



## Low Back Pain

Although pain can be a very distressing symptom, in most people with back pain, the pain does not represent a serious medical condition.

### Learn more about back pain and its causes

Knowing what is causing your back pain, and the best way of responding, may take away some of the concerns you have when experiencing back pain.

Click on the links below to find out more about back pain, what it may be caused by, and what you should do when you are experiencing back pain.

## What is Back Pain?

**At some stage we all have experienced pain, perhaps in your back or perhaps in another part of your body. But what is pain?**

What does pain tell you? Is all pain the same? Below you can find more information on what pain is. Understanding back pain is the first step towards taking control of back pain.

### Pain as a warning signal or not?

If you, accidentally, cut your finger with a knife, you experience pain. This pain signal is triggered in the cells of the tissue in your finger that are being damaged by the sharp knife. Although unpleasant, the pain is actually a useful response from your body since it alerts you that your finger is damaged and you need to take action to prevent further damage and/or ensure recovery from the damage. This is called **acute pain**. Similarly, when you sprain a muscle in your back, you will feel a sudden jolt of pain. Again this pain signal warns you need to take action in order to recover or prevent further damage.

### "Does pain equal damage?"

However, persistent back pain is very different from the above examples. Persistent pain no longer acts as a warning signal and it does not refer to any tissue damage. The warning system goes into overdrive and sends out repeated pain signals, which are not needed or are out of proportion. The pain signals in persistent pain, also called **chronic pain**, no longer serve a useful purpose. But nevertheless you experience pain and it is virtually impossible to distinguish the useful pain signals from the disruptive pain signals. However knowing that persistent pain is often not a warning signal, means that you can respond differently to the pain. While you may think that rest is best when experiencing pain, for



persistent back pain it is actually much better to stay active. Knowing that your pain does not mean that any structures in your back have been seriously damaged can take away some of the concerns you may have about using your back whilst in pain.

### **Definition of pain**

Pain is not only a physical response; your mind also plays an important role in how you perceive pain.

One of the world's leading organisations in the area of pain research (the International Association for the Study of Pain, IASP) has defined pain as: 'An unpleasant **sensory** and **emotional** experience associated with actual or potential tissue damage or described in terms of such damage'.

In this definition you can see that pain is not only a signal that your body sends out in response to a certain trigger (a sensory experience), but also an emotional experience. In other words, how your mind responds to pain is an important aspect of how you perceive pain.

### **"Back pain is not only felt in the back - it is also an emotional process"**

You may have heard of people overcoming great pain when their mind was focused on something else. This is a good example of how the mind or your emotions can influence your pain experience. Secondly, the definition of the IASP also shows that pain could be, but is not necessarily, associated with tissue damage. This refers to the difference, explained above, between acute pain and persistent or chronic pain.

## **About Your Back**

**Your back is an amazing structure that combines strength with flexibility.**

This strength and flexibility is very important since your spinal column provides vital postural support to all other body parts while at the same time it allows you to move in many different directions. Below you can find more information on the various structures in your back and what their function is.

**[Anatomy - More about the various structures in your back](#)**

**[Physiology - More about how the structures in your back work](#)**



## **Anatomy (the structures)**

The spinal column is made up of 33 bones called **vertebrae** with **discs** that act as shock absorbers in between. These bones are given a letter and a number depending on where they are located in the spinal column:

**C (cervical)** followed by a number from 1 to 7, refers to the vertebrae in the neck.

**T (thoracic)** followed by 1 to 12, refers to the thoracic spine (where the 12 ribs are attached). Sometimes the vertebrae in the thoracic spine are referred to as dorsal with the letter D.

**L (lumbar)** followed by 1 to 5, refers to the lumbar (or lowest) section of the spine.

**S (sacral)** followed by 1 to 5, refers to the lowest vertebrae, although these vertebrae are fused together, forming the sacrum.

**Coccyx** (or tail bone), formed out of 4 fused vertebrae at the very bottom of your spinal column.

## **"Your spinal column consists of 33 vertebrae"**

The shape of the vertebrae in your neck is different from the vertebrae in your lower spine. For example, the vertebrae at the bottom are much bigger and heavier since these support almost your whole upper body while the ones in the neck only support your head.

