

Managing back pain





There are many areas of the musculo-skeletal system from which dental professionals could suffer with pain or injury, but backs, necks and shoulders are usually the most common.

This factsheet focuses on the potential causes of acute (short-term) and chronic (lasting over three months) lower back pain, how to protect your back before you suffer an injury and how you can more effectively manage bouts of discomfort where you are suffering.

We have received claims from dentists as young as their 20s and 30s who have had to take months off work due to issues with their lower back. Some even as young as their 30s have been unable to practice for years because of lower back pain and repeated musculoskeletal issues.

You can see more details of figures and cases in our published claims statistics in other documents at <https://www.dentistsprovident.co.uk/dentists/documents/>

Introduction

Back pain can come on suddenly or gradually, be caused by direct trauma or can appear out of nowhere following a sudden movement. It can be debilitating, affecting both your professional and personal life including sporting and leisure activities. As a dental professional you may have experienced pain or discomfort in your back, or even had to claim or taken time off work for it already.

In your day to day working life, whether it is bending around a nervous patient during an exam, leaning across the surgery to view x-rays, sitting at the computer or keeping rigidly static while undertaking a long and perhaps complicated procedure, you are putting your musculoskeletal system under immense pressure. By concentrating on your work and having awareness of your patient's comfort, it is often far too easy to fix yourself into a distorted position for a prolonged period of time and this can put pressure on your bony vertebrae, the softer discs between them or the supporting tendons and ligaments around your spine, especially in your lower back.

Globally lower back pain is a real problem. Research has shown that, where it becomes chronic, it is the single biggest cause of living with a disability. Lower back pain is also the most common spinal disorder, affecting around 1 in 10 people at some point in their lives. Worldwide, chronic pain creates a struggle for healthcare systems, disability insurance, employers and individuals alike.

It is also important to be aware of the impact not being able to work has on your finances, your mental wellbeing as well as other areas, such as the risk of a loss of clinical skills or confidence due to the time you have had to take off. And even when you return to work, your mechanical ability to physically practice dentistry, in addition to any anxiety that the pain might return, can cause unnecessary and distracting concern.

Lower back pain is also the most common spinal disorder, affecting around 1 in 10 people at some point in their lives.

Diagnosis and causes

As dental professionals, there is an expectation that you will experience back pain or discomfort at some time in your career, and if it is simply uncomfortable it can be easy to ignore. It's also easy to think it will get better on its own or that you can self-diagnose its cause, but a professional diagnosis is always vital as it could be a precursor to something more serious. Obtaining professional advice can rule out any underlying or serious issues such as tumours, arthritis or fractures. Your first contact should therefore be your GP who can refer you to a consultant or a specialist such as an osteopath, rheumatologist, podiatrist or physiotherapist, for example.

Your first contact should therefore be your GP who can refer you to a consultant or a specialist such as an osteopath, rheumatologist, podiatrist or physiotherapist, for example.

If you remain undiagnosed, the temptation can be to take over-the-counter pain relief or maybe lie down, as that feels natural and can relieve the pain temporarily, but for some conditions could be counterproductive so it is important to know what you are dealing with and what the immediate and long-term treatments should be.

Obtaining a diagnosis can take some time as your spine is a complex structure and inflammation or nerve pain can mask the real injury and reveal itself as referred pain presenting itself elsewhere, for example such as shooting down your leg. Because of the referred pain, back pain tends to be a symptom rather than the actual cause. Most occupational back pain has its route in your musculoskeletal system and can be non-specific or mechanical caused by bad posture, a pre-existing injury or a new one. Other causes of pain include degeneration of inter-vertebral discs, herniation (or bulging) of discs, prolapsed, dehydrated or ruptured discs, osteoporosis, stress fractures, osteomyelitis (infection of your bone) or sacroiliitis (inflamed sacroiliac joint).

Sometimes even revealing some of these conditions through a scan, such as age-related degeneration of the spine like inflamed, bulging or dehydrated discs, may not necessarily reveal the cause of your pain. Indeed, some people go many years without pain despite degeneration in their spines whereas others experience significant pain without degeneration being present.

Depending on the symptoms or type of injury it may also be important to check for underlying issues such as low bone density, parathyroid problems or a lack of calcium or vitamin D in your blood, as this can be dealt with separately to prevent future problems.

