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NICKY SNAZELL'S

Wellness & Physiotherapy Newsletter

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Back Problems and Treatment

The spine is a complex structure and there are a lot of things that can go wrong. Not surprisingly there are a number of treatment options and all this makes for a very confusing situation to the general public when problems start.

In this newsletter we are going to try to explain the structure of the spine, the importance of the supporting musculature, why problems happen and what your options are in dealing with the consequences of a bad back.

This won't make you an expert, but if properly digested, this information should enable you to realise the things you should be doing to help prevent problems in the first place, and should they happen, what you should do and who you should see to get your condition improved to the best situation possible.

Spine Structure

The spine is made up of 24 individual bones called vertebrae, 7 in the neck, medically called cervical, 12 in the rib cage or thoracic area and 5 in the lower back or lumbar. Below the lumbar there is the sacrum, the big bone you can feel above the buttocks, which is a fusion of 5 vertebrae and then the coccyx, or tailbone, a fusion of 4 vertebrae.

Each neighbouring pair of vertebrae, with the exception of the top pair below the skull, has a disc separating them. The role of the disc is to allow movement and provide shock absorption.

All vertebra have a similar structure, but the shape of each changes along its length. For example, the lumbar vertebrae are designed so as to allow the spine to bend backward and forwards and to limit the amount of rotation between vertebrae. If too much lumbar rotation were allowed, the trunk

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Want To Look Younger and Feel Better?

Quite a few patients have expressed interest in getting safe treatment for their face which will make them look younger and feel both better and healthier.

Nicky has supreme needling skills, with a detailed medical training in anatomy and has been studying facial treatment intensely for the last few months and by the time you read this will have qualified.

Please call 01889 881488 to book

Back Structure

would be too unstable.

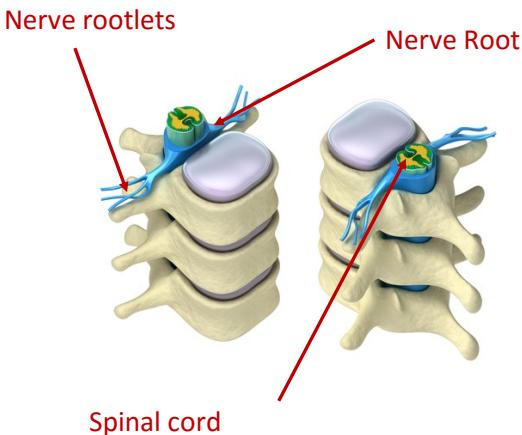
However, rotation in the spine is needed to allow the body to twist. The majority of this twist is available in the thoracic spine. The neck is able to rotate relatively freely, thus enabling the head to rotate considerably.

Total rotation of the trunk is the sum of all the individual rotations. Stiffness between one or more pairs of vertebra will put additional stress and cause pain in the area where the spine is still flexible. We will discuss how Theraflex treatment can help with this later.

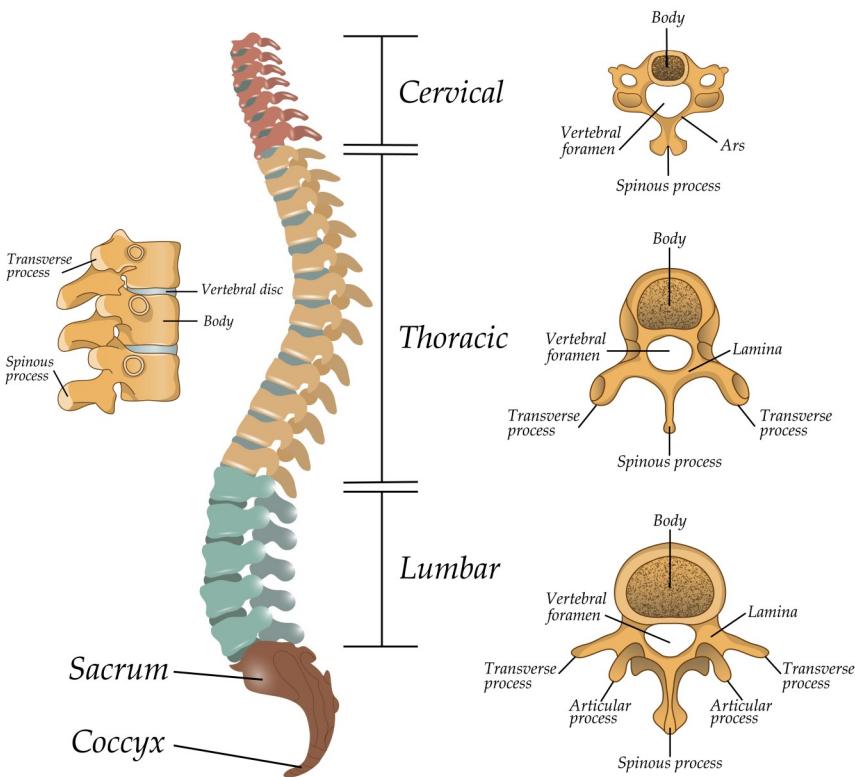
The spinal cord links to the brain and passes down the spine through each vertebrae. Nerve roots exit the spinal cord horizontally between each pair of vertebrae and then divide into rootlets to travel to the part of the body those nerves serve.

