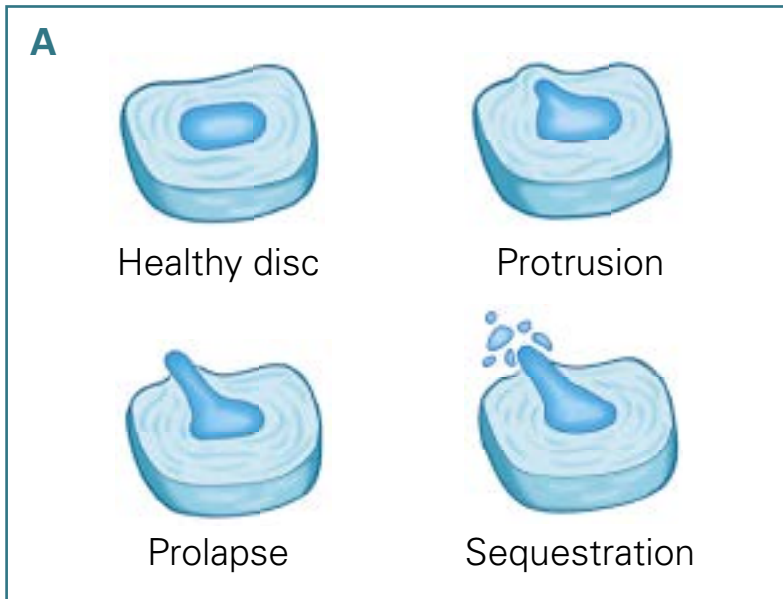
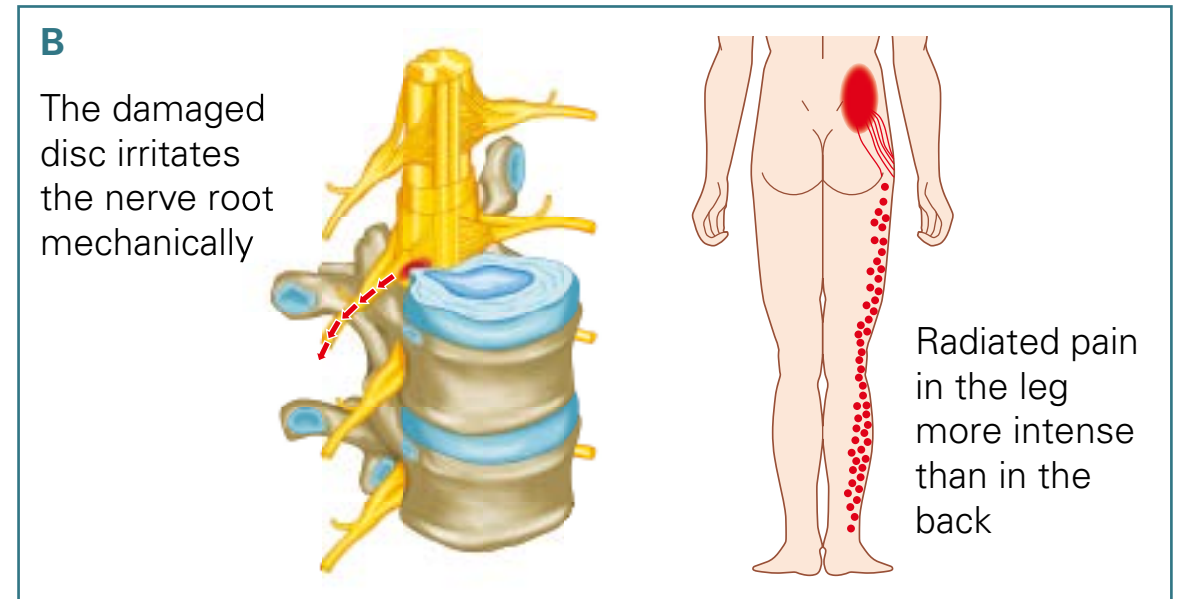