There is also evidence that stress can cause back pain and conversely that back pain, especially when it becomes chronic, can cause stress and lead to depression. When we are anxious or stressed our body's stress response activates, including a tightening of our muscles which become tense, and this can cause pain or result in a susceptibility to damage. Stomach problems such as bloating can also cause pain and discomfort in our backs as it is a very sensitive area of our bodies. So a detailed investigation is always required to check out all potential problems.

Some conditions such as slipped discs spinal stenosis (narrowing of the spinal canal) or spondylolisthesis (vertebra slipping out of position) may require surgery, but this is rare and has its own risks as well, as the implications of the time you'll have to take to recover from the operation.

There is also evidence that stress can cause back pain and conversely that back pain, especially when it becomes chronic, can cause stress and lead to depression.

Treatment and preventive care plans

Once your condition has been diagnosed, you are likely to receive a prescription for pain reducing, non-steroid anti-inflammatories (NSAIDs), analgesics, muscle relaxants or nerve blocking medicines that must be taken regularly and on the instructions of the prescribing practitioner to build up in your system to have an effect. They may also suggest steroid injections or manipulation techniques on your joints to help relieve trapped nerves or fluid, as spinal manipulation has been shown to provide some improvement for acute lower back pain and about the same as the benefit from NSAIDs, as long as it's not a fracture. Also new studies for relieving lower back pain are regularly cited in the medical press. One such study showed evidence of using an image-guided pulsed radiofrequency treatment for chronic lower back pain due to a herniated disc. Some people find pain relief in alternative therapies such as reflexology or acupuncture.

Any pain that lasts over three months is classed as chronic pain and so may have different treatment needs, such as psychological or pain management.

If the results of a scan suggest you can progress, and you're able to manage the pain in this way, it's then possible to work on any exercises or stretches your healthcare professionals may give you.

Any pain that lasts over three months is classed as chronic pain and so may have different treatment needs, such as psychological or pain management. While bone breakages may be easier to diagnose with an x-ray or a scan, they too take time to heal. This can vary from months to years of ongoing or chronic pain, depending on the type and location of the break. Soft tissue damage such as tendon overuse injuries can take many months to heal and can reoccur when you undertake the repetitive movement or activity that caused the injury, only providing a pain free solution by your not undertaking the activity for a prolonged period.

Once your focus isn't on your pain or 'fixing' your injury - and this can take time depending on the diagnosis - it is important to look for potential causes and your workplace could be a good place to start.



Workplace adjustments

If it's not your own surgery, or you are based in a hospital clinic, it can be hard to be involved in the decisions towards the equipment you use, but there are tweaks you can make to the ergonomic design of your working area, ensuring you do less reaching and stretching. In addition, you should always remember to maintain a good posture, irrespective of the equipment available to you. Conducting a review of your working area should be carried out, and in that consider all areas, including those such as the decontamination suite.

It's also worth putting some serious thought into the positioning of your patients in relation to your own seat, especially if you are left-handed and the patient delivery system you are using is more suitable for right-handed practitioners. You should also review your seat's height and tilt as well as its position in relation to your other equipment. All can contribute to poor posture or awkward, unnecessary movements that risk injury if they are not properly aligned to your individual needs. With the range of products on the market, a great deal of time and money can be spent on the chair you install for your patients, with comfort, height and headrest adjustments all high priorities. But it is you who spends the most time seated in the surgery, and the same consideration may not always be given to choosing an appropriately ergonomic seat in the name of your long-term health.

It's also worth putting some serious thought into the positioning of your patients in relation to your own seat.

Because dental work demands extreme precision, your body is naturally held rigid for extended periods, with your arms often unsupported. The tension it causes in your neck can lead to a range of associated pains, both in your upper and lower back. There are a number of chairs that are specifically designed to combat this by placing your pelvis in its natural position, supporting the spine and enabling it to maintain its natural 'S' curve. Ordinary flat seats can put pressure on the discs in your spine but saddle seats, for example, work by supporting your body in an upright position so it's harder to slouch. There are a great many benefits from sitting in this position, particularly relieving stress on your spine, but also giving your organs more space, making you feel less cramped, and this could improve your digestion and breathing as well.



Practising in a 4-handed way with dentist and nurse can mean working in harmony over the patient and can assist in reducing the amount of bending and stretching required of you to work effectively. Your handpieces should also be ergonomic and well balanced, as well as being the right size and weight to fit perfectly in your hand. This is ideal as there will be less strain and weight put into your wrists.