Secondly, the shape of the vertebrae determine in what directions you can move - you can move your neck much more freely than your lower spine.

The vertebrae have a small gap (called the 'foramen') through which the **spinal nerves** run. The spinal nerves (which are part of the central nervous system) run all the way from the base of your brain to the bottom of the spinal column. The nerves exit the spinal column at the level where they need to be, for example the nerves that go to your arms, exit the spinal column in the neck area (cervical), and the nerves going to your legs exit much lower and run along the whole length of the spinal column.

The **discs** (the structures between the vertebrae) are made up of a soft jelly like substance (the nucleus), which is held inside a tough, elastic and fibrous outer casing (the annulus). The official name of the discs is intervertebral discs.

The spinal column (consisting of the vertebrae and discs) is supported by numerous **muscles, tendons** and **ligaments**. These provide strength and stability to the 'chain' of vertebrae and discs. The muscles are connected to your bones with tendons; when a muscle contracts the forces are passed on to the skeletal system via the tendons. This ensures that a muscle contraction results in a movement of a certain body part. The



ligaments provide stability to joints, but are also somewhat flexible so they can stretch or contract when the joint moves.

You will notice that your spine is not straight, but is actually an **'S' shape**. Not all backs are the same 'S' shape but they are usually curved with a hollow in the base of your neck and another in the lower part of your back.

### **Physiology (how it all works)**

From the above you can see that your back consists of many different structures; vertebrae, discs, nerves, muscles, tendons, ligaments. But this does not fully explain how they all work. Similarly, you may know all the parts of the engine in your car, but in order to really understand the engine, you will also have to know how they work. In other words you need to know about the structures (the anatomy) and the working mechanisms. The latter is called physiology.

One of the key elements of how the structures in your body function is **blood flow**. Your blood provides the various parts in your body with oxygen and nutrients ('energy'). Furthermore, your blood also provides a 'waste-removal' service by taking away the waste that is being produced when body structures use the available oxygen and energy (for example carbon dioxide CO<sub>2</sub>). One of the factors that may restrict the blood flow is smoking. This is especially important in the discs that have a very minimum blood flow (due to the high pressure in the discs it is difficult for the blood to enter the discs). Research has now shown that smoking can indeed be one of the factors that contributes to back pain.

### **"Nerves pass on messages from your body to your brain and back"**

A second element of how your spinal structures work is how the various functions are being co-ordinated. This is done via messages that travel through your nerves. One type of nerves passes messages from your brain to the rest of your body and a second type ensures that information from the various body parts is fed back to your brain. This messaging service is however slightly more complicated because before a message from let's say your lower spine reaches your brain, there can be many factors that can either suppress or re-enforce the original message.

This is of particular interest for a pain message because it provides the option to alter a pain message and by doing so turn down the volume of the pain signal. Unfortunately your body is also able to 'increase' the volume of the pain signal and this is targeted in many treatments for chronic pain. Researchers still find new factors that can alter pain messages.



## Causes of Back Pain

**Knowing what causes back pain is a big step towards preventing back pain and controlling back pain when it occurs.**

We now know that psychological and even social factors play an important role.

Back pain can originate from various structures in the back. Sometimes the exact location of where the pain comes from can be found while in other cases it is less clear where the pain originates.

Irrespective of where in your back the pain is coming from, the question is what actually caused this pain and what can I do to prevent the pain from becoming worse or re-appearing. The list of factors that may contribute to back pain is long. Not all these factors are physical factors and we now know that psychological and even social factors also play an important role. Some of these possible causes may be surprising, but are nevertheless important if we want to understand and control back pain.

This section will give an answer to the following questions:

Where does my pain come from?

What factors contribute to back pain?

### **Where does my pain come from?**

As explained in 'About your back' your back consists of many different structures that all have to work together. You may think that any abnormalities in the structure or functioning of your back result in pain, but this is not necessarily true. People have very different backs and it is difficult to define a 'normal' structure. Some people with severe deformities may not experience any back pain while others who appear to have 'normal' backs experience severe pain.

