

5 WAYS TO BEAT  
**BACK  
PAIN**

BY **GRAHAM NELSON**

**RUSSELL VISSER**

## ABOUT NORTHWEST PHYSIOTHERAPY GROUP

Northwest Physiotherapy Group was first established as Essendon and Moonee Ponds Physiotherapy Clinic in 1990. We have over 50 years combined experience in muscle and joint conditions, and a fully equipped, purpose built facility with state of the art pilates studio and rehab gym.

We can have you feeling fitter, stronger, more energetic and pain-free in the shortest possible time.

*“Get fast, effective, long term results with new approach to Physiotherapy based on current pain research. We provide expert hands-on assessment and treatment of the whole body and teach you how to manage the cause of your problem”*

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### **5 WAYS TO BEAT BACK PAIN**

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## 5 WAYS TO BEAT BACK PAIN

Research shows that low back pain (LBP) affects 90% of the population at some time in their lives, and that 80% of these people will suffer a repeat episode at a later time.

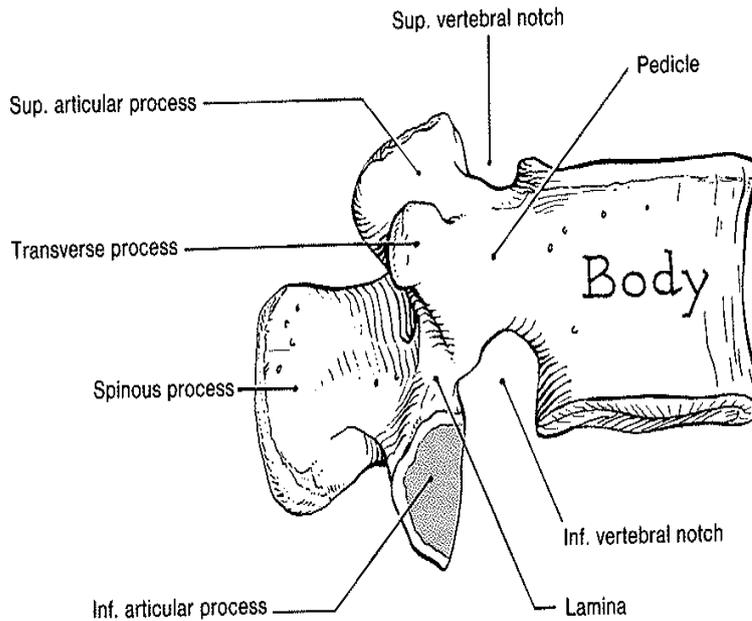
LBP can be disabling, particularly when acute, and can result in lost time from work and social activities, as well as difficulty sleeping and engaging in activities of daily living.

To understand how you can effectively manage LBP and also prevent it, it is important to understand **what causes it**. To understand the causes of LBP, it is necessary to first have a simple knowledge of the structure and anatomy of the spine.

## ANATOMY OF THE LUMBER SPINE

The lumbar spine consists of 5 lumbar intervertebral segments or bones. Each segment consists of:

1. *Intervertebral disc*- “shock absorber” made up of layers of rings like an onion (annulus) with a central “pulp”(nucleus).
2. *Facet joints*- lie either side of the segment and control movement. Have cartilage and fluid inside just like a knee joint.
3. *Segmental nerves*- leave the spinal canal from the spinal cord and supply skin and muscle in the lower limb.
4. *Ligaments*- there are number of them that surround the disc and also facet joints to reinforce the structure of the segment.



Any of these structures can be possible sources of pain as they are highly innervated by sensory nerves.

There are a number of factors that will contribute to irritation of these structures and hence cause LBP.

