

# Lumbar disc herniation epidemiology

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Only 1–3% of patients with [low back pain](#) have a [lumbar disc herniation](#).

[Disc herniation](#) with [radiculopathy](#) is one of the most common [degenerative disc disease](#)-linked clinical diagnoses that effects the [lumbar spine](#) <sup>1)</sup>.

Cummins et al.<sup>10</sup> reported that the average age of patients with a herniated disc was 41 years, and the diagnosis was slightly more common in males than females (57% versus 43%, respectively) <sup>2)</sup>.

In contrary to previous reports that the incidence of LDH increases with aging, a study of Ma et al. found that the incidence of LDH has a downward trend with aging in the elderly, especially after 80 years old <sup>3)</sup>.

Less than 5% of chronic [low back pain](#) cLBP patients suffer from lumbar disc herniation (LDH). Nevertheless, more than 30% of annual costs for the medical care of cLBP are spent on conservative as well as invasive treatment strategies in this specific patient population <sup>4)</sup>.

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Yearly incidence of surgery for symptomatic lumbar disc herniation varies and is 29/100,000 in Sweden, 46/100,000 in Denmark and 58/100,000 in Norway. This variation was used to study whether differences in surgical incidence were associated with differences in preoperative patient characteristics as well as patient-reported outcomes.

They found no clear association between incidence of surgery for lumbar disc herniation and preoperative patient characteristics as well as outcome, and the differences between the countries were lower than the minimal clinical important difference in all outcomes <sup>5)</sup>.

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Lumbar disc herniation (LDH), at L4–L5 or L5–S1 (95%), makes up the vast majority of spinal disc herniation cases <sup>6) 7)</sup>.

<sup>1)</sup>

M.C. Battie, A. Lazary, J. Fairbank, S. Eisenstein, C. Heywood, M. Brayda-Bruno, P.P. Varga, I. McCall, Disc degeneration-related clinical phenotypes, European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society 23 Suppl 3 (2014) S305-14.

2)

Cummins J, Lurie JD, Tosteson TD, et al. Descriptive epidemiology and prior healthcare utilization of patients in the Spine Patient Outcomes Research Trial's (SPORT) three observational cohorts: disc herniation, spinal stenosis, and degenerative spondylolisthesis. Spine. 2006;31(7):806-814.

3)

Ma D, Liang Y, Wang D, Liu Z, Zhang W, Ma T, Zhang L, Lu X, Cai Z. Trend of the incidence of lumbar disc herniation: decreasing with aging in the elderly. Clin Interv Aging. 2013;8:1047-50. doi: 10.2147/CIA.S49698. Epub 2013 Aug 7. PubMed PMID: 23966775; PubMed Central PMCID: PMC3743527.

4)

Shvartzman L, Weingarten E, Sherry H, Levin S, Persaud A (1992) Cost-effectiveness analysis of extended conservative therapy versus surgical intervention in the management of herniated lumbar intervertebral disc. Spine (Phila Pa 1976) 17: 176-182.

5)

Lagerbäck T, Fritzell P, Hägg O, Nordvall D, Lønne G, Solberg TK, Andersen MØ, Eiskjær S, Gehrchen M, Jacobs WC, van Hooff ML, Gerdhem P. Effectiveness of surgery for sciatica with disc herniation is not substantially affected by differences in surgical incidences among three countries: results from the Danish, Swedish and Norwegian spine registries. Eur Spine J. 2018 Sep 29. doi: 10.1007/s00586-018-5768-9. [Epub ahead of print] PubMed PMID: 30269234.

6)

Postacchini F, Postacchini R. Operative management of lumbar disc herniation: the evolution of knowledge and surgical techniques in the last century. Acta Neurochir Suppl. 2011;108:17-21.

7)

Pouriesa M, Fouladi RF, Mesbahi S. Disproportion of end plates and the lumbar intervertebral disc herniation. Spine J. 2013;13(4):402-407.

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