

# Humerus (bone)

Nathaniel Yomogida, SPT      Chloë Kerstein, SPT

## Table of contents

1 Sites

1.1 Deltoid tuberosity . . . . .

1.2 Greater Tubercle . . . . .

1.3 Lesser Tubercle . . . . .

1.4 Lateral Epicondyle of Humerus . . . . .

1.5 Humerus in line with crest of less tubercle . . . . .

2 Dysfunction

1

1

2

2

3

3

3

## 1 Sites

### 1.1 Deltoid tuberosity

| Deltoid tuberosity Muscular attachments |                         |                              |                      |                                       |
|---|-------------------------|------------------------------|----------------------|---------------------------------------|
| Table 1: Deltoid Muscles OIAN           |                         |                              |                      |                                       |
| Muscle                                  | Origin                  | Insertion                    | Nerve                | Action                                |
| Anterior Deltoid                        | Lateral 1/3 of clavicle | Humerus (deltoid tuberosity) | Axillary n. (C5, C6) | Flexion, internal rotation, adduction |
| Lateral Deltoid                         | Acromion                | Humerus (deltoid tuberosity) | Axillary n. (C5, C6) | Abduction                             |

|                   |                |                              |                      |   |
|-------------------|----------------|------------------------------|----------------------|---|
| Posterior Deltoid | Scapular spine | Humerus (deltoid tuberosity) | Axillary n. (C5, C6) | Extension, external rotation, adduction |
|-------------------|----------------|------------------------------|----------------------|---|

## 1.2 Greater Tubercle

| Greater tubercle Muscular attachments |                               |                             |                             |   |
|---------------------------------------|-------------------------------|-----------------------------|-----------------------------|---|
| Muscle                                | Origin                        | Insertion                   | Nerve                       | Action  |
| Supraspinatus                         | Supraspinous Fossa of scapula | Greater tubercle of Humerus | Suprascapular nerve (C4-C6) | Initiates abduction                               |
| Infraspinatus                         | Infraspinous Fossa of scapula | Greater tubercle of Humerus | Suprascapular nerve (C4-C6) | External rotation                                 |
| Teres Minor                           | Lateral border of scapula     | Greater tubercle of Humerus | Axillary n. (C5, C6)        | External rotation, weak adduction, stabilizes GHJ |

## 1.3 Lesser Tubercle

| Lesser Tubercle Muscular attachments                |                              |                            |   |                   |
|---|------------------------------|----------------------------|---|-------------------|
| Table 3: Lesser tubercle of humerus attachment OIAN |                              |                            |   |                   |
| Muscle  | Origin                       | Insertion                  | Nerve                                       | Action            |
| Subscapularis                                       | Subscapular fossa of scapula | Lesser tubercle of Humerus | Upper and Lower subscapular nerves (C5, C6) | Internal Rotation |

|           |  |                                     |  |  |
|-----------|--|-------------------------------------|--|--|
| Pec Major | Clavicle (medial half), sternum, costal cartilages 1–6, rectus sheath (anterior layer) | Humerus (crest of greater tubercle) | Lateral pectoral nerve and Medial pectoral nerve (C5–T1) | <b>Entire muscle:</b> adduction, internal rotation;<br><b>Clavicular and sternocostal parts:</b> flexion; assist in respiration when shoulder is fixed |
|-----------|--|-------------------------------------|--|--|

## 1.4 Lateral Epicondyle of Humerus

Dysfunction:

- Lateral epicondylitis (Tennis elbow)

## 1.5 Humerus in line with crest of less tubercle

| Lesser Tubercle Muscular attachments |                            |   |                             |                                       |
|--------------------------------------|----------------------------|---|-----------------------------|---------------------------------------|
| Muscle                               | Origin                     | Insertion                                       | Nerve                       | Action                                |
| Coracobrachialis                     | Scapula (coracoid process) | Humerus (in line with crest of lesser tubercle) | Musculocutaneous n. (C5–C7) | Flexion, adduction, internal rotation |

## 2 Dysfunction

- Lateral epicondylitis (Tennis elbow)