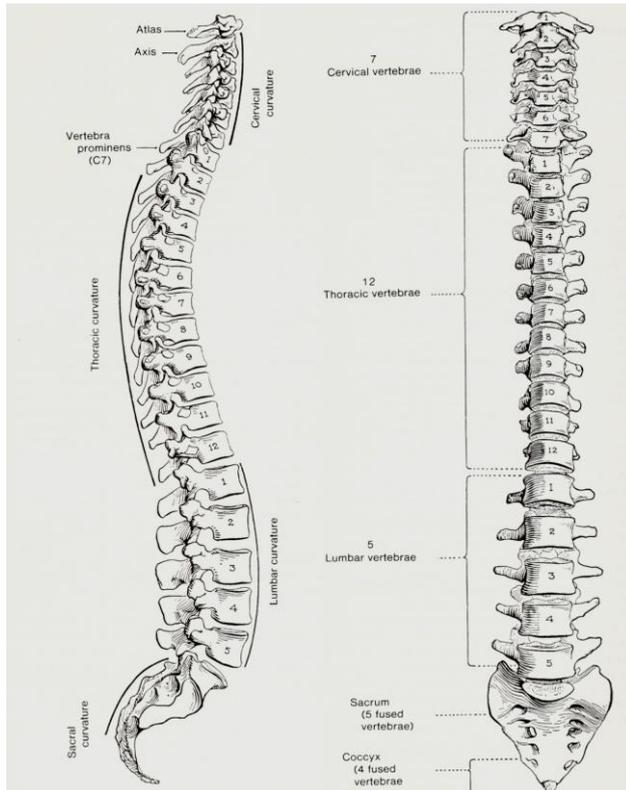
## FACTORS THAT CONTRIBUTE TO LBP

### 1. POOR POSTURE

The spine has an S-shaped curve that is designed to spread weight bearing forces evenly and reduce loading on specific segments. The lumbar spine is lordotic (curves in) and this curve must be maintained to prevent load or injury to the lower back.

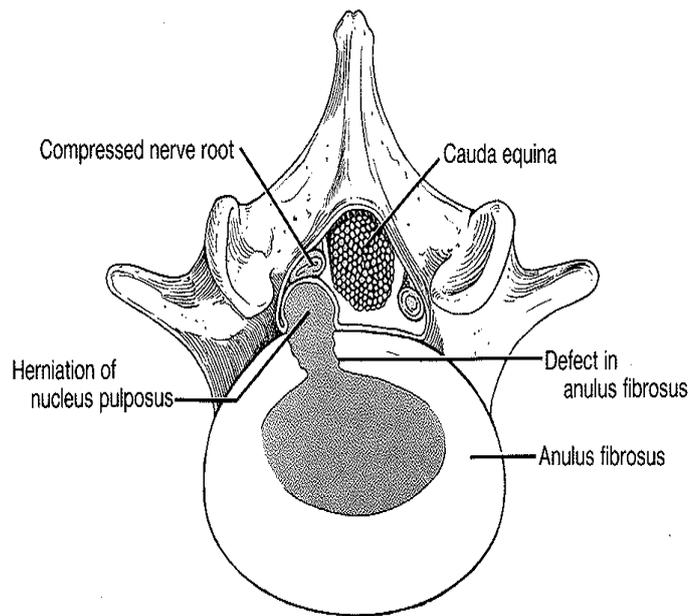
Postures that flatten the lordosis will increase pressure on the intervertebral discs, and postures that increase the lordosis will increase pressure on the facet joints.

Slouching in an armchair or work chair or while driving will all flatten the lordosis, as well as lifting with a bent spine. Arching your back and maintaining this position will increase the lordosis.



## 2. REPETITIVE OR HEAVY LIFTING

This places a lot of pressure on the IV disc and can cause tearing in the outside layers of the disc (annulus). The pressure in the disc when the spine is bent can rise up to 2.5 times body weight. As the layers of the annulus tear, creating fissures, the nucleus of the disc can then bulge or prolapse through these fissures, placing pressure on surrounding nerves and facet joints. This is called a disc prolapse (“slipped disc”), and there are different degrees of prolapse.



