

# Shoulder Ultrasound

JACLYN HASTINGS

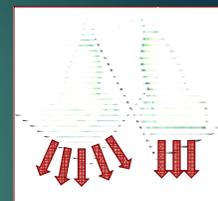
## Ultrasound Basics

- ▶ Dynamic visualization
- ▶ Guide interventional procedures
- ▶ Easy comparison of opposite side
- ▶ No radiation
- ▶ Portable
- ▶ Inexpensive

## Getting Set Up

## Probe

- ▶ High frequency transducer
- ▶ Probe
  - ▶ Linear: near/far matches width of probe
  - ▶ Curvilinear: far is extended beyond width of probe: helpful for guided injections
  - ▶ Match physical footprint of transducer to the area of interest



## Orientation

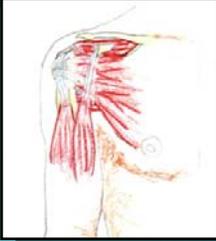
- ▶ Cephalad and/or anatomic right
- ▶ Joints – longitudinal axis with linear probe

## Anisotropy

- ▶ Maintain perpendicular plane to avoid anisotropy

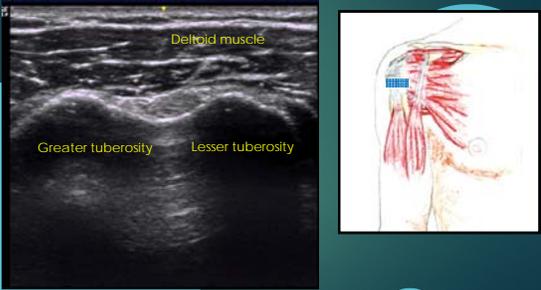
### 1. Long head of biceps tendon

► Relaxed, resting position in supination



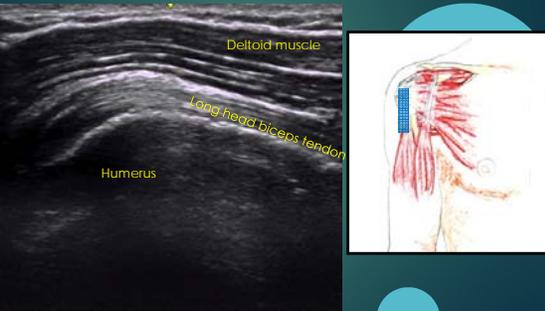
This slide features a dark teal background with light blue circles and a red square in the top right. The title '1. Long head of biceps tendon' is in white. Below it, a bullet point indicates 'Relaxed, resting position in supination'. An anatomical diagram shows the shoulder in a relaxed, supinated position, with the long head of the biceps tendon highlighted in red. A blue box on the diagram indicates the location of the ultrasound probe.

### Transverse



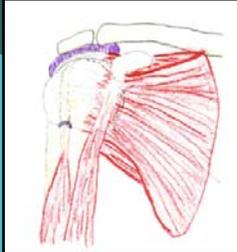
This slide features a dark teal background with light blue circles and a red square in the top right. The title 'Transverse' is in white. It contains two images: a B-mode ultrasound image on the left and an anatomical diagram on the right. The ultrasound image shows a transverse view of the shoulder with labels for 'Deltoid muscle', 'Greater tuberosity', and 'Lesser tuberosity'. A blue box on the diagram indicates the probe location.

### Longitudinal



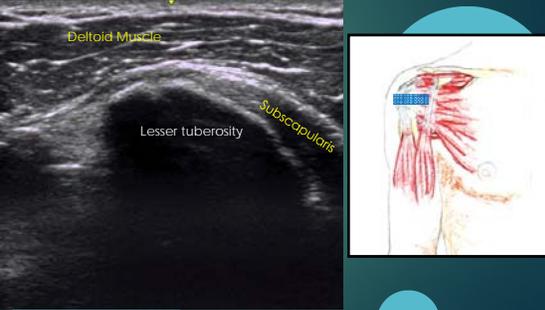
This slide features a dark teal background with light blue circles and a red square in the top right. The title 'Longitudinal' is in white. It contains two images: a B-mode ultrasound image on the left and an anatomical diagram on the right. The ultrasound image shows a longitudinal view of the shoulder with labels for 'Deltoid muscle', 'Long head biceps tendon', and 'Humerus'. A blue box on the diagram indicates the probe location.

### 2. Subscapularis



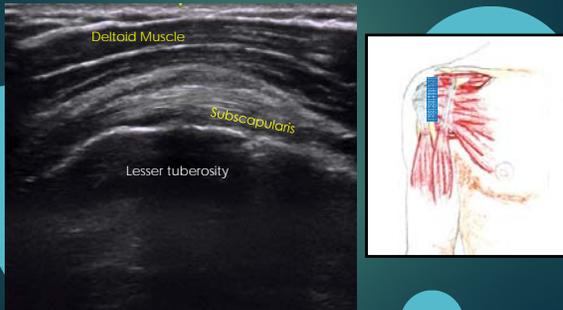
This slide features a dark teal background with light blue circles and a red square in the top right. The title '2. Subscapularis' is in white. It contains a single anatomical diagram showing the shoulder with the subscapularis muscle highlighted in red. A blue box on the diagram indicates the location of the ultrasound probe.

