

# Lumbar discectomy

Lumbar [discectomy](#) is one of the most common [spinal surgery](#) worldwide.

The traditional midline bone-destructive procedures together with approaches requiring extreme muscular retraction in [open lumbar discectomy](#) are being replaced by muscle sparing, targeted, stability-preserving surgical routes. The increasing speculation on LDHs and the innovative corridors described to treat them have led to an extensive production of papers frequently treating the same topic but adopting different terminologies and reporting contradictory results.

Through the analysis of papers by Lofrese et al. it was possible to identify ideal surgical corridors for ILDHs, ELDHs, and IELDHs, distinguishing for each approach the exposure provided and the technical advantages/disadvantages in terms of muscle trauma, biomechanical stability, and nerve root preservation. A significant disproportion was noted between studies discussing traditional midline approaches or variants of the posterolateral route and those investigating pros and cons of simple or combined alternative corridors. Although rarely discussed, these latter represent valuable strategies particularly for the challenging IELDHs, thanks to the optimal compromise between herniation exposure and bone-muscle preservation.

The integration of adequate mastery of traditional approaches together with a greater confidence through unfamiliar surgical corridors can improve the development of combined mini-invasive procedures, which seem promising for future targeted LDH excisions. <sup>1)</sup>

## Classification

see [Lumbar discectomy classification](#).

## Indications

Lumbar [discectomy](#) is an effective therapy for neurological decompression in patients suffering from [lumbar disc herniation](#), which can be safely performed via minimal invasive procedures <sup>2) 3)</sup>.

## History

In [1908](#) the first successful lumbar [discectomy](#) was initiated and performed by the German neurologist [Heinrich Oppenheim](#) (1858-1919) and the surgeon [Fedor Krause](#) (1857-1937); however, neither recognized the true pathological condition of discogenic [nerve compression syndrome](#). With the landmark report in [The New England Journal of Medicine](#) in [1934](#), the two American surgeons [William Jason Mixter](#) (1880-1958) and [Joseph Seaton Barr](#) (1901-1963) finally clarified the pathomechanism of [lumbar disc herniation](#) and furthermore, propagated [discectomy](#) as the standard therapy. Since then interventions on [intervertebral discs](#) rapidly increased and the treatment options for lumbar disc surgery quickly evolved. The surgical procedures changed over time and were continuously being refined.

## Outcome

see [Lumbar discectomy outcome](#).

## Complications

[Lumbar discectomy complications.](#)

## Rehabilitation

see [Rehabilitation after lumbar disc surgery.](#)

## Case series

[Lumbar discectomy case series.](#)

<sup>1)</sup>

Lofrese G, Mongardi L, Cultrera F, Trapella G, De Bonis P. Surgical treatment of intraforaminal/extraforaminal lumbar disc herniations: Many approaches for few surgical routes. Acta Neurochir (Wien). 2017 Jul;159(7):1273-1281. doi: 10.1007/s00701-017-3198-9. Epub 2017 May 22. Review. PubMed PMID: 28534073.

<sup>2)</sup>

Hansson E, Hansson T. The cost-utility of lumbar disc herniation surgery. Eur Spine J. 2007;16(3):329-337.

<sup>3)</sup>

Yeung AT, Yeung CA. Minimally invasive techniques for the management of lumbar disc herniation. Orthop Clin North Am. 2007;38(3):363-372.

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