

SNS COLLEGE OF ALLIED HEALTH SCIENCE
Affiliated to The Tamil Nadu Dr. M.G.R Medical University, Chennai



DEPARTMENT OF OPERATION THEATRE AND ANESTHESIA
TECHNOLOGY

COURSE NAME : 1131 - BASIC SCIENCES - ANATOMY

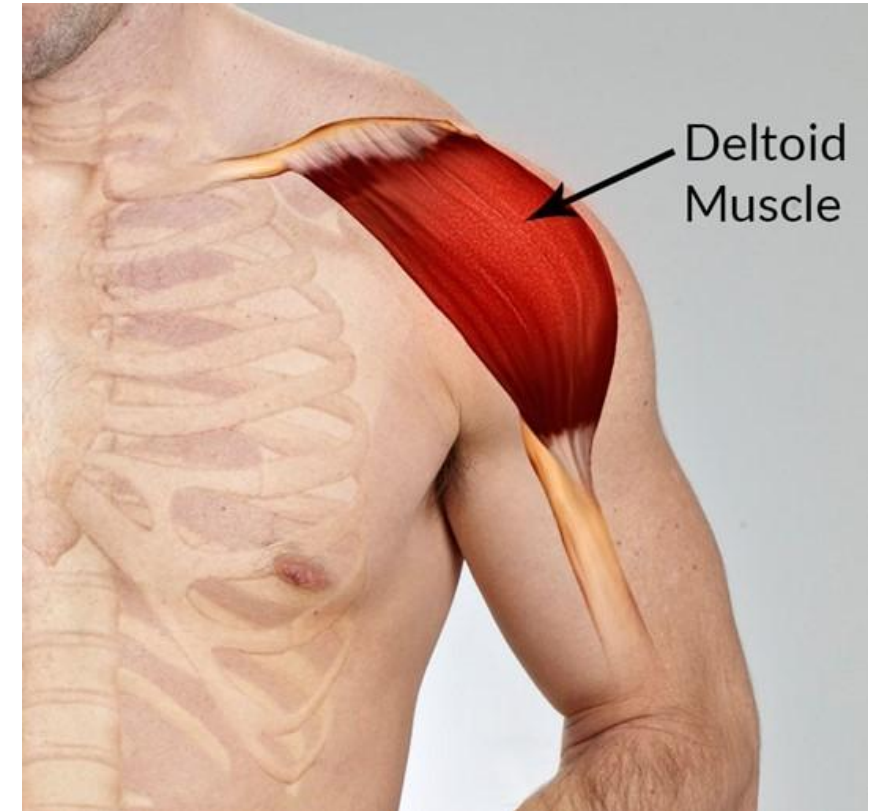
UNIT : 1 BASICS OF ANATOMY

TOPICS : DELTOID MUSCLE

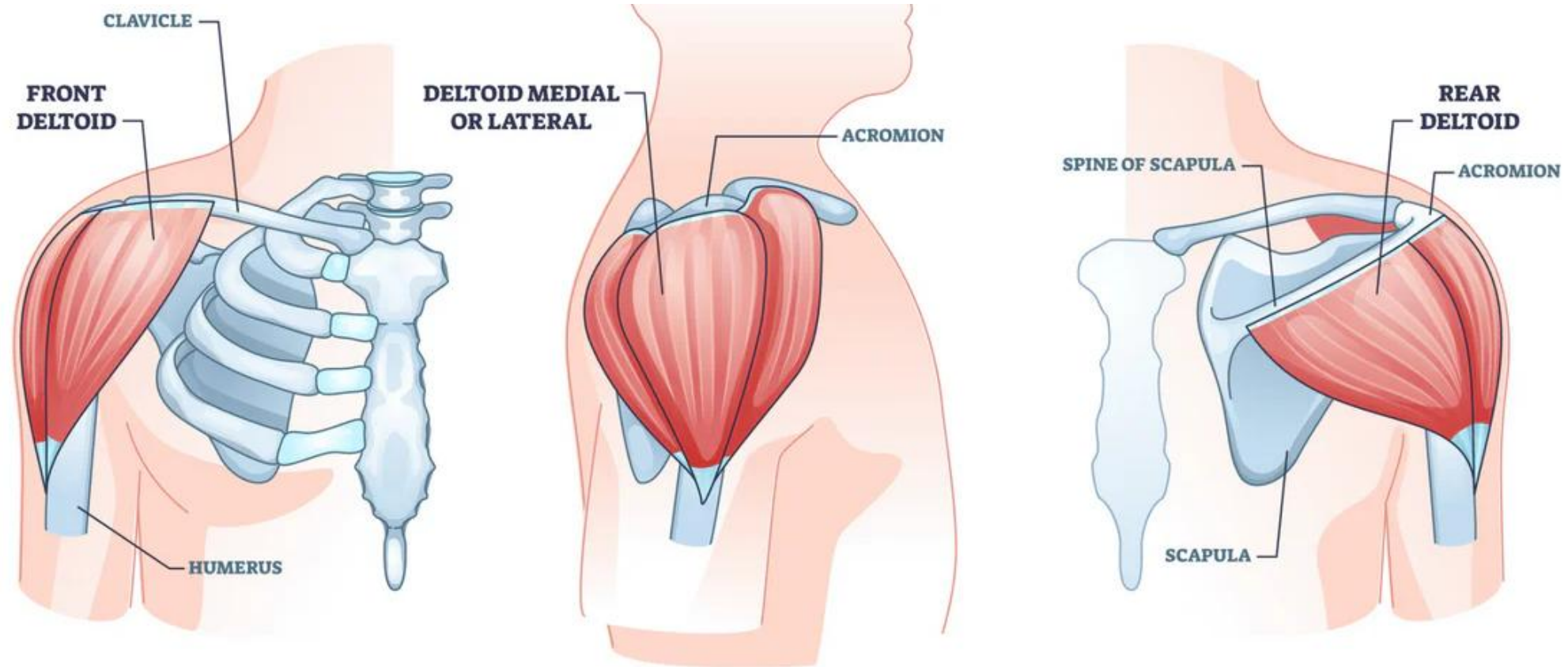
FACULTY NAME : Ms. SHANMUGA PRIYA.B

INTRODUCTION (Define)

- The deltoid muscle is a crucial component of the shoulder anatomy, often described as a "**three in one**" muscle.
- The deltoid is a **thick, powerful, and curved triangular muscle** that covers the **shoulder**.
- It is responsible for forming the characteristic rounded contour of the shoulder.