**'In most cases scans, such as X-rays and MRI's, cannot show where back pain comes from'**

This is why medical imaging such as an **X-ray, MRI scan or CT scan** is not necessarily an appropriate method of assessing back pain. Nowadays your GP or consultant will only use these scans when he or she thinks that your back pain is associated with a certain structural abnormality in your spine. This is only the case in a minority of the people with back pain. In most cases scans and test show no clear explanations for the pain. It should be noted though that even although the exact cause of the pain may be difficult to identify, the pain is real and fortunately there are a number of options when treating this type of back pain.



In some cases the back pain can be traced to a specific cause, for example:

**Muscle sprain:** sometimes you can 'pull a muscle' in your back, resulting in a small tear or sprain in your muscle.

**Disc protrusion:** sometimes the discs between the vertebrae may become weaker and bulge out. In an extreme case this may lead to a prolapsed disc.

**Prolapsed disc** ('slipped disc' or 'herniated disc'): Sometimes a disc bulges so far out that it puts pressure on the spinal nerves running in your back. You may feel this as pain in your legs (sciatica) since these nerves in your lower back run all the way down to your legs.

**Spinal stenosis:** the spinal column runs through a narrow opening in your vertebrae. If this opening becomes too narrow the nerves may become trapped, which causes pain.

**Collapsed vertebra:** the vertebrae give much of the structural support to the spine but these may become damaged as a result of disease or injury. Severe osteoporosis may result in a vertebra collapsing and by doing so disturb the surrounding structures.

The above causes may explain where the pain originates, but may not necessarily explain the degree of pain. This is where the risk factors that are discussed below may play a role.

### **What factors contribute to back pain?**

One of the most important risk factors for back pain is a previous history of back pain. This suggests that if you have experienced back pain in the past, you are more likely to have back pain re-occurring. This makes it even more important for those people with a history of back pain to take good care of their back and know what to do when back pain strikes. Furthermore, it also seems that genetic factors play a role in back pain. The fact that many of your relatives experience back pain may not mean that you will be affected by back pain, but it does imply that you probably will have to take good care of your back.

### **PHYSICAL RISK FACTORS**

Most people associate back pain with physical risk factors such as heavy lifting, twisting and bending and awkward postures. These can indeed contribute to back pain or exacerbate existing pain. Therefore you should pay attention to controlling these factors by, for example, using manual handling aids (lift, carts etc) and ergonomically assessed workstations. Other risk factors of a physical nature include vibration (for example the vibrations that a driver experiences when driving a car or truck), repetitive work and static postures.

### **PSYCHOLOGICAL RISK FACTORS**



It may seem strange to think that psychology plays a role when the problem seems to be in the back. However as explained in the '[About your back](#)' section, pain signals can be interfered with by many factors. You may all know an example from yourself or someone around you who had to endure much pain and discomfort in order to achieve something they really wanted to achieve. Think about a marathon runner who 'forgets' about the pain once the finish line gets closer and the crowd starts cheering. This may be an extreme example of how your mind can alter your pain sensation, but it plays a role in our everyday life.

**"Fact: Stress and work satisfaction  
can influence back pain"**

Mental stress, dissatisfaction at work, depression and distress can all play a role in back pain. These factors may re-enforce relatively minor pain signals resulting in a much more present pain sensation. By no account does this mean that people with back pain are mad, it merely shows that our mind and our psychological well-being plays a very important role in any pain experience. When treating back pain it is therefore very important to address all of these factors.

**SOCIAL RISK FACTORS**

After physical and psychological risk factors, there is a third category; social risk factors. Again you may wonder how can these impact on my back pain? Social factors do not necessarily impact on your back, but have an important role to play in how we respond to pain. Over the past decades, the medical profession has made great progress and we can now treat many conditions that were previously untreatable. The same expectation that everything can be treated exists for pain. However it has also become clear that a (back) pain free society does not exist. But this does not mean we should accept the burden that pain gives us. It has become clear that by showing people how to respond to pain, we can control pain and live a life that is not restricted by pain.

