PART 3 - GLENOHUMERAL JOINT
(MUSCLE-TENDON)
3.1 Deltoid Muscle

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The deltoid is the largest and perhaps most important muscle in the shoulder girdle (Fig. 3.1a). It is made up of three major parts: the anterior deltoid taking its origin from the anterior and superior surfaces of the outer third of the clavicle and anterior acromion; the middle deltoid, originating from the lateral margin of the acromion; and the posterior deltoid, originating from almost the entire scapular spine. The deltoid covers the proximal portion of the humerus and converges into a thick tendinous insertion at the lateral surface of the humeral shaft [1, 2]. The most important function of the deltoid is forward elevation on the scapular plane. However, differences in activity of the three portions of the deltoid related to arm position have been observed by electromyographic analysis [3]. The function of the deltoid is highly differentiated and is not restricted to only abducting moment of the arm. Although its integrity is critical to shoulder function, it has not been extensively studied with reference to its stabilising function [4]. The axillary nerve and posterior humeral circumflex artery are the only nerve and the major blood supply of this muscle [2] (Fig. 3.1b).

Fig. 3.1. a Lateral view of the upper superior arm (right side): lateral view of the deltoid muscle. This is a powerful muscle and has an important role in arm elevation. Its origins are common to other muscle insertions in shoulder girdle. The insertion (*) is on the lateral surface of the humerus (ACR acromion). b Superior view of the right shoulder: superior view of the origin of the deltoid muscle. The dotted lines describe the bony profiles of acromion and the clavicle. The anterior part of the muscle comes from the clavicle, the middle part from the acromion and the posterior part from the scapular spine (AC acromioclavicular joint).