- Its shape resembles the inverted **Greek letter Delta**.



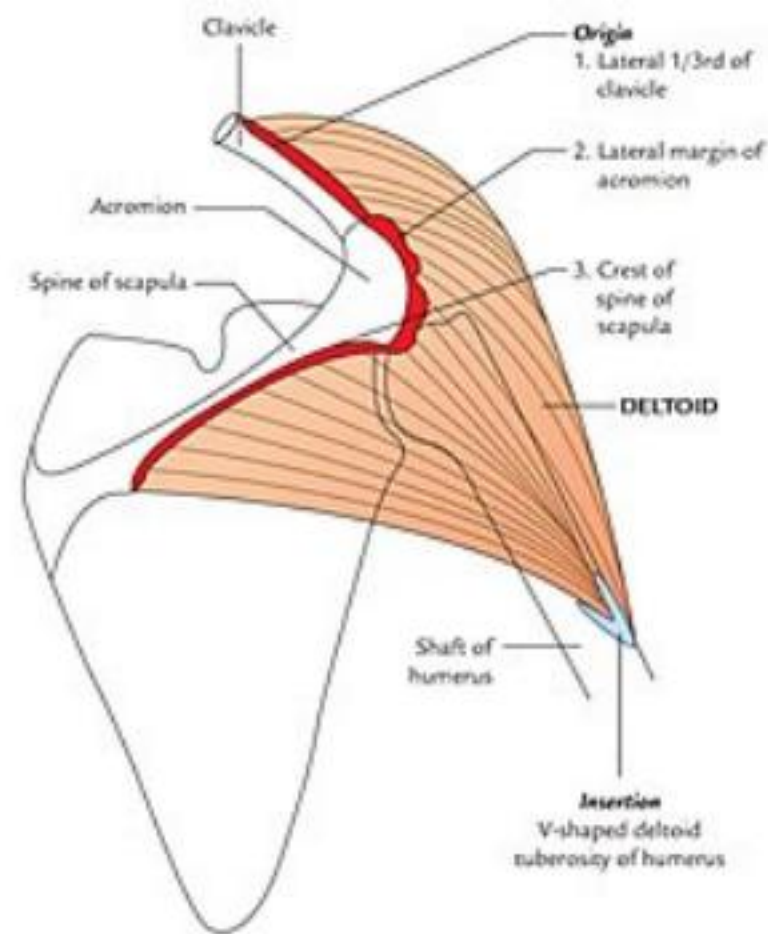
Deltoid Muscle



ORIGIN AND INSERTION

MUSCLE FIBRES	ORIGIN	INSERTION
ANTERIOR UNIPENNATE	Upper surface and anterior border of the lateral one-third of the clavicle	<ul style="list-style-type: none"> The muscle fibers converge inferiorly (downward) to form a short, thick tendon. This tendon is inserted onto a V-shaped deltoid tuberosity or tubercle. The insertion site is located on the lateral aspect of the mid shaft of the humerus
POSTERIOR UNIPENNATE	Lower lip of the spine of the scapula	
MIDDLE MULTI-PENNATE	Lateral margin and the upper surface of the acromion process of the Scapula	

