

Non-Specific Spinal Pain Service User Information Leaflet

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What do we mean by the term ‘non-specific spinal pain’?

Your spine is made up of many segments of bone (vertebrae) with discs between the vertebrae. At each level of the spine two nerves come out (nerve roots). There is one nerve root on the left side and one nerve root on the right side. In the lower spine these nerves pass into the legs to supply the muscles in the legs and provide feeling to the legs. In the neck the nerves pass into the arms (Figure 1).

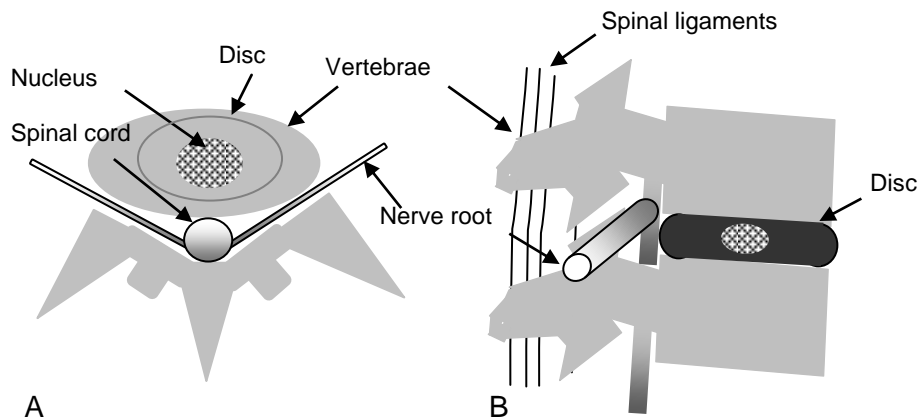


Figure 1 Spinal segments viewed from A) above and B) the side

The human body matures from about the age of 25 years old. It is therefore normal to have a few wrinkles, and perhaps a few grey hairs. Changes in the structure of the tissues in the spine are similar. These changes tend to happen in several parts of the spine (disc, muscle, and ligament) and at several levels. These changes happen in everyone, not just in people with spinal pain.

What actually causes ‘non-specific’ spinal pain?

The honest answer is that we do not really know. We think there may be several reasons for ‘Non-Specific Spinal Pain. 1) Either the tissues becomes stretched beyond their normal limit. Like an elastic band that has been overstretched and does not quite go back to its original shape. This may be the result of a specific injury or repetitive factor (Figure 1).

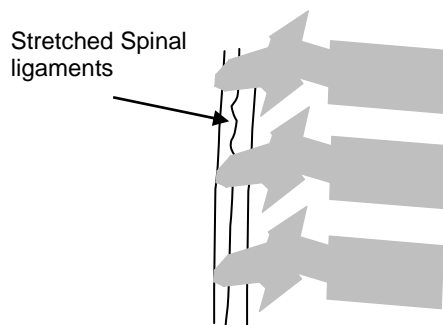


Figure 1 Non-Specific Spinal Pain possibly as a result of over-stretched spinal ligaments.

2) The nerves around the tissues, ligament or discs, may become chemically sensitised (continue to 'fire' and tell the body that damage has occurred). This is despite the fact the body usually heals in about 3 to 6 weeks after injury (Figure 2). This is similar to how the scar of a burn might remain sensitive for many years after the injury has occurred, even when the skin has healed over. It may be a mix of both the reasons above.

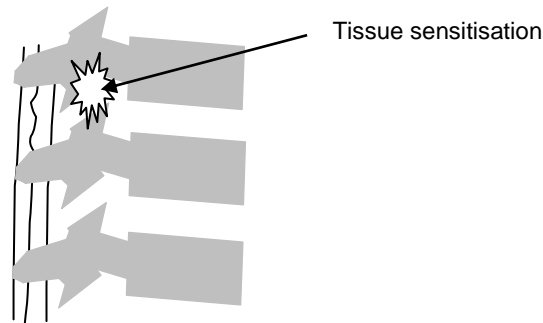


Figure 2 'Non-specific' spinal pain possibly owing to chemical and tissue sensitisation

A history of spinal pain in the family, smoking, lack of exercise and prolonged driving can also increase your risk of spinal pain.

Why can the pain persist or become 'chronic' (last longer than 3 months)?

The body has lots of pain nerve endings which send pain messages through pathways in the spinal cord to the brain, which processes these messages. The brain can also send messages back down the pathways in the spinal cord in response to pain messages. For example, standing on a pin will cause pain messages to be sent to the brain. The brain will then send a message back to the foot to move off the pain. This is an example of how pain can be useful to the body to prevent further injury (acute pain).

The spinal cord is therefore like a telephone exchange. It sends messages up to the brain and also takes messages back down the body. Chronic spinal pain can follow a spinal muscle strain or joint sprain. Despite the injury healing, the body continues to experience pain. Pain messages are sent to and from the brain despite healing having occurred. The nervous system becomes "wound-up" and is sensitised. The pathways in the spinal cord become like motorways rather than country lanes. It is therefore easier to send messages along them and they travel faster and more frequently. Even unconnected sensations such as touch, heat or cold can be felt as pain along these pathways (Figure 3).