Thus the gap between a pair of vertebrae is important. There has to be enough gap to allow the nerves to move freely as any compression of the nerves will cause pain. Hence the size and shape of the disc is key.

Nerve roots contain many individual nerves and there are two types. The first is the sensory nerves which transmit sensations, such as pain, movement or touch to the brain.



The structure of the segments of the spine



An example would be if your big toe was touched, the nerves associated with that big toe would carry the signal to your brain.

The other type of nerve carry signals from the brain to the body, called the motor nerves. An example would be the signals sent to the leg muscles to allow you to walk.

Joints In The Spine

Each vertebra connects to the next via the disc and through small facet joints on each side. Area wise, the bulk of the connection is through the disc. Each disc is bonded to the vertebra above and below and so these are unlubricated joints.

Deformation of the disc means it's bulk could move in any direction with some restriction by the facet joints. Imagine squeezing a partially filled balloon between flat palms.

Causes of Back Pain

The facet joints are lubricated, called synovial joints. In a synovial joint, the bones are covered in cartilage to provide cushioning and smooth movement. The joint is also bathed in a lubricating fluid, called synovial fluid. The whole joint is sealed in a sac to contain the fluid.

The lumbar facet joints are about the size of a middle finger joint, reducing to about the size of a small finger joint in the thoracic spine.

Synovial joints are prone to suffer from osteoarthritis.

89% of back pain is due to nerve compression

What Causes Back Pain

In principle, any of the structures within the spine that are linked via nerves to the brain can be a source of pain. Thus pain can arise from any of the ligaments, muscles, fascia, joints or discs of the spine.

However, Mr Knight, a Harley Street neurosurgeon, has demonstrated that 89% of pain comes from nerve compression.

Nerve bundles are designed to be able to move freely without restriction. Any form of compression on the nerves will cause pain.

The sensory nerves will detect things like touch, heat and pain from all over the body. If you could imagine that a nerve which detected pain in your foot was separated at the spine and then compressed, your brain would tell you that you had a pain in the foot, not in the spine, even though the nerve compression was in the spine. This is why problems in the back can cause pain down

the leg all the way to the toes. It is also a source of confusion, as it's not at first obvious that a pain felt in the leg, might not be that at all, but is a problem in the back.

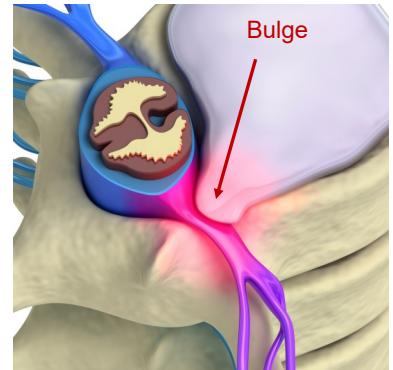
If we understand that spine pain is primarily nerve pain, then we can focus on the possible causes:

- Disc bulge / rupture
- Bone spurs (Osteophytes)
- Muscle contracture
- Connective tissue tethering
- A particular ligament which can act like a guillotine on the nerves when bending forward
- Disc dehydration & thickness reduction
- Bone thinning (osteoporosis)
- Micro fractures in the vertebrae end plates, which allow new nerves to grow into the discs and new pain moves into the discs.
- Arthritis in the synovial joints

These problems can be aggravated by lack of exercise, poor core muscles, excess weight and biomechanical issues.