**"There are cultural differences  
in how back pain is perceived"**

A famous example of this is from Australia; the aboriginals in Australia seek very little medical help for back pain compared to the other groups of the Australian population. However if you ask them, many will tell you that they have back pain. This shows a fundamental difference in how people respond to pain. Pain itself may be manageable but it becomes a much bigger problem when it impacts on our daily life and people become disabled as a result of back pain. This is when action is needed. Hopefully you now



understand that back pain is a complex symptom that can be caused by a range of different factors and in most cases it is a combination of these factors that result in back pain becoming a real problem. Any attempt to control back pain should therefore address those factors that are important and relevant to you.

### **First Response When in Pain**

**Many of us will occasionally experience back pain. It is therefore useful to know what to do when back pain occurs and when to seek medical help.**

With a correct first response to back pain, you can reduce the impact that back pain has on your life and promote a swift return to your normal activities. Most people with back pain find that their pain disappears within days or weeks. The appropriate action can:

- increase your rate of recovery
- help you in continuing your daily activities when in pain;
- prevent future onsets of back pain.

The key message when back pain strikes

The most important thing to do when you experience back pain, is to **continue your normal activities** as much as you can. Although you might be tempted to rest and move as little as you can, this will only make your pain worse and lengthen the period that you are in pain. Extensive research has shown that prolonged bed rest does not result in a quick recovery.

In some cases, the pain might interfere too much with your normal lifestyle. In such cases you could take some **simple pain killers** (e.g. paracetamol, aspirin or ibuprofen) to control your pain (if in doubt, consult your GP or pharmacist).

The above recommendations would be most effective if you integrate them in your daily life. That will give you the best chance of controlling back pain and continuing your normal activities.

Read more below or click on the provided short-cuts to specific aspects of dealing with back pain.

[Staying active](#)

[Medication](#)

[Exercise](#)

[Hot and cold packs](#)

[Preventing recurrent back pain](#)



## **STAYING ACTIVE**

The evidence shows that you are most likely to reduce your discomfort from back pain if you continue your daily activities as normally as you can. In the past, bed rest was often prescribed, but this has now been shown to be counterproductive. The support and reassurance offered from a professional movement specialist trained in the management of lower back pain, enables you to regain the confidence and trust in your body, helping you to return to your normal activities and lifestyle as soon as possible.

## **MEDICATION**

In some cases the pain might be too severe to continue your daily activities. In such cases, you can consider taking over-the-counter painkillers. Many recommend you should first try paracetamol, if that doesn't give you sufficient pain relief, you could try ibuprofen. Also, more effective pain relief can be achieved by taking pain killers regularly instead of waiting until the pain is bad. You should discuss any concerns you have about medication with your GP or pharmacist, especially when you are taking these medications over prolonged periods of time.

## **EXERCISE**

A large number of research studies have shown that exercise is a very good method of reducing back pain. Joining a structured and supportive exercise programme like that offered by [Back4Good® Practitioners](#) is one of the most effective ways of staying active. Such a structured programme is the best way to move towards a healthier and happier back as well as lifestyle.

## **HOT AND COLD PACKS**

Some people find that applying hot or cold packs to the painful area can give some pain relief. There are special hot or cold packs available in most pharmacies or drug stores, however you can also improvise by, for example, using a bag of frozen peas as a cold pack. It is advisable not to apply the hot or cold packs directly onto the skin, but to wrap the packs in a thin towel or cloth.

Choosing between applying heat or cold is often a matter of trying; some prefer hot packs while others get more pain relief from cold packs. If you think the back pain comes from a muscle sprain or tear, it is probably better to try hot packs first. If you think that the pain



originates from an inflammation, it would be better to apply cold packs. Try it out, and you'll see what works best for you.

## **PREVENTING RECURRENT BACK PAIN**

Many individuals with persistent back pain have flare-ups and periods of no pain. Learning how to manage this effectively is key to maintaining a normal lifestyle. For further information refer to our section on [Prevention & Maintenance](#).