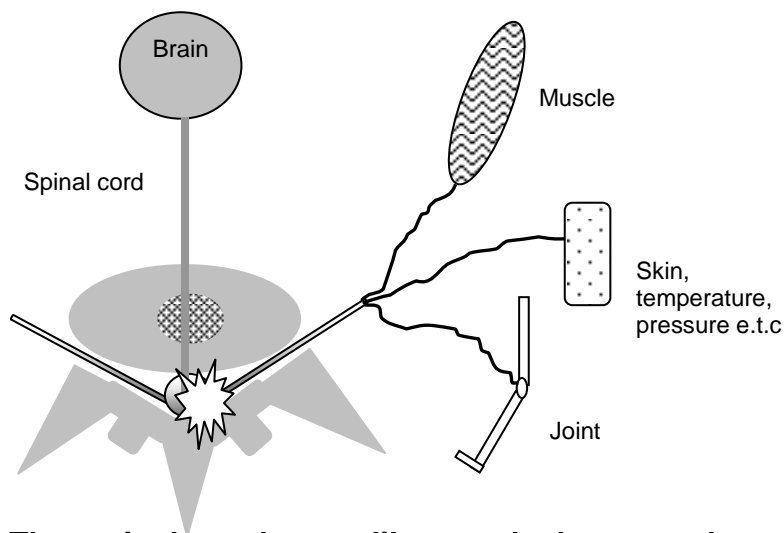


Figure 3 The spinal cord acts like a telephone exchange for the spinal tissues, skin, joints, muscles and brain

There is no doubt that spinal pain is real and comes from a physical problem in the spine. These problems often just improve with time, however sometimes the pain can persist. The way you feel about your pain may increase the pain in your spine and other tissues (Figure 3). For example, if you are anxious or stressed then this can increase the nerve signals back down the spinal cord. This can affect the level of pain experienced in your spine as a result of the nerve connections.

Should I have an x-ray or scan?

An X-ray of your spine will probably not help identify the cause of pain if your spinal pain has come on recently, unless as a result of a fall or direct trauma. This is because the 'problem' often lies in the function of the spine, not in the bony structures. If we scan people with no spinal pain, 30% to 40% of patients show evidence of disc damage. These people do not suffer any pain therefore scan results can be misleading.

It is therefore what you tell us about your pain, rather than any tests which will most help with identifying 'non-specific back pain'.

What can be done to 'cure' my spinal pain?

There are many conditions doctors can 'cure' such as a chest or ear infections. In many other conditions, however, treatment is not aimed at 'curing' but at 'managing' the problem. Spinal pain is an example of this (Table 2).

Table 2: Treatment of different conditions

Diagnosis	Treatment	Result
Chest infections	Antibiotics	Cure
Asthma	Inhalers	Symptom management
Non-specific spinal pain	Pain killers Activity Weight reduction Stop smoking	Symptom management

Healthcare professionals cannot cure spinal pain and treatments available generally will provide only short term symptomatic relief. With time spinal pain does seem to improve through natural recovery, although recurrence is possible. The role of healthcare professionals is to help you to help yourself.

What is likely to happen in the future?

From our mid teens onwards, 25% of adults report spinal pain. Typically the pain goes through a cycle of good and bad times. People with spinal pain usually report the pain to be worse between the ages of 20 to 55 years old. It affects around 85% of people at some point in their life.

What can I do to help myself?

Keeping your spine moving stops it from stiffening up. It may hurt a bit at first, but it does not do any harm. It is worth gradually working through any initial discomfort as this can help your symptoms improve quicker. Being physically fit and active will help you manage it better. This includes stopping smoking and losing any excess weight.

What are the best exercises?

You do not have to do any special exercises. Do the ones that you enjoy and that you will find easy to keep doing. Simply continue to do your ordinary activities as normally as possible. You may need to take it easier at first and gradually build it up. Being active little and often is the best plan (Table 4).

Table 4: Key messages from recent research

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| <ul style="list-style-type: none">• Bed rest for more than a day or two is usually bad for you.• The sooner you get going the faster you will get better.• Staying active will help you get better faster and prevent more spinal trouble.• Regular exercise and staying fit helps your general health and your spine.• If you do not manage to get back to normal activities quite quickly, you should seek additional help on how you can help yourself.• To date, research shows that no 'cure' has yet been found your time is better spent on exercise, rehabilitation and self management rather than focusing on looking for cure.• Try not let your spinal pain control your life. |
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Should I be off work?

It is usually recommended that you try to stay at work or get back to work as soon as possible after a flare-up. Research shows that work keeps the back strong. The longer you are off work the less likely it is that you will return.

For free and confidential advice about work call the Health Working Lives Advice Line on 0800 019 2211

Summary

Non-Specific spinal pain is a common condition. It is rarely due to any serious disease or condition. The long term outlook is good. Even when it is very painful, it does not usually mean there is any serious damage to your spine. Staying active can aid your recovery.

Useful reading

For back pain
The Back Book
TSO Information and Publishing Solutions
ISBN 0-11-322312-9

For pain that is limiting your activity
Explain Pain
Authors L Mosley and D Butler
ISBN-13: 978-0975091005

Useful Information

Back Pain
www.nhsinform.scot/illnesses-and-conditions/muscle-bone-and-joints

Sheffield Back Pain Service
<http://www.sheffieldbackpain.com/>

Pain Association Scotland
www.painassociation.com

Backcare
www.backcare.org.uk

Mental Health Advice
<https://www.moodcafe.co.uk/>

Back Pain Overview
<http://www.youtube.com/watch?v=BOjTegn9RuY>

Physical Activity Advice
www.healthscotland.com/physical-activity.aspx

Physical Activity Health Benefits
<http://www.youtube.com/watch?v=aUalnS6HIGo>