ORIGIN AND INSERTION



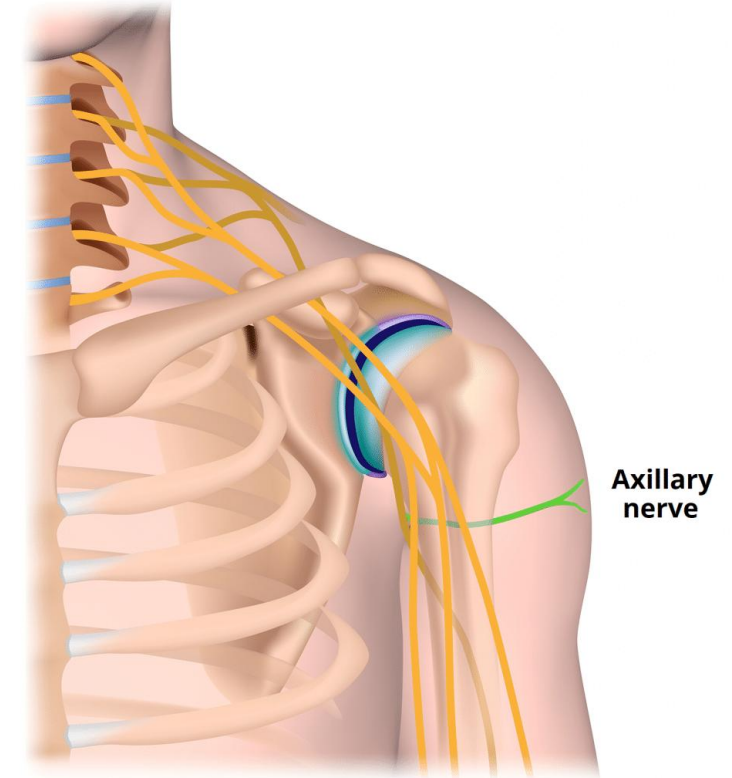
Nerve Supply and Actions

Nerve Supply

- The deltoid is supplied by the axillary nerve which arises from spinal roots C5 and C6.

Actions

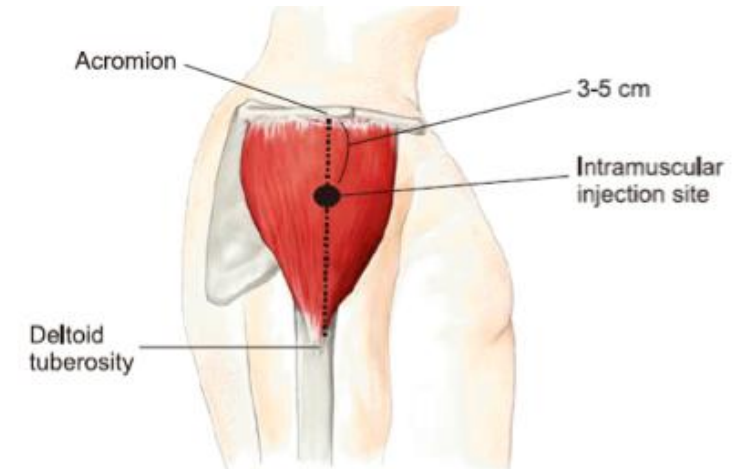
- Anterior fibers: flexors and medial rotators of the arm.
- Posterior fibers: extensors and lateral rotators of the arm.
- Middle fibers: abductors



Clinical Anatomy and Correlation

Intramuscular Injections (IM)

- The deltoid is the **main site** of intramuscular injections.
- IM injections are commonly administered in the **lower half of the deltoid to avoid injury to the axillary nerve.**
- This **caution** is necessary because the axillary nerve **winds** around the surgical neck of the humerus.
- In actual clinical practice, the injection is often given in the **upper outer quadrant** of the deltoid region.



Structures under Deltoid Muscle

Bones: Upper end of the humerus and the coracoid process.

Joint: The shoulder joint

Ligament: The coracoacromin ligament.

Bursae: Subscapular, subacromial, subdeltoid, and infrapinatus bursae.

Vessels: Anterior and posterior circumflex humeral artery and vein.

Nerves - axillary nerve

Structures under Deltoid Muscle (Cont)

Muscles

- INSERTION: Pectoralis minor, pectoralis major, teres major, latissimus dorsi, subscapularis, supraspinatus, infraspinatus, and teres minor.
- ORIGIN: Long head of biceps, short head of biceps, coracobrachialis, and the long and lateral heads of the triceps.

Summary

- Shape: Big triangular muscle on the shoulder – looks like an upside-down "Δ" (Delta).
- Three Parts: Front (anterior), Middle, Back (posterior).
 - Front part → lifts arm forward & turns it inward
 - Middle part → lifts arm out to the side (main abductor)
 - Back part → pulls arm backward & turns it outward
- Nerve: Axillary nerve (C5-C6) – very important, don't injure it!
- Injection Site: Common place for injections (like vaccines), but must give in the safe lower or outer part to avoid hitting the nerve.

Reference

Books

- Manipal Manual of Anatomy for Allied Health Sciences – by Sampath Madhyastha
- BD Chaurasia's Human Anatomy (Vol. 1 – Upper Limb & Thorax) – Latest edition
- Essentials of Human Anatomy – by A.K. Datta (Vol. 1)

Websites / Online Resources

- <https://teachmeanatomy.info/upper-limb/muscles/shoulder/deltoid/>
- <https://www.kenhub.com/en/library/anatomy/deltoid-muscle>
- <https://www.physio-pedia.com/Deltoid>

THANK YOU