If in doubt you could always consult with your GP or other qualified healthcare provider. You can find more information on when to seek medical help in our section '[When to seek medical help](#)'.

### **When to Seek Medical Help**

**Most back pain disappears within days or weeks and does not need medical intervention. In some cases, however, you should seek advice from your GP or other qualified healthcare provider.**

As explained in the '[First aid for back pain](#)' section, there are a number of things you can do to speed up recovery and prevent reoccurrence. Most people find that their back pain disappears spontaneously within days or weeks. There are however a few occasions where you should ask your GP or other qualified healthcare provider for advice. For example when:

You experience **any other symptoms** together with your back pain, such as weight loss, generally feeling unwell, a fever, altered sensation in your lower body, incontinence or muscular weakness in your lower body.

Your pain is **persistent** or you experience **increasingly more pain and discomfort**.

Your pain is **too severe** to manage.

You have had a **recent trauma or injury** to your back.

If in doubt, you should always consult an appropriately qualified healthcare professional and we are not able to advise on any individual case. You could also consider contacting NHS Direct (0845 4647 or [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)).

NHS Direct's website has more information available on when you should urgently seek medical help, see:

<http://www.nhsdirect.nhs.uk/articles/article.aspx?articleId=234&sectionId=10>.



## Persistent Back Pain

**Although most people find that their back pain disappears within days or weeks, some may experience more persistent pain or pain that returns regularly. When this is the case you may want to explore some other alternatives that allow you to take control of your pain.**

Back pain can be persistent and many people find that their pain re-occurs regularly. The tips given in the section on '[First aid for back pain](#)' can also be useful when the pain is more persistent, but we have collected some more tips and information for people with more persistent back pain.

[What to do when pain is persistent](#)

[What is persistent pain?](#)

[Finding treatments for persistent pain](#)

[What works for most people](#)

### **What to do when pain is persistent?**

If you have tried to manage your back pain by staying active, the use of medication and the other tips explained in '[What to do when back pain strikes](#)', and found that after a number of weeks or months your pain is still bothering you, you may want to explore some other options. This however does not mean that the tips in the 'What to do when back pain strikes' section are no longer applicable. Staying active, medication, exercise, hot or cold packs can also be of use in managing persistent back pain.

The chances are that you have days of fairly minimum pain and also days of more severe pain. When feeling good, you may tend to do most things that you have to do, while on the bad days you cannot get yourself to do your daily activities because the pain is bothering you too much. There is however the risk that you over-do it on the good days and that this leads to more pain on the subsequent days. To avoid this 'yo-yoing' between good days and bad days, you may want to try to pace yourself on the good days and spread your workload over a longer period. This pacing will need some practice but after a while you will know how much you can do without over-stretching yourself and paying the price in the days after.

### **What is persistent back pain?**

As explained in the '[What is back pain](#)' section, there is a difference between acute pain and persistent pain (also called chronic pain). Acute pain, that pain you feel when you cut



your finger or sprain a muscle, is a warning signal that tells your body that a part may have been damaged and needs your attention. However, persistent pain, that may have been present for weeks or months, no longer acts as a warning signal. Instead your body has gone into overdrive and the pain that you perceive no longer refers to possible damage.

### **Finding treatments for persistent back pain**

There is a range of different treatments and products you may use to help you in controlling persistent back pain. Some people find that these treatments or products cure their back pain completely, but most people find that these treatments or products reduce the pain and make their back pain much more manageable. It is important to be realistic about your expectations from any treatment or product. Obviously everyone would prefer not to have any pain, but this is not realistic. Reducing pain to a level that is manageable and does not interfere with most of your activities is perhaps a more achievable goal.

There is a large range of treatments and products available. The [Back4Good Programme](#) offers a structured pathway to manage your pain and move towards recovery. There are also other options you may wish to consider in conjunction with our programme. To get more information about back pain and additional and supplementary treatments, you should visit [BackCare.org.uk](http://BackCare.org.uk). Like us, BackCare strongly believe that there is always something that can be done about back pain. It is important to work through the various options objectively to find the best solution for you and your lifestyle.

