
Solutions for Back Pain

by Clive Lathey DO MSc (Sports Medicine), founder of The Putney Clinic

How widespread is back pain?

Up to 80% of us will suffer with the misery of back pain at some point in our life. As well as causing pain and discomfort, it costs billions in NHS treatment and lost business revenue each year. Understanding why it occurs – and how you can keep your back in good shape – can help to reduce your risk of suffering.

Back pain is the second highest cause for seeking medical advice in the UK, falling just behind the common cold. GP's receive some 7 million visits from sufferers each year, with 80% of back problems recurring. What's more, the NHS spends more than 2 million every year on back-pain-related costs, including GP consultations, hospital fees and physical therapy. In the private healthcare sector, a further 5.5 million is spent annually trying to treat this condition. Factor in the five million working days lost each year, and the charity BackCare estimates that back pain costs the UK around 5 billion every year.

What is the main cause of back problems?

The leading cause is sedentary living. In the Western and developing world, sedentary life is on the increase, particularly in the workplace. We spend long periods of time sitting at desks and computers, driving vehicles, flying and generally being less active. This has contributed to the dramatic increase in back pain in recent times.

The human spine is a complex piece of engineering which is designed to be active. Prolonged sitting places our spinal discs under strain. The discs are like shock absorbers between our vertebrae and have a jelly-like substance inside them. A slumped sitting posture, which reverses the natural curve of the lower back, can increase disc pressure by as much as 190%. This gradually weakens the tough spinal ligaments and outer layer of the disc, and subsequently can lead to the development of disc bulging (also known as slipped disc).

Decreasing fitness levels and back pain

If you live an inactive life with a sedentary job, it goes without saying that you overall body function will suffer. For example, in a typical day an average person may spend 30 minutes walking to and from public transport to their workplace and home again (and even less if they drive to work). The rest of the day, for the majority of people, will be spent inactive sitting at a desk. This may easily mean seven-to-ten hours of very little movement.

Mechanically, you will develop generally less flexible muscles and poor muscle tone, alongside increased joint stiffness. The spinal muscles will not only shorten and tighten, but also waste, which is known as muscle atrophy. The result of this is less ability to control and maintain body position, coordinate movements and maintain the natural S-shape of the spine. All these factors increase the likelihood of injury to your spine.

Does posture play a big role in back pain?

The way you hold your body is probably the most important factor in determining the health of your back. Poor posture will gradually weaken your back and result in pain.

Good posture is achieved by maintaining the S-shape of the spine, both in sitting or standing position. When the spine is in the S-shaped position the centre of gravity is located in the mid-line or neutral location. In other words, the weight of your body is distributed equally along the length of the spine. In this position, the muscles in the front and back of the body are well toned, but relaxed.

A poor slumped or C-shaped posture (particularly when sitting) will weaken the spinal discs, stretch ligaments and joints, tighten muscles and eventually cause pain.

Who suffers most from back pain?

The overweight and obese are more likely to suffer with joint pain. Excess body weight not only leads to an increase in loading of many of the body's joints – which can contribute to early wear and tear, i.e. arthritis – but also puts a tremendous strain on the back and neck.

The spine – with all its discs, muscles and ligaments – and the pelvis, has to support the rest of the body. So, if there is extra weight, which generally pulls the body forward, all the components of the spine have to work very hard to maintain an upright posture. This means that there is a much greater risk of a slipped disc, muscle tears and ligament sprains.

Overweight patients often complain of low back, knee, hip, ankle and foot pain. The body requires optimal health in order for damaged tissue to repair quickly and permanently. However, if – as is often the case with these patients – the body is not in a healthy state, then these tissues can become chronically damaged resulting in long-term pain and reduced quality of life.

Congenital conditions and back pain

A number of patients who complain of hip, back and neck pain have a spinal scoliosis, which may be the root cause - or at least a contributory cause – of the pain. The scoliosis may be due to other factors such as leg length difference or pelvic torsion and so the spine is trying to accommodate these asymmetries by twisting and rotating. In some patients, the scoliosis may have occurred at birth, or later in life through a traumatic incident or long-term postural anomalies.