Disc Bulge / Rupture

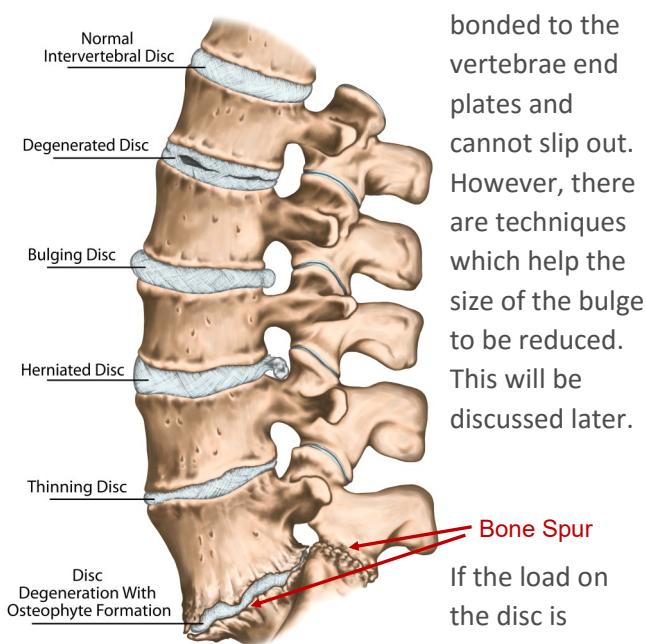
A simple analogy of a disc is a car tyre laid on its side. The 'tyre' is a tough outer fibrous ring, which surrounds a centre of a soft gel with a crab paste type texture. The soft centre assists in spreading compressive load evenly and helps prevent overload on the vertebrae. Hydration is thus critical to performance.



Excessive loads can cause a bulge on the outside of the disc, very much like the bulge on the side of a tyre, which if large enough could compress the nerves causing pain.

Causes of Back Pain

A disc bulge is sometimes referred to as a 'slipped disc', which to the layman suggests that the disc has physically slipped out of position, which further suggest that it can be put back in. This is not correct as



it can cause the outer fibres to tear which allows the soft inner to be squeezed out. This is called a rupture or herniation. If the soft material comes in contact with nerves, it will cause a severe burning pain.

Bone Spurs

A bone spur, or osteophyte, in the spine is an area of bone growth typically as a result of degenerative wear. They occur around the vertebrae end plates and around the synovial joints.

Bone spurs can cause stiffness and pain. They may also reduce the space for nerves to move freely and cause nerve pain.

Muscle Contracture

Doctors are often perplexed by pain that shows no sign of tissue damage or inflammation, nor has any visible justification on an MRI or Xray.

This type of pain, known as neuropathic pain,

typically occurs when nerves malfunction and become extremely sensitive (called supersensitivity) and causes innocent signals to be exaggerated and misperceived as painful ones.

A result of supersensitivity is that the muscle in the area will go into permanent contracture which will cause ongoing stiffness and cause severe pain if nerves become compressed.

GunnIMS is the only method which successfully treats muscle contracture.

Connective Tissue Tethering

Connective tissue surrounds the body like a bubble wrap. It needs to be able to move freely and stay elastic. It is the connective tissue which helps hold the spine together and it is thus important to maintain its suppleness with constant stretching.

If it is allowed to become leathery it can cause nerves, arteries and discs to compress, causing pain.

Ligament Guillotine

There are small ligaments in the nerve root tunnel at each disc level, which can, if the disc height is reduced, cut, bruise and tether the nerves. Repetitive jarring movements will aggravate this.