### **What works for most people**

Even when your back pain is persistent, it is important to remain physically active. Spending too much time in bed or on the couch is likely to result in further de-conditioning and this will impair recovery from back pain. It may not always be easy to remain physically active due to your pain. If this is the case you can consider using medication to control the pain. Some people find that applying hot or cold packs to the painful area can give some pain relief.



## Prevention & Maintenance

**Back pain is very common and in many cases difficult to prevent completely. However there are a number of things you can do to reduce the risks of developing disabling back pain.**

Good back care is not only focussed on preventing back pain from striking in the first place, but also on trying to prevent the negative consequences of back pain. In this section you can read more about what you can do to keep your back fit and healthy. Click on the sections that most apply to you:

[Good back care](#)

[Physical activity](#)

[Manual handling](#)

[Office workers](#)

[Posture](#)

## Good Back Care

**It is important to keep your back fit and healthy. This does not only put you in the best position to prevent back pain, but also enables you to control back pain when it strikes.**

### Preventing back pain

Research has shown that it is difficult to prevent back pain completely, but there are a number of things you can do to:

Reduce the risks of developing back pain, and

Reduce the impact back pain has on your life when back pain does occur.

As explained in the section on [causes of back pain](#), there are many factors that can lead to back pain. To achieve this it is important to reduce multiple risk factors for back pain by:

[Staying active](#)

[Looking after your posture](#)

[Keeping your back flexible](#)

[When lifting heavy goods, use the correct technique and lifting tools if available](#)

[Eating healthy foods and drinking sufficient water.](#)



### **Staying active**

It is important to keep your back fit and healthy by staying active and participating in regular physical activity. There is no need to run a marathon or become a fitness fanatic to achieve this; small changes to your life style can make a real difference. You can think of:

- Walking or cycling instead of taking the car.
- When using public transport, getting off one stop earlier and walking the rest.
- Gardening, hoovering, cleaning the house or walking the dogs are all examples of daily activities whereby you are being physically active.

Furthermore you should chose an exercise or activity that you enjoy and gives you the benefits you want, such as walking, swimming, cycling, going to the fitness centre, aerobics, etc. You'll find that you get most benefit if you do these activities 2 to 4 times a week for about 20 to 30 minutes at a time. You may want to alternate between activities or join a group to ensure that you keep enjoying your activities.

Besides using these activities to keep your back fit and healthy, your mind and the rest of your body will also experience the benefits.

### **Looking after your posture**

Your spine is a very flexible and strong structure that can cope with many of the stresses in daily life. Ergonomists often say that the best posture for your back is the next one, showing that regularly changing your position is very useful.

You will see that your spine is a 'S' shape and it is important to keep this natural curve of your back when sitting. Good chairs follow this natural curve of the back. However, since all backs are different, good chairs should also be adjustable to ensure you can set them up for your needs.

When kneeling, bend from the knees and not from the back, especially when you are having to lift something at the same time.

Read more about [posture](#) and back care [here](#).

### **Keeping your back flexible**

Flexibility is one of the key characteristics of your back. To improve or maintain the flexibility in your back you can do mobilising exercises. You will feel that is especially important to do this after you have been in one position for a long period of time.



Besides doing some mobilising exercises at home, you can also take part in a structured exercise classes that focus on balancing mobilisation with stabilisation like Body Control Pilates classes and the 'Healthy Back' classes offered by Back4Good Practitioners.

### **Lifting heavy goods**

Lifting heavy or awkwardly shaped items can be a risk factor for back pain, especially when you have to lift repetitively. To reduce the chances of lifting giving you a back injury, you should use manual handling aids and the correct technique. When lifting bend your knees and keep the weight as close to your body as possible. If the item is very heavy, ask for help, or use tools such as lifts to make the work easier. This is especially important when having to do repetitive lifting.

