

Dermatomes of Upper Limb

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Introduction

- A **dermatome** is the area of skin supplied by the sensory fibers of a single spinal nerve root.
- There are **31 pairs of spinal nerves** (except C1, which is motor only), and each has a corresponding dermatome.
- Dermatomes provide important clinical information:
 - Help in **localizing nerve root lesions**.
 - Used in **neurological examination**.
 - Guide for **regional anesthesia**.

Key Dermatomes of Upper Limb

- **C3** ? Root of neck, supraclavicular fossa.
- **C4** ? Skin over acromion, shoulder region.
- **C5** ? Lateral aspect of arm (upper arm, regimental badge area).

- **C6** ? Lateral forearm, thumb.
 - **C7** ? Middle finger.
 - **C8** ? Little finger, medial side of hand & forearm.
 - **T1** ? Medial aspect of arm, near axilla.
 - **T2** ? Axilla and upper part of chest wall (supplied by intercostobrachial nerve).
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Clinical Anatomy

- **Radiculopathy (nerve root compression):**
 - Cervical disc prolapse can compress roots.
 - Example: C6 root compression ? numbness and tingling in **thumb**.
 - C7 compression ? symptoms in **middle finger**.
- **Herpes Zoster (Shingles):**
 - Reactivation of varicella zoster virus in **dorsal root ganglion**.
 - Produces painful vesicular rash restricted to one dermatome.
- **Root Lesion vs Peripheral Nerve Lesion:**
 - Root lesion ? **segmental sensory loss** (dermatome).
 - Peripheral nerve lesion ? **patchy sensory loss** (depending on nerve distribution).

- Example: Axillary nerve injury ? sensory loss only over regimental badge area, not entire C5 dermatome.

- **Neurological Testing:**

- **C5** ? sensation over lateral upper arm.
- **C6** ? sensation over thumb.
- **C7** ? sensation over middle finger.
- **C8** ? sensation over little finger.
- **T1** ? sensation over medial forearm.

- **Referred Pain:**

- Cardiac pain radiates to **inner arm (T1–T2)** via intercostobrachial nerve.

- **Regional Anesthesia:**

- Knowledge of dermatomes essential in **brachial plexus blocks** and spinal/epidural anesthesia.