### Longitudinal



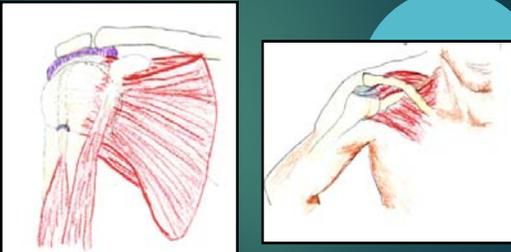
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### Transverse

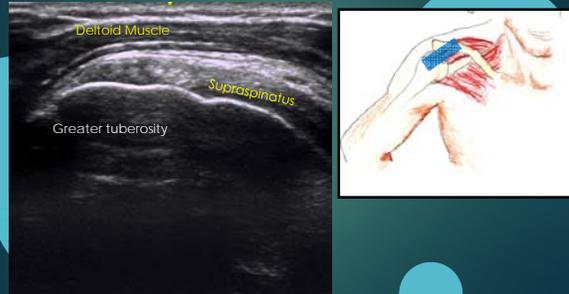


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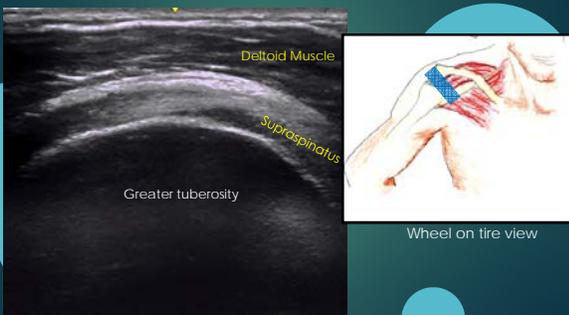
### 3. Supraspinatus



### Supraspinatus – longitudinal

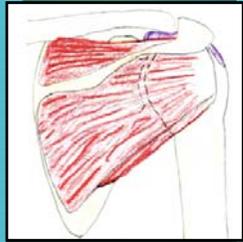


### Supraspinatus – transverse

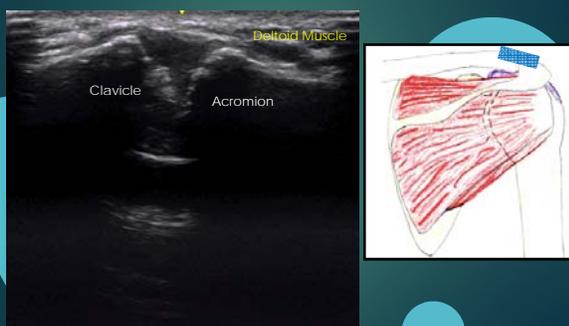


### 4. Acromioclavicular joint

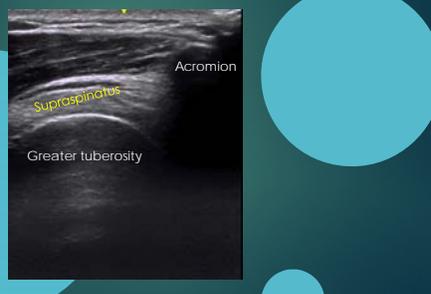
- ▶ Acromioclavicular joint and bursa
- ▶ Subacromial-subdeltoid bursa



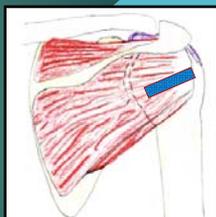
### Acromioclavicular joint



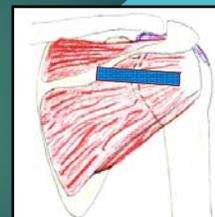
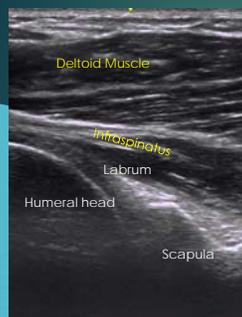
### Subacromial/Subdeltoid Bursa



## 5. Infraspinatus - longitudinal



## Glenohumeral joint line



## Sources

- ▶ Plomb-Holmes, Chantal, et al. "An Orthopaedic Surgeon's Guide to Ultrasound Imaging of the Healthy, Pathological and Postoperative Shoulder," *Orthopaedics & Traumatology: Surgery & Research*, Elsevier Masson, 11 Aug. 2018, <https://www.sciencedirect.com/science/article/pii/S1878749618302111>.
- ▶ Ihnatsenka, Barys and Andre Pierre Boezaart. "Ultrasound: Basic understanding and learning the language." *International Journal of Shoulder Surgery*. 2010. 4(3): 55-62. <https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC3061111/>.
- ▶ Photo credit: Simon Griesbach, Jaclyn Hastings