Disc Dehydration

Discs naturally tend to dry as we age over 40, making them more prone to tearing and also as it dries out the soft centre, this becomes less efficient at spreading the load, making the end plates of the vertebrae more susceptible to fractures.

It is thus particularly important that we stay well hydrated at all times, as the discs will suffer further if there is a water shortage in the body. Dehydration is common, especially so in the elderly and this has very negative consequences.

Treatment and Options

Bone Thinning

Bone thinning, or osteoporosis, is a silent disease which is only first noticed when bones start fracturing. When this includes vertebrae in the spine, the consequences can be severe.

Treatment is limited to drug therapy and if needed surgery.

Vertebrae Micro Fractures

Fractures in the end plates could be caused by overloading alone or could be a combination of bone thinning and loading.

When micro fractures occur it can allow blood to seep into the disc, in turn providing an opportunity for new nerves to grow into the disc. These nerves can cause pain.

Arthritis

Osteoarthritis is a wear and tear problem and thus is related to age, although lifestyle and injury will also be factors. As a general rule osteoarthritis first starts to appear around the mid 40's, is a 90% probability by age 60 and 100% by 70.

Osteoarthritis is a chronic condition, the symptoms of which can be managed but not cured.

Treatment

Even from this brief overview of back problems, it is very clear that treating back pain is far from simple. This complexity emphasizes the need to see a therapist who is qualified to assess the condition properly, as incorrect assessment could lead to inappropriate treatment, which could at a minimum be a waste of money, at worst dangerous.

Your Options

The most likely qualified options you would consider would be a physiotherapist, chiropractor or osteopath.

Common between these 3 professions is the use of mobilisations and manipulations.

In simple terms, physiotherapists will use acupuncture and dry needling, with supporting technology and prescribe exercises, whereas osteopaths will focus on massage and joint manipulation.

Chiropractors will use technology and tend to focus on regular adjustments, which involve more forceful manipulations and mobilisations.

The most important issue is to see what works best for you and particularly to find a good practitioner who has the skills and knowledge to achieve the best outcome.

Manipulation and Mobilisation

Mobilisations (mobs) primarily consist of oscillatory movements by the therapists hands, which are classified in increasing grades of movement and force. The highest grade of force is called a manipulation.



The purpose is to restore pain free, full range of movement in the joint and help decompress trapped structures.

Joint mobilisation is an excellent choice to manage musculoskeletal dysfunction by restoring the motion in the related stiffened joint, connective tissue or shortened muscles, which can cause pain by trapping nerves.

By removing the restriction by mobilisations and thus improving flexibility, the source of pain is often reduced.

Gentle mobilisations provide analgesic, soothing pain relief, while more forceful, deeper mobilisations are effective for decreasing chronic joint stiffness, caused

Treatment and Options

by fibrous tissue, poor posture (tissue creep) and inevitable wear and tear.

Stronger and faster mobilisations and manipulation can cause a gas release in the joint with an associated popping sound. This sound is often considered evidence of effectiveness of the manipulation. However, this is totally unfounded and there is zero evidence to suggest otherwise. It is just gas.

The phenomenon of creep relates to the ability of tissues to change shape over time when under a constant load. This creep deformation is not permanent and once the load is removed, mobilisations will allow the tissue , such as a mildly bulging disc, or jammed facet joint , to slowly resume its original position.

If the ability of a joint to move is reduced, the joint efficiency is poor and the area is no longer bathed in synovial fluid and can get arthritic faster, plus unequal loading of forces will cause cartilage erosion and osteophytic formation.

Mobs can be used to treat 5 symptom groups:

- Pain, including that associated with poor posture and lack of flexibility
- Stiffness
- Momentary spasms of pain
- Disorders such as osteoarthritis and disc bulges

The most forceful grade 5 mobilisation, called manipulation, is only needed if more gentle mobs are unable to free 'jammed' joints which must be intact and strong, and importantly, where both sciatica and a slipped disc has been ruled out.

Treatment Combination

If mobilisations or manipulations are used alone, then muscle memory remains unchanged and the problem can come back in about 3 weeks.

To maintain benefits, we combine mobs with other treatment modalities including acupuncture or GunnIMS and also a full range of electrotherapy such as laser, deep oscillation and pulsed shortwave to help with inflammation and pain.

