

Exercise walk-through

3.2

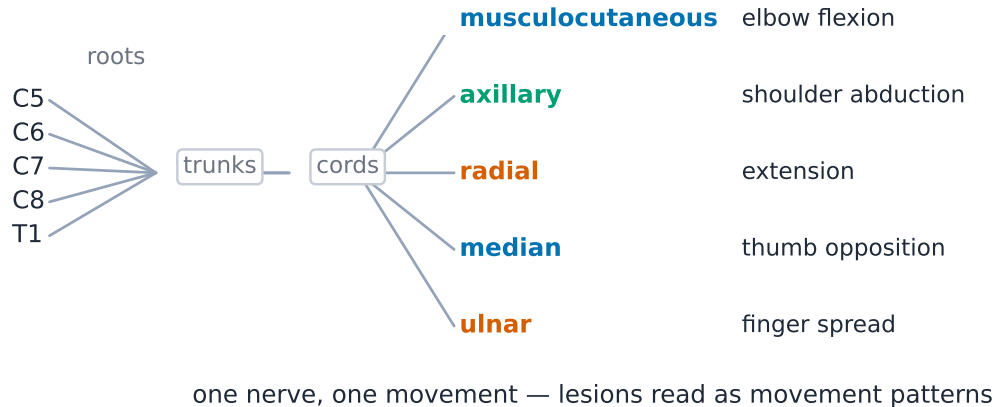
Upper limb

University Medicine

Upper limb - the brachial plexus

- 1 **Circuit** C5-T1 → trunks → cords → five terminal nerves: musculocutaneous, axillary, radial, median, ulnar.
- 2 **Tests** One nerve, one movement: radial extends, median opposes, ulnar spreads - wrist drop / ape hand / claw hand are one-line reads.
- 3 **Palpable** The ulnar nerve sits in the groove behind the medial epicondyle: tappable and entrappable.

C5-T1 condense to five nerves, one movement each.



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Exercises 2.1-2.3

2.1 Which nerve runs in the groove behind the medial epicondyle? [3]

2.2 Which nerve injury spares the shoulder but abolishes elbow extension? [3]

2.3 Name the roots of the brachial plexus. [3]

Exercises 2.1-2.3

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2.1

- Ulnar nerve.
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2.2 Which nerve injury spares the shoulder but abolishes elbow extension? [3]

2.2

- Radial nerve (elbow extension = triceps, radial; the site spares the branch pattern).
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2.3 Name the roots of the brachial plexus. [3]

2.3

- C5, C6, C7, C8, T1 ✓.

Exercise 3.1

3.1 A patient cannot extend wrist or fingers; shoulder abduction and thumb opposition are intact.

Name the nerve and the likely site (spiral groove). Explain why sensation over the dorsal first web space is affected. Predict the effect on elbow extension and explain why. [7]

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- Radial nerve in the spiral groove of the humerus.
- Dorsal first web space is radial autonomous territory.
- Elbow extension spared if the triceps branches leave before the groove (typical); involved if injured higher – the level is read from which muscles share the nerve's course.

Exercise 3.2

3.2 A patient has loss of thumb opposition and thenar wasting, with sensation lost over the radial three and a half digits.

Localise the lesion (median, carpal tunnel). Explain why the forearm pronators and flexors are SPARED in this site. State the classic night symptom and its mechanism. [7]

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- Median nerve at the carpal tunnel (thenar branch distal).
- Forearm pronators/flexors are supplied ABOVE the tunnel – the lesion is distal to their branches.
- Night paraesthesia: immobile wrists pool oedema; the classic relief is shaking the hand.