The consequences of a scoliotic spine will be uneven stresses and strains being placed upon the vertebral joints, discs, ligaments and muscles, resulting in damage and discomfort of varying forms. As Osteopaths, we assess the type and degree of scoliosis and the

Solutions for Back Pain - continued

causes and contributory factors. With this information, we can perform manual treatment with the intention of minimising the scoliosis and/or assisting the patient's body to adapt to the strains and thus reduce the pain. Postural advice and exercise regimes can also help in a rehabilitative and preventative manner.

The key to the management and prevention of back pain

Firstly, if you develop acute back pain, it is always advisable to consult a medical expert such as an osteopath, physiotherapist or your GP. There are some simple clinical tests that can be done to clearly identify whether the back pain you are suffering from is of a serious nature or just a simple mechanical problem.

Certain conditions such as rheumatoid arthritis, spondylolithesis (vertebral slippage), fractures, slipped discs or nerve/ spinal compressive pathologies need to be diagnosed and treated early to avoid any serious long-term injury to your spine, spinal cord and peripheral nerves. So if in doubt, seek advice first and foremost.

The treatment of back pain usually follows a three-stage process.

Osteopaths often work alongside GP's or hospital consultants to ensure that you receive optimal care from both osteopathic and orthodox disciplines.

Firstly, reducing inflammation and pain – and this is where nutrition can play a big role. Secondly, restoring mobility. This is where an osteopath can often correct the initial problem through manipulation of soft tissues and mobilisation. Finally, the focus shifts to a restoring stability i.e. strength. This is a more long-term approach,

which builds in a preventative aspect to the treatment. It may include an exercise regime, Pilates / core stability recommendations, postural changes, workstation advice and any other lifestyle changes that can positively benefit you.

For more complicated conditions, osteopaths often work alongside GP's or hospital consultants to ensure that you receive optimal care from both osteopathic and orthodox disciplines. For example, scans, blood tests and other investigations may be carried out by a GP or hospital and can aid diagnosis and help in determining the best treatment plan. This may include osteopathy, physiotherapy and certain medications. Again, a long-term programme is the best way to encourage optimal health.

Working at an ergonomically designed workstation with a chair that provides low back support can help maintain a healthier spine, as can postural awareness and doing some regular and appropriate exercise.

What type of exercises can be helpful in back pain

An episode of pain and immobility weakens the spinal "core muscles", hence it is crucial that treatment is followed by a rehabilitation exercise programme. There are some very simple exercises to help you to develop muscles that build core strength and improve your overall posture generally.

Standing exercise

Starting at the bottom of your body, try and stand with the weight going through both the heels and balls of your feet. Next, gently draw in your tummy button (umbilical area) towards your spine. At

the same time, gently lift your chest up and outwards, while moving your shoulders down and back. Gently elongate your neck and bring your chin in towards your spine. Imagine a cord is gently lifting your head upwards from the crown.

Sitting exercise

Try and sit well back into the chair with your low back supported and your weight evenly distributed on both buttocks and thighs. Your knees should be lower than your thighs. Do not sit with your legs crossed (if you have to, only do so for short periods of time). Keep your feet planted on the ground, hip-width apart if possible. The shoulders should be down, back and relaxed and the head held straight, with the chin gently pulled in towards the spine (not poked forward). Do not sit for more than 30 minutes – aim to get up and walk around. Never cradle the telephone between your ear and shoulder, as this puts a lot of strain on your back and neck.

Other back exercises

The simple daily exercises can help to strengthen your back, stretch out tight muscles and aid improved posture.

Flexion stretch 1: Lie on back with head on floor, pull one knee to chest and hold for a few seconds; repeat with other leg; repeat.

Back extension: Lie face down with hands on the floor, under shoulders. Straighten arms to push top half of body upwards; hold for a few seconds and feel stretch in lower back; slowly return to floor; repeat.

