

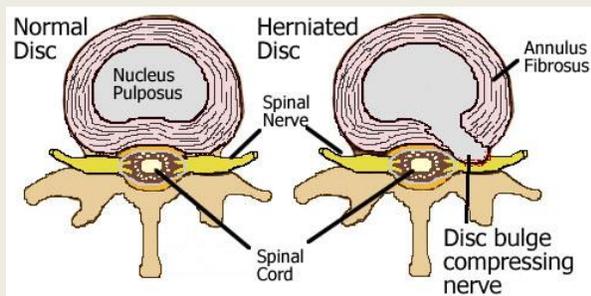
Medicine for Managers

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Slipped Disc

Slipped discs don't slip! More correctly they should be described as *prolapsed discs* or *disc herniations*. Simply the disc has a tough outer layer (annulus fibrosus) within which is a softer gelatinous material (nucleus pulposus). When a disc prolapses part of the outer covering ruptures and the gel leaks out. The consequences depend on the size and the location of the leak.

The prolapse of the damaged disc may press on a nerve root and the symptoms of pain, numbness and tingling that ensue are the result of damage and compression to the nerve fibres running within that nerve.



To go back to basic principles, the spine is composed of 24 bones called vertebrae and between each vertebra is a disc. The disc is rubbery and allows some movement between each vertebra, holds them together and has some shock-absorbing properties.

The protrusion of the disc may apply pressure to the spinal cord itself or to a nerve exiting from between adjacent vertebrae (see diagram).

The consequent symptoms will depend to what extent and where the pressure is applied, which

means that, if applied to the spinal cord, it may affect an area of the body below that of the protrusion and, if applied to a single nerve, will cause symptoms in the structures supplied by that nerve.

The scan shows a disc protrusion (black) impinging on the spinal cord



In any acute prolapse the symptoms are aggravated by the development of inflammation around the prolapse.

Any disc in the spine can prolapse but most prolapsed discs occur in the lumbar spine and the sciatic nerve is frequently affected.

Anyone can suffer a prolapsed disc. Back pain is a very common symptom but, in fact, less than 1 in 20 cases of acute back pain are due to disc prolapse. Prolapse most commonly occurs

between the ages of 25 and 50 and men are twice as commonly affected as women. Aggravating factors include jobs involving lifting, sports activities involving weight-bearing such as weight-lifting, obesity and increasing age. The risk of disc injury can be reduced therefore by maintaining an ideal weight, regular exercise such as swimming, maintaining a good posture when sitting or standing and avoiding awkward lifts.

The classical symptoms of prolapse are the sudden onset of often severe back pain aggravated by standing and eased by lying down. It is usually made worse by moving, coughing and sneezing.

The commonest nerve affected by a prolapsed disc is the sciatic nerve. It is the longest nerve in the body extending from the lower lumbar spine through the buttocks, down the leg and ending in the great toe. Therefore a prolapse affecting the nerve may cause aching pain down the leg which may extend to the foot, weakness, numbness and paraesthesia.

The character of the symptoms will depend on which part of the nerve is affected and so some sufferers will experience pain whilst others may experience numbness.

If the disc presses on the lowest part of the spinal cord, symptoms may be more generalised and the inability to pass urine, disturbed bowel function, numbness around the back passage and weakness of the legs may be a serious presenting features which require urgent medical attention. The condition is called *cauda equina syndrome*.

In most cases the symptoms of a slipped disc tend to improve over 4-6 weeks and in a high proportion of patients, the inflammation associated with the prolapse subsides, the disc shrinks away from the nerve and the pain settles.

Early treatment is usually a combination of initial rest followed by graduated exercise as soon as the pain allows it and analgesia (notably anti-inflammatory medication such as ibuprofen) together with physiotherapy and massage.

If the symptoms have not improved after twelve weeks it may be necessary to refer the patient for further investigation.

MRI scan is valuable in diagnosing prolapse and indicating whether a disc has impinged on a nerve or the spinal cord and how much damage has been caused.

In some cases it is necessary to submit to surgery to release the compressed nerve and remove part of the disc.

However, success is not guaranteed, especially if the prolapse has been present for some time, although for most sufferers surgery certainly relieves at least some of the symptoms.

Back pain is a most unpleasant symptom (and I speak from personal experience), so be good to your back, exercise regularly, lift carefully and stand or sit straight!

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