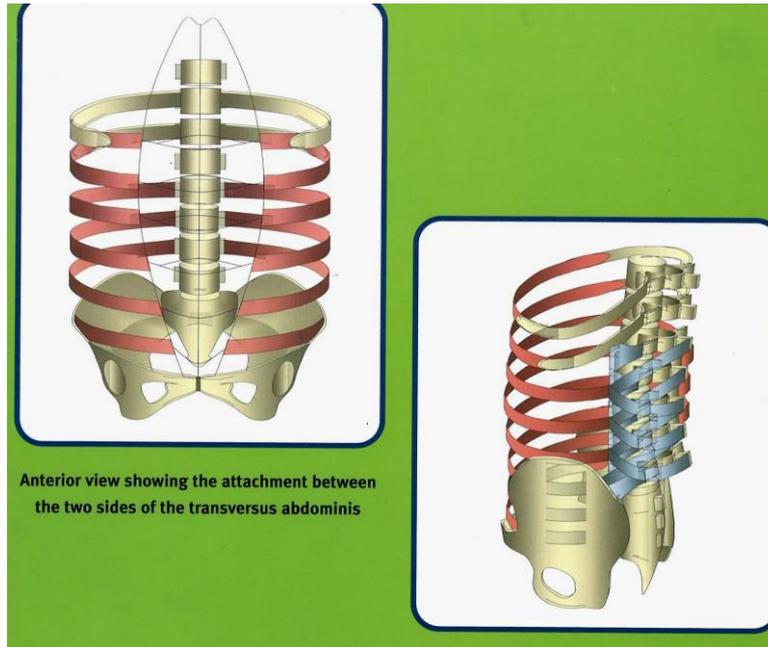
### 3. PROLONGED STATIC LOADING

This occurs with prolonged sitting, standing or bent postures that are sustained eg gardening, sitting, driving... These postures compromise circulation to the lumbar spine and all living tissue requires circulation/blood flow for nourishment and proper function. Lack of blood flow leads to pain (ischaemic pain) eg like the heart muscle during a heart attack, and also joint and muscle tension, which in turn can cause pain. This is made worse when poor posture is also present. Static loading also places considerable pressure on the disc.

### 4. MUSCLE WEAKNESS OR INACTIVITY

There has been much research on the role of the deep muscles of the spine and their role in preventing injury. These muscles such Transversus Abdominus act like a natural brace for the spine, and Multifidus stabilises individual segments of the spine, much like guy ropes would hold up the mast of a ship.

Weakness in these muscles due to lack of use will then cause more pressure to go through the actual discs and joints of the spine thereby leading to wear and tear in the spine and pain. These muscles do not strengthen on their own- they need specific exercise to get them working and feeling stronger.



## 5. AGEING/DEGENERATION

As our bodies age, wear and tear develops in the spine and other joints and tissues/organs. In the spine this is known as **spondylosis**, which involves loss of disc height and degeneration of facet joint cartilages. Boney outgrowths, called **osteophytes**, also may develop as the vertebral segment tries to increase its surface area for distribution of pressure. These may grow into the **intervertebral foramen** (exit holes for nerves) and hence place pressure and irritate spinal nerves. As degeneration occurs, sensory nerves are also irritated and this will contribute to back pain.

## 6. TRAUMATIC INJURY.

Any fall, motor vehicle accident, lifting injury or sports injury can potentially damage ligaments, discs, facet joints or muscles of the spine and as all these structures have a nerve and blood supply that can lead to pain. Pain often leads to deep muscles shutting down around the spine (muscle inhibition) which causes more pressure to build in a vicious cycle of events. One of the most important aims following injury is to regain the strength of these deep muscles to break this vicious cycle.

