

Cervical disc herniation surgery options

[Anterior cervical discectomy and fusion](#), [artificial cervical disc prosthesis](#) and minimal invasive posterior cervical disc surgery.

Despite initially more neck pain after posterior surgery, patients swiftly improved and, as of postoperative week 5, results similar to those after anterior surgery were observed. The findings should enable improved patient [counseling](#) and enhanced shared decision-making between physicians and patients with cervical radiculopathy, where more neck pain in the first postoperative weeks should be balanced against the benefits of posterior surgery ¹⁾.

Anterior

Surgical decompression for [cervical radiculopathy](#) includes:

- 1.- [Anterior cervical discectomy](#) without any [prosthesis](#) or [fusion](#): rarely used today.
- 2.- [Anterior cervical discectomy and fusion](#) with [interbody fusion](#): the most common approach.
 - a.- without [anterior cervical plate](#).
 - b.- with [anterior cervical plate](#) or with zero profile.
- 3.- with [artificial disc](#): see [Anterior cervical discectomy and arthroplasty](#)
- 4.- Percutaneous
 - a.- Anterior percutaneous cervical disc chemonucleolysis.

Tissue trauma is significantly reduced with laser and endoscopic surgery techniques. [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) are both suitable for the specific indication of soft, symptomatic contained [cervical disc herniations](#). A prospective cohort study indicates that [Anterior cervical laser discectomy](#) and [Anterior percutaneous endoscopic cervical discectomy](#) are options for cervical decompression surgery when medical comorbidities or preferences by patients and surgeons dictate more minimally invasive strategies ²⁾.

Posterior

- 1.- [Cervical laminectomy](#) not typically used for [cervical disc herniation](#), more common for [cervical spinal stenosis](#), [OPLL](#).
 - a.- without posterior [fusion](#).
 - b.- with [lateral mass](#) fusion.

2-. Keyhole laminotomy (Posterior cervical foraminotomy).

Posterior percutaneous endoscopic cervical discectomy: Percutaneous Full-Endoscopic Resection in Cervical Intervertebral Disc Herniation with a Posterior Approach

The preoperative and the postoperative characteristics (0-, 3-, 12- and 24-month results) of patients who had undergone [anterior cervical discectomy and fusion](#) (24 patients, 40%), [cervical discectomy](#) and [prosthesis](#) (21 patients, 35%) or minimal invasive posterior [cervical discectomy](#) (15 patients, 25%), for single-level disc hernia of the C3 to C7 region at the İstanbul Yeni Yüzyıl University Gaziosmanpaşa Hospital between February 2015 and December 2017 were evaluated postoperatively using visual pain scales, neck disability index (NDI) values, and Odom's criteria.

Postoperative visual analog scale and [NDI](#) scores were significantly decreased immediately after surgery in all groups ($p < .001$). Similarly, these two values at the second year were significantly decreased compared to post-op values ($p < .001$). When pre-op, post-op, third month, first year and second-year scores were compared between the groups, a significant difference was found between the groups ($p < .001$). It was observed that the minimally invasive posterior cervical discectomy surgery was significantly better than the other two surgeries in all follow-up assessments ($p < .001$ for all follow-up).

The early postoperative values of the visual pain scale and neck disability indicator were found to demonstrate immediate benefits of the surgeries, in addition to the further decrease at the 2-year follow-up in this study ³⁾.

References

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