

# Positions in neurosurgery

[Lateral Decubitus Position](#)

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[Park bench position \(Lateral oblique position\)](#)

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[Prone Position](#)

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[Semilateral Position](#)

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[Sitting Position](#)

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[Supine position](#)

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[Trendelenburg position.](#)

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Pepper et al. investigated the effects on the [cervical spine](#) of positioning patients for [maxillofacial](#) procedures by simulating intraoperative positions for common maxillofacial procedures.

Magnetic resonance imaging was used to assess the effects of [head position](#) in common intraoperative configurations - neutral (anterior mandible position), extended (tracheostomy position), and laterally rotated (mandibular condyle position) on the C-spine of a healthy volunteer.

Results: In the [tracheostomy](#) position, maximal movement occurred in the sagittal plane between the cervico-occipital junction and C4-C5, as well as at the [cervicothoracic junction](#). Minimal movement occurred at C2 (on C3), C5 (on C6), and C6 (on C7). In the mandibular condyle position, C-spine movements occurred in both rotational and sagittal planes. Maximal movement occurred above the level of C4, concentrated at atlanto-occipital and atlanto-axial (C1-2) joints.

[Neck extension](#) is likely to be relatively safe in injuries that are stable in [flexion](#) and [extension](#), such as [odontoid fracture type II](#) and [cervical spine fractures](#) between C5 and C7. Head [rotation](#) is likely to be relatively safe in fractures below [C4](#), as well as [cervical vertebral body](#) fractures, and [laminar](#) fractures without [disc](#) disruption. Early dialogue with the neurosurgical team remains a central tenet of the safe management of patients with combined maxillofacial and [cervical spine injury](#) <sup>1)</sup>

1)

Pepper T, Spiers H, Weller A, Schilling C. Intraoperative [Positioning](#) in [Maxillofacial](#) Trauma Patients With [Cervical Spine Injury](#) - Is It Safe? Radiological [Simulation](#) in a Healthy Volunteer. *Craniofacial Trauma Reconstr.* 2022 Dec;15(4):312-317. doi: 10.1177/19433875211053091. Epub 2022 Jan 3. PMID: 36387322; PMCID: PMC9647385.

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