

# Lumbar facetectomy

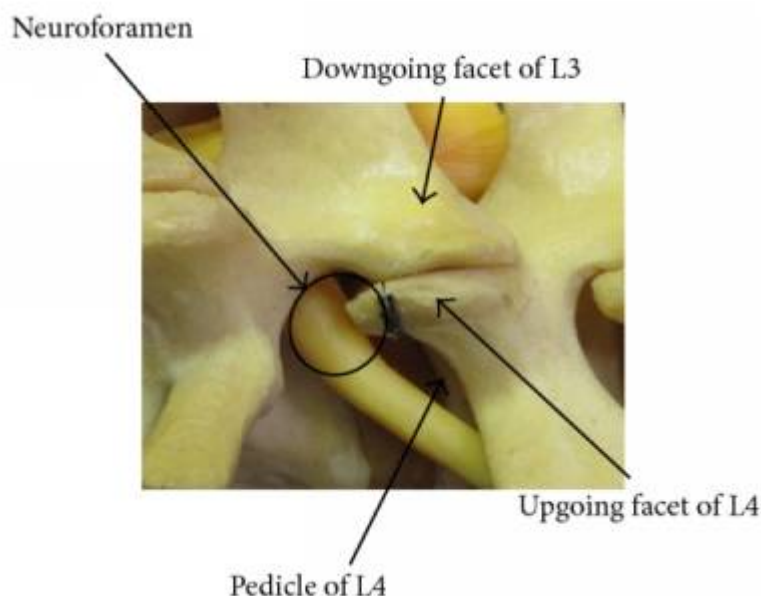
- [Robot-assisted versus navigated spinal fusion surgery: a comparative multicenter study on transpedicular screw placement accuracy and patient outcomes](#)
  - [Shear Resistance of a Posterior Lumbar Total Joint Replacement Prosthesis](#)
  - [Biportal endoscopic bilateral decompression in lumbar spinal stenosis: a 3-year retrospective cohort study](#)
  - [Spinous Process Osteotomy for High Lumbar Disc Disease - An Alternative for Transforaminal Lumbar Interbody Fusion in Young- A Case Report](#)
  - [Transforaminal Percutaneous Endoscopic Discectomy for L3/4 and L4/5 Foraminal and Extraforaminal Lumbar Disc Herniation: Clinical Outcomes and Technical Note](#)
  - [Minimally Invasive Robotic-Guided Facetectomy and Laminectomy for Transforaminal Lumbar Interbody Fusions: Feasibility, Workflow, and Early Results](#)
  - [A quantitative review of finite element-based biomechanics of lumbar decompression surgery](#)
  - [Uniportal Versus Biportal Endoscopic Decompression for the Treatment of Lumbar Spinal Stenosis: A Systematic Review and Updated Meta-Analysis](#)
- 
- 

[Facetectomy](#) plus [lumbar undercutting laminectomy](#) decreases segmental shear stiffness and increases anterior translational L4-L5 displacement. The shear stiffness of the instrumented segment is higher with the device and anterior displacements under shear loading are similar to the intact spine. This condition could theoretically be interesting for the simulation of non-fusion instrumentation in degenerative spondylolisthesis <sup>1)</sup>

---

Conventional surgical [approaches](#) for [lumbar foraminal stenosis](#) or far lateral stenosis can be categorized as total facetectomy with/ without fusion and facet-preserving micro[foraminotomy](#). Total facetectomy offers sufficient decompression through the [nerve root](#) course. However, this often leads to segmental [lumbar spine instability](#) and [back pain](#) <sup>2) 3) 4) 5)</sup>.

## Partial facetectomy



see [Medial facetectomy](#).

see [Complete facetectomy](#).

A facet-preserving microdecompression technique using a paraspinal approach was reported by Reulen et al in 1987 <sup>6)</sup>, and Wiltse and Spencer in 1988 <sup>7)</sup>.

Findings demonstrate that bilateral facetectomy (BF) during single-level [TLIF](#) improves clinical outcomes to a greater degree than unilateral facetectomy (UF) without any notable differences in perioperative complications or radiographic measurements <sup>8)</sup>.

## Case series

### 1981

Seventy-eight patients who had been operated on for bony entrapment of lumbar nerve roots were studied in an attempt to define the clinical syndrome, and to assess the results of a new technique of decompression which preserves spinal stability. The mean age of the patients was 45 years and 28 of them had previously undergone spinal operations. Pain in the leg was the predominant symptom, with evidence of motor involvement in half of the patients. Signs of nerve root tension were found in only one-third of the patients. The principal factor in the aetiology was degenerative change in the posterior facet joints. Decompression was achieved by a partial undercutting facetectomy. Fifty-nine per cent of the patients obtained a "good" result and 85 per cent were satisfied with the result of their operation. Successful partial facetectomy for bony entrapment of lumbar nerve roots produced rapid and lasting relief of pain <sup>9)</sup>.

1)

Charles YP, Persohn S, Rouch P, Steib JP, Sauleau EA, Skalli W. The effect of posterior non-fusion instrumentation on segmental shear loading of the lumbar spine. *Orthop Traumatol Surg Res*. 2014 Sep;100(5):461-7. doi: 10.1016/j.otsr.2014.05.005. Epub 2014 Aug 5. PMID: 25106101.

2) 6)

Reulen HJ, Pfaundler S, Ebeling U. The lateral microsurgical approach to the “extracanalicular” lumbar disc herniation. I: a technical note. *Acta Neurochir (Wien)*. 1987;84(1-2):64-67.

3)

Garrido E, Connaughton PN. Unilateral facetectomy approach for lateral lumbar disc herniation. *J Neurosurg*. 1991;74(5):754-756.

4)

Jenis LG, An HS. Spineupdate. Lumbar foraminal stenosis. *Spine (Phila Pa 1976)*. 2000;25(3):389-394.

5)

Epstein NE. Foraminal and far lateral lumbar disc herniations: surgical alternatives and outcome measures. *Spinal Cord*. 2002;40(10):491-500.

7)

Wiltse LL, Spencer CW. New uses and refinements of the paraspinal approach to the lumbar spine. *Spine (Phila Pa 1976)*. 1988;13(6):696-706.

8)

Tye EY, Alentado VJ, Mroz TE, Orr RD, Steinmetz MP. Comparison of Clinical and Radiographic Outcomes in Patients Receiving Single-Level Transforaminal Lumbar Interbody Fusion With Removal of Unilateral or Bilateral Facet Joints. *Spine (Phila Pa 1976)*. 2016 Sep;41(17):E1039-45. doi: 10.1097/BRS.0000000000001535. PubMed PMID: 26926356.

9)

Getty CJ, Johnson JR, Kirwan EO, Sullivan MF. Partial undercutting facetectomy for bony entrapment of the lumbar nerve root. *J Bone Joint Surg Br*. 1981;63-B(3):330-5. PubMed PMID: 7263743.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

[https://neurosurgerywiki.com/wiki/doku.php?id=lumbar\\_facetectomy](https://neurosurgerywiki.com/wiki/doku.php?id=lumbar_facetectomy)

Last update: **2024/06/07 02:54**

