💪 SCAPULAR REGION – MUSCLES CONNECTING SCAPULA TO HUMERUS

These muscles are critical for shoulder movements and stabilization.

🔹 1. Deltoid Muscle

📌 Origin

- Anterior fibers: lateral third of clavicle
- Middle fibers: lateral border of acromion
- Posterior fibers: spine of scapula

📌 Insertion

- Deltoid tuberosity of humerus (middle of lateral surface of shaft)

📌 Nerve Supply

- Axillary nerve (C5, C6)

📌 Actions

Fiber	Movement
Anterior	Flexion + medial rotation of arm
Middle	Abduction of arm (15°–90°)
Posterior	Extension + lateral rotation

💡 Key Concept

- Abduction above 90° → requires supraspinatus + scapular rotation
- Powerful shoulder prime mover

🔹 2. Teres Major 🏋️

📌 Origin

- Inferior angle of scapula

📌 Insertion

- Medial lip of intertubercular sulcus of humerus

📌 Nerve Supply

- Lower subscapular nerve

📌 Actions

- Extends arm at shoulder
- Assists in adduction and medial rotation

🔹 3. Teres Minor

📌 Origin

- Inferior lateral border of scapula

📌 Insertion

- Greater tubercle of humerus (inferior facet)

📌 Nerve Supply

- Axillary nerve (C5, C6)

📌 Actions

- Lateral rotation of arm
- Weak adduction
- Stabilizes shoulder joint

🔹 4. Subscapularis

📌 Origin

- Subscapular fossa (costal/anterior surface)

📌 Insertion

- Lesser tuberosity of humerus

📌 Nerve Supply

- Upper and lower subscapular nerves (C5–C7)

📌 Actions

- Medial rotation of arm
- Stabilizes shoulder joint (part of rotator cuff)
- Multipennate → very strong rotator

🔹 5. Supraspinatus

📌 Origin

- Supraspinous fossa of scapula

📌 Insertion

- Greater tubercle of humerus (anterior facet)

📌 Nerve Supply

- Suprascapular nerve (C5, C6)

📌 Actions

- Initiates first 15° of abduction
- Stabilizes shoulder joint (prevents downward displacement of humerus)

🔹 6. Infraspinatus

📌 Origin

- Infraspinous fossa of scapula

📌 Insertion

- Greater tubercle of humerus (posterior aspect)

📌 Nerve Supply

- Suprascapular nerve (C5, C6)

📌 Actions

- Lateral rotation of arm
- Assists in adduction
- Stabilizes shoulder joint

🟢 ROTATOR CUFF SUMMARY TABLE

Muscle	Origin	Insertion	Nerve	Main Action
Supraspinatus	Supraspinous fossa	Greater tubercle (ant.)	Suprascapular C5,6	Abduction (0–15°)

Infraspinatus	Infraspinous fossa	Greater tubercle (post.)	Suprascapular C5,6	Lateral rotation
Teres Minor	Lateral border	Greater tubercle (inf.)	Axillary C5,6	Lateral rotation + adduction
Subscapularis	Subscapular fossa	Lesser tubercle	Upper & Lower subscapular C5–C7	Medial rotation
Teres Major	Inferior angle	Medial lip of intertubercular sulcus	Lower subscapular	Adduction + medial rotation + extension

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🟢 APPLIED ANATOMY / CLINICAL PEARLS

1. Deltoid injury / axillary nerve damage

   - Weak abduction (15–90°)

- Atrophy → "flattened shoulder"

2. Rotator cuff tears (esp. supraspinatus)
    - Weak initiation of abduction
    - Pain during overhead movement
3. Teres Major vs Minor
    - Teres Major → "Lat helper" → adduction + medial rotation
    - Teres Minor → rotator cuff → lateral rotation + stabilization
4. Subscapularis multipennate → strong medial rotation

💡 Tip for Exams

- Think SITS (Supraspinatus, Infraspinatus, Teres minor, Subscapularis) for rotator cuff

- Teres major is NOT part of rotator cuff ✅

✨ ANASTOMOSIS AROUND THE SCAPULA

🔹 What is Anastomosis? 🤔

Definition:

An anastomosis is a connection between two blood vessels, ducts, or tubular structures, either naturally or surgically, to restore flow or bypass an obstruction.

Purpose:

- Maintains blood supply, oxygen, and nutrients
- Provides alternative pathways if a main vessel is blocked

🔹 Types of Anastomosis

Type	Description	Clinical Example
Arterial	Connection between two arteries	Collateral circulation around joints
Venous	Connection between two veins	Superficial and deep veins of limb
Enteric	Connection between two intestinal segments	Post bowel resection
Microvascular	Surgical connection of small vessels	Reconstructive/plastic surgery
Lymphatic	Connection between lymphatic vessels	Treating lymphedema

🔹 Arterial Anastomosis Around Scapula 🩸

- Formed between 1st part of subclavian artery & 3rd part of axillary artery
- Axillary artery = continuation of subclavian artery
- Axillary artery parts (for reference):

Part	Location
1st part	Proximal to pectoralis minor
2nd part	Posterior to pectoralis minor
3rd part	Distal to pectoralis minor

🔹 Key Arteries Forming the Anastomosis

Artery	Source	Path / Contribution
Suprascapular artery	Thyrocervical trunk (subclavian)	Passes over scapula → anastomoses with circumflex scapular artery
Deep branch of transverse cervical artery	Subclavian artery	Supplies dorsal scapular region
Circumflex scapular artery	Subscapular artery (axillary)	Enters infraspinous fossa → anastomoses dorsally

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💡 Conceptual Flow:

Subclavian artery → thyrocervical trunk → suprascapular & transverse cervical arteries

Axillary artery → subscapular artery → circumflex

scapular artery

All converge → collateral network around scapula

✅ This ensures continuous blood supply if any major branch is blocked.

🔹 Anastomosis Around the Acromion Process

- Formed between 1st part of subclavian artery & 2nd and 3rd parts of axillary artery
- Branches involved:

Branch	Source
Acromial branch of thoracoacromial artery	2nd part of axillary artery
Acromial branch of suprascapular artery	Subclavian → thyrocervical trunk

Acromial branch of posterior circumflex humeral artery	3rd part of axillary artery

💡 Key Insight:

- Provides redundant circulation to acromion & deltoid region
- Important in fractures or surgical procedures around shoulder

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🔹 Clinical Correlation

1. Collateral circulation:
    - If subclavian or axillary artery is narrowed, scapular anastomoses maintain arm perfusion.
2. Surgical relevance:

- In shoulder surgery or flap procedures, knowing the anastomosis prevents ischemia.

3. Radiology & Imaging:

- Can be visualized in angiograms for vascular planning.

✅ Mnemonic for remembering scapular anastomosis:

"Screw The Lawyer, Save Patient"

- Suprascapular
- Transverse cervical (deep branch)
- Lateral thoracic / thoracoacromial
- Subscapular / circumflex scapular
- Posterior circumflex humeral

-> The End <-