Read more about [manual handling](#) here

### **Healthy eating and drinking**

A healthy diet and drinking sufficient water is important for everyone, including people with back pain. It has been suggested that drinking sufficient water is important to keep the intervertebral discs hydrated. Besides possible benefits for your back health, a healthy diet is good for your general well being, which gives another important reason to pay attention to what you eat and drink.

**People who are physically active and participate in regular sport or exercise, not only experience better overall health but also better back health.**

Staying active is not only about taking part in sports or exercise, but also about making small changes to your daily life style. Some of the life style changes you can think of include:

- Walk or cycle to the shops instead of taking the car
- When taking the bus, get off one stop earlier and walk the rest
- Take the stairs instead of the lift or escalator
- Take the dog for a long walk instead of letting the dog do its thing in the garden
- Instead of emailing your colleagues, walk over and have a chat with them.

These are just some of the changes you can think of in order to become more physically active.

### **Sport and exercise**



Regular participation in sport or exercise is an important element of an active life style. There is a whole range of different sports and exercises and many of these are also beneficial for your back health.

People benefit from different exercises and research has shown that it is difficult to say which exercise is best for preventing back pain. However the most important thing about any exercise programme is the fact if you do your exercises or not. It is therefore important to choose an exercise or sport that you enjoy and would therefore do regularly. Examples of exercises you can think of include:

- Walking or running
- Healthy Backs Classes
- Body Control Pilates Classes
- Swimming
- Hydrotherapy (exercises in water)
- Cycling

If you need some help with increasing your level of physical activity, you can consult your GP, physiotherapist, osteopath or chiropractor. Furthermore your local Back4Good practitioner will be able to advise you on other suitable activities to supplement your recovery/management programme.

Before starting a new exercise programme, you are advised to see your GP or other healthcare specialist, especially if you haven't participated in regular physical activity for some time.

## **Manual handling**

**Lifting heavy objects has often been linked with back pain. So how should you lift correctly to avoid back pain?**

Lifting objects is part of our daily life and fortunately the strength of your back and the rest of your body allows you to do this. However, lifting (or manual handling as it is often called) is also a common cause of back pain. In order to prevent back pain it is best to lift with care and not to lift more than you can easily handle. There are comprehensive guidelines on manual handling available. Most companies have manual handling training courses and information available for their employees.

In general it is useful to adhere to the following tips on manual handling:

- Think before doing!
- Use manual handling equipment when this is available and make sure you use it correctly.
- When lifting objects, bend your knees and keep your back straight.



- Make sure you have a stable base to stand on when lifting objects.
- Carry objects close to your body.
- Lift heavy objects or awkwardly shaped objects with two or more people.

Following these tips is an important step towards avoiding back pain when doing a lot of manual handling.



## Office Workers

**Back pain is not only common in people doing manual work, many office workers also experience back pain. However, with the right measures, most back pain can also be controlled in an office environment.**

Controlling back pain entails two things; first of all reducing risk factors that may lead to back pain and secondly reducing the impact of back pain when it strikes. The measures below can be useful for both aspects.

Similarly to preventing back pain in other settings; good back care in the office should consist of a comprehensive set of measures. These measures may not, on their own, prevent back pain but as part of a comprehensive programme can make a real difference to your health and wellbeing.

Chairs and desks

Computers

Breaks

Stress

Working hours and duties

Physical activity

Ergonomical assessments

### **Chairs and desks**

Your chair and desk should fit you and your duties, especially if you have to spend long periods of time behind your desk. Most people find that adjusting their work station using the following guidance reduces their chances of developing discomfort or pain.

The height of your chair should allow you to have your feet flat on the floor and your upper leg horizontal or slightly sloping down.

The back rest of your chair should give you sufficient support, especially in your lower back. The back rest should not pinch into your shoulders.

The height of your desk should be just below your elbows when you are seated with your elbows in a 90° angle.

If you are using arm rests, make sure they do not hamper you in moving your chair close to your desk.

Bear in mind that these are just guidance notes and you should ensure you feel comfortable when seated behind your desk.



Following these tips is an important step towards avoiding back pain when doing a lot of manual handling.