Where the spine is generally stiff, we use Theraflex. This is a robotic spinal mobilization device, which is able to mobilise the whole spine far more effectively than just a therapist hands can achieve.

Not to be overlooked is the importance of a strong muscle core, which will help prevent reoccurrence of back problems. A simple analogy would be to imagine sitting on a chair with no front legs (no core). The stress on the back legs (the back) would be massive.

If mobilisations or manipulations are used alone, then muscle memory remains unchanged and the problem can come back in about 3 weeks

Although not obvious, the way you walk can have a major impact on back problems. We can determine if this is an issue with a biomechanical assessment and if needed bespoke orthotics.

Summary

The spine and its problems are complex. In this newsletter we have touched on many possible problems. We hope this amplifies the importance of seeing a well qualified therapist, to first properly assess and then treat your condition.

There are many possible treatments of which manipulation and mobilisation are the most commonly known. Our therapists are fully trained in these techniques and qualified to mobilise and if needed, manipulate spines.

Evidence has shown, however, that mobilisation and manipulation on its own will not provide a long lasting solution, typically with symptoms returning within just 3 weeks. Research as shown that by combining mobilisations with other treatments yields better results.

Art Therapy

Latest research is suggesting that expressive art is more effective than verbal dialogue in tackling negative traumatic memories and chronic pain.

Brain research shows that we sense the world and process our experiences firstly through the right side of the brain as an image. Even a tasting experience is handed over to the left side of the brain as an image.

This, however, is where the conflict occurs. The left side interprets the picture and judges what it can see in it according to past experiences and learnt beliefs. That's right, it translates the image, denies certain truths and judges it through learnt beliefs. It then weighs up how positive or negative the verbal thoughts should be in order to take the necessary action.

If the image is wrongly translated as fearful and negative, it will cause an immune system dysfunction and over time, illness.

Our memory stores verbal memories in the left hand filing cabinet and emotional memories on the right. Hence, if we want to access an emotional memory, it needs a picture password, rather than a verbal password.

We now know that the body-mind language is imagery and the alphabet replaced by colour, size, distance, rhythm, texture and form. So my view is as both patients and therapists, we should pay close attention to metaphors, symbols and postures associated with a problem and not just the words spoken.

If you feel like your heart has shut down at times, try painting out how you feel. It's inspiring what happens.

I am not suggesting you see your GP and say, here I have painted my problem, as these ideas are too new as yet. (But please show us)

Healthy Diet

"Eating healthily is all about balance. Every now and then it's perfectly ok to have a pie for dinner or a nice slice of cake at teatime. Treats are a part of life, but it's also important to recognise when we are pushing things too far. Indulgent food should be enjoyed and savoured, but only occasionally. It's important to remember that the majority of our diet should be made up of balanced, nutritious foods. Make healthy food a priority in your life and allow it to bring your family and friends together. Learn to love how it makes you feel, how delicious it is and remember that a healthy balanced diet and regular exercise are the keys to a healthy lifestyle." A quote from Jamie Oliver. More in The Body book by Nicky.



We have very much enjoyed setting up a highly productive vegetable plot and thoroughly enjoyed the added taste when eating freshly picked salads and vegetables. Not only were they much fresher than in the supermarket, we also gained substantial food cost savings.

It's really very easy to create very healthy meals. Wherever I can, I source my own from the garden and supplement this with bought salads and raw vegetables as needed.

I add texture and colour with pulses (also very cheap), plain yoghurt, cottage cheese, nuts and houmous, the latter having less sugar when natural. This year my aim is to make my own houmous.