Flexion stretch 2: Start on all fours, then bend knees and lower buttocks to heels, and hold for a few seconds; repeat.

Back stabilisation: Start on all fours and, with flat back and straight neck, stretch out left arm and right leg simultaneously and hold for a few seconds; repeat with right arm and left leg extended; repeat.

Do not continue with any exercises if you feel any pain.

General exercise and back pain

Research shows that cross training, i.e. mixing specific gym exercises (using gym equipment or floor exercises) with your chosen sport, helps reduce injuries. For example, playing tennis and doing Pilates, or running alternating with swimming, football with visits to the gym. This is because doing regular core exercises – i.e. building up the abdominal, gluteal (buttock) and spinal muscles – in conjunction with other sports improves balance, posture and performance.

Pilates is particularly good for backs as it is very muscle specific and involves flexibility and posture control. Yoga, Tai chi, Gyrotonics, walking/ hiking and swimming can also be beneficial.

Footwear and back health

Your feet support your body, so looking after them and choosing supportive footwear can help to promote a healthy back too.

When exercising, wearing appropriate footwear is important – i.e. supportive training shoes that can absorb the shock of impact when walking, jogging or running.

For women, high heels worn long-term can create a shortening of the calf and posterior thigh muscles, which can lead to muscle tension and

Solutions for Back Pain - continued

damage. The body's centre of gravity is also thrown forward so that more pressure is exerted on the front of the feet, front of the knees and low back as it attempts to keep you upright. These resultant forces over time can contribute to early arthritic changes to feet, knees, hips and the back. It is, therefore, only advisable to wear high heels for short periods of time and as infrequently as possible. Wear trainers or a good supportive shoe to and from work and, if necessary, change into work shoes – but limit your use of high heels if you are standing all day.

Remember that shortened muscles are prone to injury while performing other activities, i.e. walking, running, gym sessions – but the damage has already been done by the high heels.

If you suffer with other foot problems, such as overpronation

(collapsed arch) or supination (very high arch), these can contribute to foot, ankle, knee, hip and back pain. An orthotic device can help restore balance and improve posture. There are also manipulative techniques that can improve function of the feet, and these can be carried out by an Osteopath.

Foods that heal pain and inflammation

by Patrick Holford

Pain and inflammation are the body's way of saying "help". While it is important to understand and deal with the underlying causes, there are natural pain killers and anti-inflammatory substances found in certain foods that can bring relief from back or other pain, without the unpleasant side-effects of other drugs.

Antioxidant nutrients help reduce inflammation and pain, so aim to eat plenty of fruit (especially berries) and vegetables.

counteract pain and inflammation. Aim to eat three portions of oily fish a week.

Sulphur is another natural anti-inflammatory pain-reducing agent. It is rich in garlic, onions, leeks and eggs. Even more effective is the spice turmeric. Its bright yellow pigment contains the active compound curcumin, which has a variety of powerful anti-inflammatory actions.

Turmeric gives a great flavour to curries and stir-fries, or add a teaspoon when cooking rice. Trials in which it was given to arthritic patients have shown it to be similarly effective to anti-inflammatory drugs, without the side effects. On top of this, it is a potent antioxidant nutrient.

Antioxidant nutrients help reduce inflammation and pain, so aim to eat plenty of fruit (especially berries) and vegetables. Red onions, broccoli, squash, red grapes and citrus foods are particularly rich in a potent anti-inflammatory antioxidant called quercetin. A trial in which people with rheumatoid arthritis were treated with a vegan diet high in antioxidants including quercetin found they had decreased joint stiffness and pain, as well as an improvement in self-reported health.

Ginger is another effective anti-inflammatory favoured by Ayurvedic medicine. Twentieth-century technology has demonstrated that ginger inhibits the synthesis of pro-inflammatory mediators in the body. You can boost your intake to therapeutic levels by incorporating a half-inch slice of fresh ginger into your daily diet. Add to stir-fries, grate over cooked vegetables or crush into honey and mix with hot water for a warming drink.

For more information about any of the information contained in this document, please contact
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