



## Low Back Pain & Your Disc

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Low back pain affects most of us at some point in our adult lives. Fortunately most episodes are relatively brief and are not incapacitating, but for some, back pain can limit sports, hobbies, work and occasionally everyday activities.

There are many causes of low back pain and many names associated with pain in this region, such as fibrositis, lumbago, slipped disc, degenerative disc disease and when pain extends down the leg, sciatica.

Most lifting, twisting and sport related back injuries are strains to the muscles, ligaments and small joints of the low back. Injuries to the discs between the vertebrae of your back are relatively uncommon.

The discs in the low back are strongly attached to the vertebrae above and below and cannot "slip". The center of the disc (nucleus) is soft and allows the disc to alter its shape which allows the spine to move.

Sometimes the nucleus bulges through cracks in the outer disc (annulus) and applies pressure to the surrounding tissues. Bulging of the disc can cause pain in the back, buttock and into the leg. Sometimes the disc bulge causes pressure on nerves which may cause pain, numbness, tingling sensations or weakness in the leg. This is a "pinched" nerve. Occasionally the annulus of the disc ruptures and the nucleus is no longer contained. This almost always results in more significant leg symptoms and may sometimes require surgery.

The nucleus when it is contained by the outer annulus acts like a balloon, in that its shape can change as pressure is applied but its volume remains unchanged. Distortion of the nucleus through a crack in the annulus results in limitation of certain motions and can force the body into an off center position (usually forwards or to one side). If you experience a sudden onset of low back pain and /or leg pain, and are unable to straighten up properly, you may have a bulging disc. Usually the pain starts in the low back and will progress in a matter of days or hours to the buttock and/or leg.

Activities which involve prolonged sitting for example, long car or plane journeys, repetitive or sustained bending, or twisting while lifting may result in disc distortion.

Typically injuries to the disc occur in the younger age groups (20-50 years) as with aging the nucleus becomes drier, and is less likely to bulge when sustained forces are applied to the back.

Treatment may consist of:

- Rest; bed rest is usually only recommended in severe cases and should be limited to a few days. Modification of activity is usually enough.

- Exercises; exercises are very useful in the treatment of most types of mechanical back pain. Certain exercises are believed to influence disc bulging by applying forces in a direction that eases the pressure off the sensitive structures around the disc. The exercises are simple to perform and should be started as soon as possible after the onset of back pain. However the type of exercises used to treat a bulging disc will be very different from exercises for a muscle injury. A thorough assessment is therefore required to try to establish the cause of your back pain and to devise an appropriate rehabilitation program. Exercises are also extremely important to maintain a healthy back after injury and prevent reoccurrence.
- Ergonomics /posture correction; the onset of back pain may relate to poor sitting or standing postures, from prolonged bending or from poor lifting techniques. A physiotherapist can evaluate your posture, teach you how to lift correctly and provide ergonomic advice on your workstation.