# Radicular syndrome following intervertebral disc prolapse

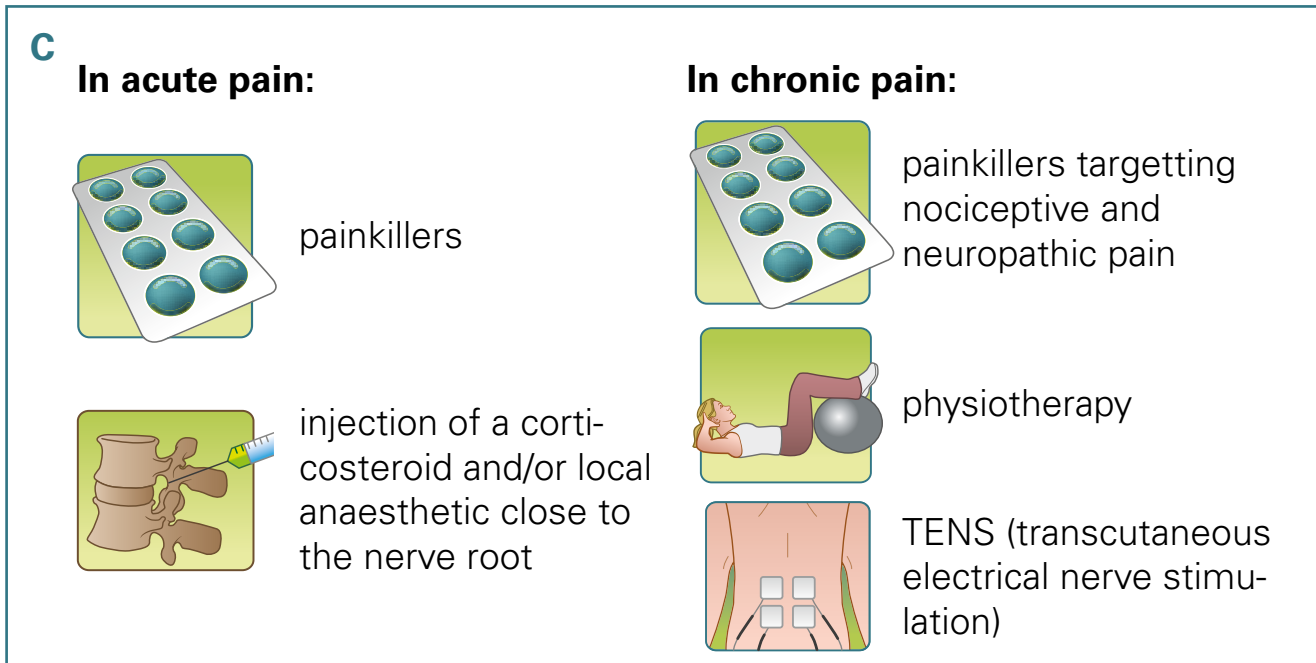
## Development of a disc prolapse [1]



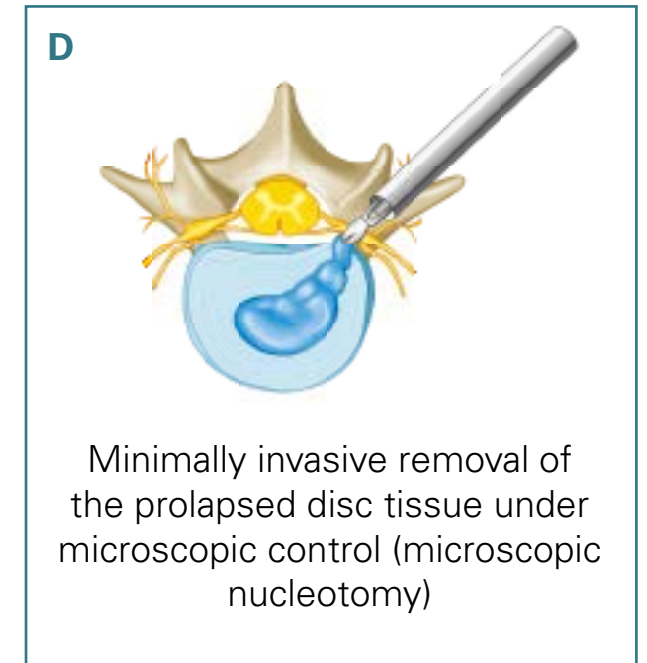
## Root irritation [2] (1, 2)



## Conservative treatment [2, 3]



## Surgical procedures [4]



(1) modified from Grönemeyer. Mein Rückenbuch. (2008). Goldmann Verlag

(2) modified from: Zenz M et al. Taschenbuch der Schmerztherapie. 3rd edition. WVG Stuttgart. 117

# Radicular syndrome following intervertebral disc prolapse

## A Development of an intervertebral disc prolapse [1]

The bulging of the disc is referred to as **protrusion**. It can develop after fatigue of the outer fibrous ring (annulus fibrosus).

**Prolapse** describes the tearing of the fibre ring whereby gelatinous material is forced into the intervertebral foramina and the spinal canal.

**Sequestration** is the separation of disc material.

## B Root irritation [2]

Intervertebral disc prolapse occurs most commonly in the area of the lumbar spine. The causes include overloading, lack of nutrient supply to the disc due to lack of movement, and genetic predisposition (susceptibility).

The damaged disc compresses the nerve root, which can be irritated or injured and is very painful. In addition to the local back pain, nerve irritation may lead to the pain radiating into the leg supplied by the nerves. The pain is experienced as being more intense in the leg than in the back.

The pain is perceived as stabbing, tugging and often like an "electric shock." In addition, sensory disorders (tingling or a sensation of crawling insects) often occur along the nerve pathway.

## C Conservative treatment [2, 3]

In acute pain: initially non-opioids and injections of corticosteroids and local anaesthetics close to the root (periradicularly).

In chronic pain: painkillers targeting nociceptive and neuropathic pain, physiotherapy and TENS.

## D Surgical procedures [4]

The most important surgical procedure is the minimally invasive removal of the disc prolapse under microscopic control (microscopic nucleotomy).

[1] Urban JPG, Roberts S. Arthritis Res Ther (2003) 5:120- 130.

[2] Stafford MA et al. Br J Anaesth (2007) 99(4): 461- 473.

[3] National Institute for Health and Clinical Excellence (NICE). Nice Guidelines on Treatment of Sciatica (Lumbar Radiculopathy. Available at: <http://cks.nice.org.uk/sciatica-lumbar-radiculopathy#!scenariorecommendation:2> Accessed May 2013.

[4] Jacobs WCH et al. Eur Spine J (2012) 21(11): 2232–2251.