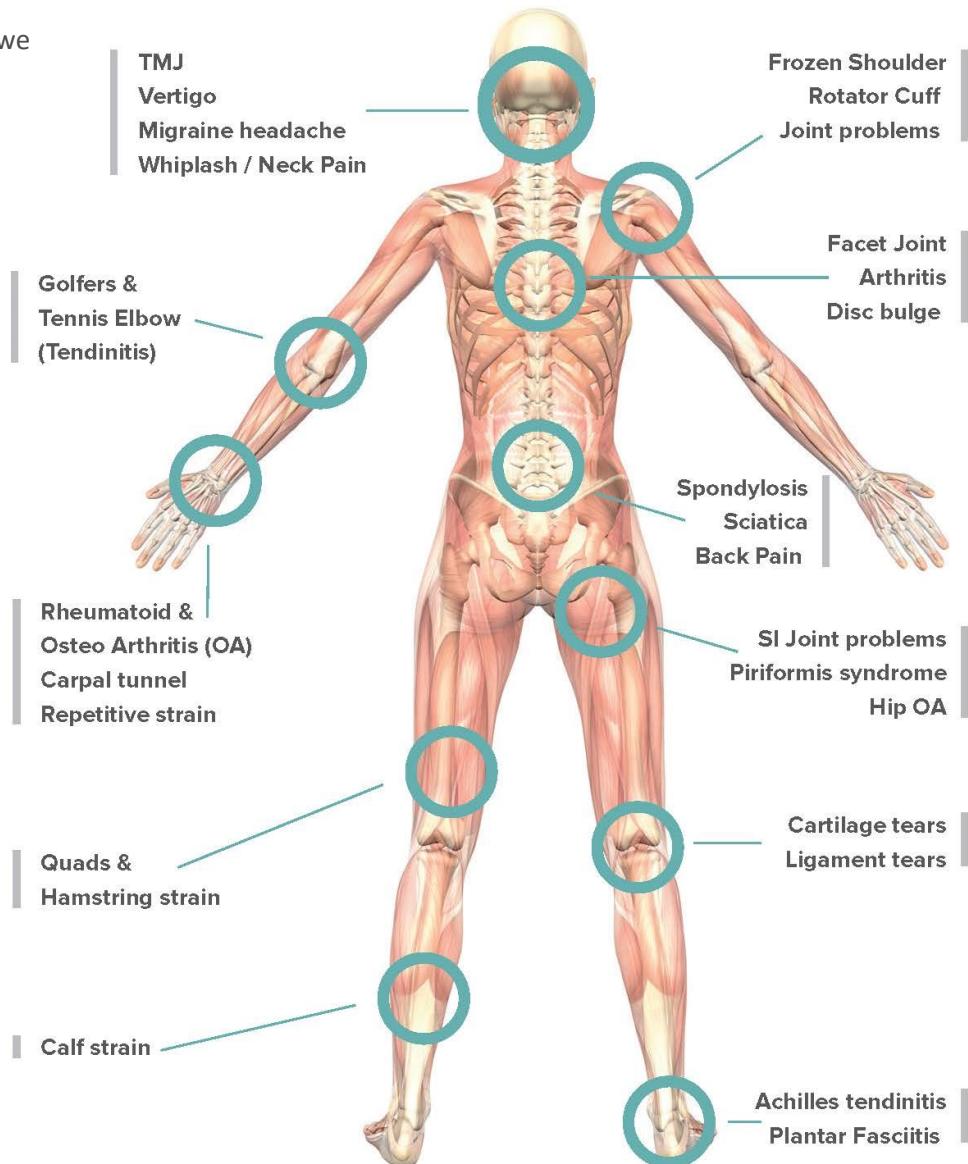
What We Do At Our Clinic

Not a month goes by without a number of our patients commenting that they were not aware of all the things we do here and if only they had known they would have booked in sooner.

It's impossible to list everything we do in this small space and the graphic below only gives a sample. In simple terms, if you have a problem with a muscle, tendon, ligament, spinal disc or joint anywhere in your body, we can help. If you want to improve your wellness, we can help with that as well.

Here is a list of the treatments we offer:

- Wellness advice & books
- GunnIMS—world specialist dry needling for chronic & sports pain
- Acupuncture
- Physiotherapy
- Sports therapy
- Post op rehab
- Biomechanics & Bespoke orthotics
- Relaxing, sports and deep tissue massage
- Personal training
- Reiki
- Reflexology
- Pregnancy pain
- Indian head massage



Contact Us

If you want to know more about the services we offer why not give us a call

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