If you are designing your own surgery, you can take the time to consider all other aspects of your surroundings, such as the location of cabinetry and the positioning of your computer, for example, to minimise your reaching across the surgery.

Loupes are also well known as a method of supporting your ability to maintain good posture and prevent twisting and bending, as they allow you to look from a natural distance rather than having to bend down, but make sure their weight and magnification is right for you.

Good posture should be achieved despite the equipment available to you however, when your focus is on patient care, it isn't always easy to maintain an appropriate level of good posture, so having the right equipment can support you in this. Good posture means your feet remain flat on the floor, your legs are at 90 degrees and you are bending from your hips and not your middle, upper back or neck. There are a number of videos online that can remind you of this. Considering all of your equipment to this level may seem like an expensive and timely process, especially when you are young, but it could be both career saving and one of the best investments you can make for your future health. And if you are unsure, there are reputable companies that provide ergonomic assessments of your workplace and who can offer valuable guidance to get you started.

Personal care plan

As well as making sure you have ergonomic equipment and seating, you can help yourself by keeping fit, flexible and mobile. Regular exercise such as swimming, always maintaining a good neutral posture and not staying in one position for too long, as well as leading a healthy lifestyle, can go a long way to supporting your bones, tendons, ligaments and muscles and prevent injuries from occurring.

If you have previously experienced lower back pain that has led to you having time off work, you may already have been recommended exercises or activities by your consultant, physiotherapist or other practitioner. If so, it is obviously important to keep these up.

Research also shows that general muscular endurance training can help dental professionals reduce work-related pain, and there are specific exercises that can help. It is important to undertake aerobic exercise for cardiovascular fitness but also strengthening, resistance and flexibility exercises to improve your strength and flexibility are also important. Some daily stretches can be done in the few minutes before or after surgery, or even between patients. Core strengthening exercises work your abdomen and back muscles to help strengthen and support the muscles in your back and therefore good posture. Simple stretches such as shoulder rolls, child pose, cat stretch, roll downs, hip flexor stretches and knee hugs, or rocking from side to side should be done, ideally every morning and evening, to reduce tension and stress in your muscles. Other simple exercises such as bridges, side planks, wall sits, leg raises, squats and lunges all improve both your flexibility and strength.

More specific practices include Yoga. There are many different types, from gentle yin and hatha yoga to faster and more complex types such as power or hot. These more static exercises can improve and maintain your flexibility. Pilates, either mat or reformer (machine based) are more dynamic exercises and not only strengthen your core to help to protect your lower back but also encourage you to use the larger muscles in your back by focusing on stretching and strengthening the whole body to improve balance, muscle-strength, flexibility and posture.

Meditation, mindfulness or simply finding time to undertake a regular activity that relaxes you, such as walking, running, gardening, listening to music, reading or having a warm bath can all make a difference.

The Alexander Technique teaches you to move in a more natural and fluid way, using larger muscle groups and joints for prevention of injuries as well as encouraging a more relaxed approach to physical tasks. Natural balanced movements such as bending from the hips rather than the back can help to prevent overloading your back.

Stress relieving exercises and relaxation techniques are also good to help relieve tense muscles and a busy mind. Meditation, mindfulness or simply finding time to undertake a regular activity that relaxes you, such as walking, running, gardening, listening to music, reading or having a warm bath can all make a difference. But do check with your medical practitioner before undertaking any new exercises, techniques or hobbies that require increased physical exertion.

Your back is one of the most important tools you possess for both life and work. Some focused time to look after your spine could be a good long-term investment for your health, as well as your career.

Dentists' Provident

PO Box 76944, London, EC1P 1LG

Telephone: +44 (0) 20 7400 5700 Calls are recorded for our mutual security, training and monitoring purposes.

Fax: +44 (0) 20 7400 5701 www.dentistsprovident.co.uk / www.dentistsprovident.ie

Dentists' Provident is the trading name of Dentists' Provident Society Limited which is incorporated in the United Kingdom under the Friendly Societies Act 1992 (Registration Number 407F) and has its registered office at 91-94 Saffron Hill, London, EC1N 8QP. Authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority in the United Kingdom (Firm Reference Number 110015) and regulated in the Republic of Ireland by the Central Bank of Ireland for conduct of business rules (Firm Reference Number C33946).