

LUMBAR SPINE DISC INJURIES

FIRST AID AND PREVENTION

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Tim Keeley B.Phty, Cred.MDT, APA

Principal Physiotherapist

Tim has over 12 years experience in Physiotherapy and the Fitness Industries. He is also a rehabilitation expert, clinical educator and convention presenter.

He is the Director of Physio Fitness Australia operating 4 clinics across Sydney.

For more information go to www.physiofitness.com.au or call 1300 233 300.

HAVE YOU had a lumbar spine disc bulge, herniation or prolapse? Have you had sciatica? Do you get lower back pain from sitting or bending forward, do you sit a lot or bend forward a lot in your job? As someone in your family had disc problems? Then read on as I have some very important information to share with you to help reduce your back pain and lessen the change of disc injuries in the future. Most people in their life develop some sort of back pain. With disc injuries, many can go unnoticed for years before they can cause pain (one study shows 35% of cases are asymptomatic). The problem is that there are many factors that cause disc injuries, and you need to try to address every one that you can. To understand what happens, let's start with some simple anatomy and posture.

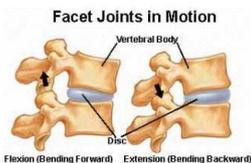
ANATOMY AND POSTURE



The lumbar disc is made up of a tough ligamentous circular wall called the annulus fibrosus. Inside this is a nucleus, a thick jelly-like substance which has hydrostatic properties. It's like a giant jelly donut surrounded by a car tyre.

The discs have unique shock absorption properties which help the spine handle impact and allow bending, extension and twisting—normal human movement. The spine is designed to have specific lordotic and kyphotic curves to assist this shock absorption. Unfortunately, the discs are degenerative in nature, so over time they slowly age and injury can occur if there is too many repetitive forces in the wrong directions, along with a number of other factors.

HOW DOES IT HAPPEN?



When you bend forward, or sit without a good spinal posture, the lower back moves from lordosis ('neutral') into flexion. Over time if the sitting is sustained and the flexion is repeated, the pressure increases in the back of the disc, and the nucleus can migrate more towards the back wall.

This stresses the back of the disc wall and over time it stretches and weakens. It then bulges out towards the spinal cord and nerve roots, causing pain. It can happen slowly giving you pain in sitting, or suddenly after one bending movement causing sharp severe pain that can also go down the leg.

CAUSES AND PREDISPOSING FACTORS

There are a lot of factors that can lead to sustaining a disc injury, the highest cause is simply having a **family member** who has had it—you are more likely too as well. Other major causes are **repetitive bending and lifting** (150%-220% pressure compared to standing), **sustained sitting** (140%),

sedentary lifestyle, poor spine posture in heavy lifting, driving, physical inactivity and a weak core, previous full term pregnancy, and even having a tall stature (statistically, taller people suffer more disc problems).

DIAGNOSIS



A trained Physiotherapist can effectively diagnose a disc bulge simply from taking the history of onset and assessing the loss of movement, pain and symptoms. Usually if the symptoms are severe the Physio will refer you to a doctor for referral for further investigation scans, namely a CT or MRI scan (see picture).

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Rest is very important, making sure that you cease activities like bending forward and sitting until the symptoms subside (which maybe for weeks). Seeing the Physiotherapist for guidance through the first few weeks of a disc bulge or pain is crucial, as you will need to do a lot of small movements, stretches and exercises to get better. **Lying on your back with your knees bent** (crook lying) or calves up on a chair is the best resting position when you are in acute pain. This position drops the disc pressures to 25% of standing and reduces the back muscle spasm.

The McKenzie Extension is the number one and most effective stretch that you can do to reduce the disc bulge and get you back moving again. It is also the best preventive exercise you can do long term, for the rest of your life.



It will become a routine after a while like brushing your teeth as it is so effective. **To do this exercise:** push up backwards with your arms, relaxing your buttocks and back, keeping your pelvis on the ground, push back to the tightness, but not into pain. Breath out, pause for 1-2 sec and slowly return. You should be aiming to repeat 1-2 sets of 10 reps, every 2 hours when in pain, (then ingoing 3 sets of 10, once per day as prevention).

You will then need to see the Physio for **core stability re-training and rehabilitation** for a number of weeks, including learning **how to lift properly** and safely and effectively strengthen the back, core and legs to improve your overall physical ability and spinal strength. They will also teach you what not to do and great postural habits to adopt, including using a **foam lumbar roll** whenever you sit at a desk or in the car. Following that, long term core strengthening like **Pilates** (one-on-one, as well as classes) is a great idea to keep you motivated and continue the work. Remember, most cases resolve over time and you can get back to normal life, as long as you are guided through the injury and adopt the preventative exercises into your life.