## 5 WAYS TO BEAT BACK PAIN

### 1. MAINTAIN AND BE AWARE OF GOOD POSTURE.

Maintain your lumbar lordosis when you sit and stand and also during lifting/pushing/pulling activities. Sitting with a lumbar roll in your office chair or car will assist with this. It is important to be aware of the type of posture you have and how this can be improved, and your physiotherapist can assess this and properly advise you. You may have an increased or decreased lordosis and different exercises will apply for each.

### 2. APPLY CORRECT LIFTING PRINCIPLES.

Whenever you are lifting:

Bend both your knees and your hips.

Maintain the arch in your back (lordosis)

Be aware of the weight beforehand by rocking it side to side before you lift it.

Keep the weight close to you when you raise.

Brace your stomach muscles- your Physiotherapist will show you how to do this properly.

Do not twist as you lift, but rather step around once you have the weight safely at waist level.

### 3. AVOID / MINIMIZE STATIC LOADING POSTURES.

Do not sit for longer than 30min before standing up and moving around. If you work sitting down, set up a timer on your computer that will remind you to break your posture every 30-40 minutes. Walking to the water fountain, toilet or simply stretching can potentially prevent lots of pain and hardship, particularly if your job involves sitting. Do not stand for longer than 10 minutes in the same spot before walking or sitting.

Make sure you stand and walk every 20-30 minutes if you are gardening or working on the floor or with a bent posture.

## **4. CONTROL YOUR WEIGHT, STAY ACTIVE AND BUILD DEEP MUSCLE STRENGTH.**

This is probably the most difficult but the most rewarding way to beat back pain.

Your body weight will directly affect the pressure on the spine and increase your risk of back pain. The best way to keep your weight under control is through regular cardiovascular exercise. The Heart Foundation recommends at least 30min of continuous activity that raises your heart rate on a daily basis. This may be walking, cycling, swimming, or taking a group fitness class (aerobics, boxing, spin class). Of course, eating a healthy, well balanced diet is also very important.

Movement is very important in circulation and nourishing the joints and muscles, so simple things like taking the stairs instead of the lift, walking to the milk bar rather than driving or breaking your sitting posture can all help with circulation.

Specific core exercises have been proven to assist with low back pain. These may include exercises on a Fitball, Pilates exercises or floor exercises involving combined movements. Sit ups are generally not the preferred exercise for those suffering low back pain as they increase the flexion load on the spine.

Your Physiotherapist can advise you on the best exercises for your particular spine.

## **5. MANUAL THERAPY COMBINED WITH SPECIFIC EXERCISE HAS BEEN SHOWN TO BE EFFECTIVE IN MANAGING LOW BACK PAIN.**

Joint mobilization, manipulation, massage and specific strengthening/stretching exercises have been shown to reduce low back pain when combined in the appropriate manner. This is because these techniques assist with blood flow to damaged areas of the spine, and help to reduce tension within pain sensitive joints and muscles. Traction, which involves stretching the spine on a traction table, is also helpful for degenerate conditions as it unloads the IV disc. These techniques also have an effect on the Central Nervous System (afferent mediated responses) which assists in reducing perception of pain.

So what do you do now if you still have back pain?

This report provides some basic guidelines for managing and preventing back pain.

But each case of back pain is different, and you have seen that there are many causes. Your back pain will be different to your neighbours', or your colleagues. What other people have done may not be suitable for you!

## WHAT TO DO NEXT?

If you have back pain, and would like to get to the bottom of its causes and learn to overcome it, then you need to book an assessment with us at [Northwest Physiotherapy Group](#).

We have over 50 years combined experience in dealing with back pain, and have a range of strategies that have been proven to help and have helped thousands of patients before you.

Your satisfaction with our professional, caring and thorough service is guaranteed.

Simply call our rooms at Moonee Ponds on **9370 5654**, or send an appointment request through the website and they will book you in for your assessment.

(Please bring all reports/scans with you and be prepared to disrobe.)

A life free from back pain could be just around the corner for you!!

Look forward to many years of increased energy, activity and enjoyment doing the things you love to do!!