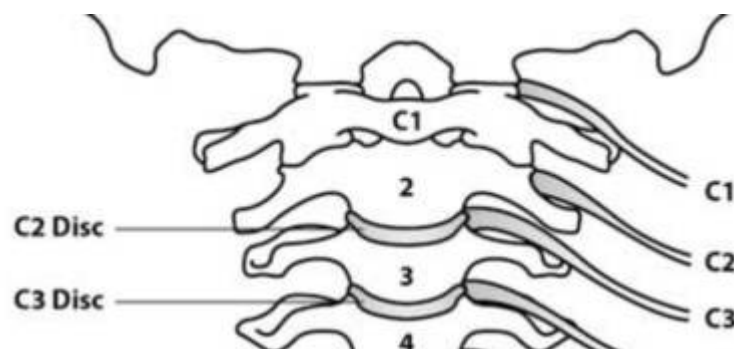


# Cervical nerve root



They are the [spinal nerves](#) from the [cervical vertebrae](#).

The [nerve root](#) exits above the [cervical pedicle](#) of its like-numbered [cervical vertebra](#).

Although there are seven cervical vertebrae (C1-C7), there are eight cervical nerves (C1-C8). All cervical nerves except C8 emerge above their corresponding vertebrae, while the C8 nerve emerges below the C7 vertebra. (In the other portions of the spine, the nerve emerges below the vertebra with the same name.).

Each root exits passes through its [neural foramen](#) in close relation to the undersurface of the [cervical pedicle](#).

Dorsal (posterior) distribution includes the suboccipital (C1), greater occipital (C2) and third occipital (C3).

Ventral (anterior) distribution includes the cervical plexus (C1-C4) and [brachial plexus](#) (C5-T1).

## Types

lower cervical roots...

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Ultrasound-guided selective C5 nerve root blocks have been described in several case reports as a safe and effective means to anesthetize the distal clavicle while maintaining innervation of the upper extremity and preserving diaphragmatic function. In this study, cadavers were injected with 5 mL of 0.5% methylene blue dye under ultrasound guidance to investigate possible proximal and distal spread of injectate along the brachial plexus, if any. Following the injections, the specimens were dissected and examined to determine the distribution of dye and the structures affected. One injection revealed dye extended proximally into the epidural space, which penetrated the dura mater and was present on the spinal cord and brainstem. Dye was noted distally to the divisions in 3 injections. The anterior scalene muscle and phrenic nerve were stained in all 4 injections. It appears unlikely that local anesthetic spread is limited to the nerve root following an ultrasound-guided selective C5 nerve root injection. Under certain conditions, intrathecal spread also appears possible, which has major patient safety implications. Additional safety measures, such as injection pressure monitoring, should be incorporated into this block, or approaches that are more distal should be considered for the acute pain management of distal clavicle fractures <sup>1)</sup>.

1)

Falyar CR, Abercrombie C, Becker R, Biddle C. Intrathecal Spread of Injectate Following an Ultrasound-Guided Selective C5 Nerve Root Injection in a Human Cadaver Model. AANA J. 2016 Apr;84(2):80-4. PubMed PMID: 27311148.

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