

It is impossible to talk about the movements of the shoulder without also discussing the shoulder girdle, which consists of the scapula and clavicle (collar bone). The clavicle joins the sternum (breast bone) at the sternoclavicular joint, which allows for full-range movement of the outer (shoulder) end of the clavicle. The outer end of the clavicle joins the scapula at the acromion in what is known as the acromioclavicular joint.

Because the clavicle cannot move by itself, movements of the shoulder girdle are usually referred to as movements of the scapula, which is free to move in all directions. Thus, scapula movements allow for a greatly increased range of motion in the shoulder joint by changing the position of the joint.

Basic Movements in the Shoulder Joint and Shoulder Girdle

Extension	 Moving the arm down and to the rear.	Flexion	 Moving the arm upward and in front of the body.	Abduction	 Moving the arm sideward and upward away from the body.	Adduction	 Moving the arm sideward and downward towards the body.	Horizontal Extension	 Moving the arm horizontally from the front of the body towards the side.
Horizontal Flexion	 Moving the arm horizontally towards the front of the body.	Horizontal Abduction	 Moving the arm horizontally from the front of the body towards the side.	Horizontal Adduction	 Moving the arm horizontally towards the front of the body.	Lateral Rotation	 Rotation of the humerus outward.	Medial Rotation	 Rotation of the humerus inward.

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