### **Computers**

The top of your computer screen should be at eye level at about an arm's length distance. The keyboard and mouse should be within easy reach. When typing, the keyboard should be placed so that you have your shoulders relaxed, your elbows at a 90° angle and your wrists straight.

When using a laptop, connect your laptop to an external keyboard and/or monitor.

### **Breaks**

However well set up your work place is, the best way to stay comfortable and prevent back pain is to get up regularly and move around. Get up from your desk and make yourself a cup of tea, go over to talk to a colleague instead of emailing your message; all these small breaks can make a big difference in your comfort. Try also to teach yourself to stretch regularly.

### **Stress**

As a result of stress, your muscles become tense, you are less likely to take a break and you pay less attention to your comfort. All this can increase your risks for developing discomfort and back pain. Managing stress should therefore be part of any programme that is aimed at enhancing your health and well-being.

### **Working hours and duties**

Long periods of repetitive work can be detrimental to your well-being. Controlling long working hours is often easier said than done, but should be taken seriously when you experience back pain. Carefully planning your work and alternating various duties (e.g. break up your desk-based work with doing some other duties) can make a big difference.

### **Physical activity**

Increasingly, organisations offer employees the opportunity to take part in fitness or exercise classes. Take advantage of this when it is available or make your own



arrangements. Not everyone may be able to go to the gym in their lunch breaks, but a brisk walk is easy to include in your daily routine. Walk or cycle to work, or when this is not possible take the bus and get off a stop earlier and walk the rest. In the beginning this may all feel a big effort, but once it is part of your daily routine it is a great way of getting some exercise. Staying active and exercising is very important in reducing your chances of developing back pain and many other diseases!

### **Ergonomical assessment**

A comprehensive ergonomical assessment of your work place can be very useful when having to cope with back pain at work. Your HR department or occupational health department will be able to tell you how you can arrange an ergonomical assessment of your work place. If this is not available in your organisation, you could also seek the advice of a physiotherapist, occupational therapists or ergonomist.

## **Posture**

**Many people associate back pain with bad posture. But what is good posture and how can this prevent back pain?**

People have different shapes and sizes. Similarly, spines come in many different shapes and sizes. Generally speaking your spine is curved in an S-shape with, when looking from the side, a curve in your neck and in your lower back. When looking from behind most spines are straight with all vertebrae in one line. However, exceptions do apply. And it is important to realise that if your spine is shaped differently this does not necessarily mean you have or will develop back pain.

In order to keep our back fit and healthy, we should adopt a posture that allows the structures in our back to do the things they are supposed to do. 'Bad' posture can put unnecessary strain on the muscles, tendons, ligaments and vertebrae which in the long term may result in structural changes that can constrict blood vessels and nerves or cause other problems with the muscles, joints, discs in the spine.

### **Good posture**

Your body can take numerous different postures and it is almost impossible to describe them all here, however some general principles to promote good posture:

- Make sure your back is well supported when seated for long periods of time. Extra support in your lower back can improve the comfort of many seats and chairs.



- Keeping your neck and head in line with your spine prevents unnecessary strain on the muscles in the neck.
- When looking from behind, your spine should be straight. If you have to bend your spine sideways for a long time, you will start to feel uncomfortable.
- Many chairs and seats have been designed to fit this natural S shape of your spine. Many people find that maintaining this S shape when seated gives them more comfort and less pain.

But more importantly: move around regularly. Even the best posture will start to become uncomfortable after some time. Move around and change your posture regularly.

**Examples of bad posture include:**

- Hunching the shoulders forward
- Slumping in your seat

To prevent such postures from giving you back pain, you should restrict the amount of time you adopt these 'bad' postures. While your body is perfectly able to cope with many of the daily stresses, excessive exposure to such bad postures may increase your risk of developing back pain.

## **Facts & Figures**

**The following facts give an overview of the total number of people affected by back pain, the associated costs and various other facts and figures.**

### **KEY FACTS**

Back pain is very common; according to a survey published in 2000 almost half the adult population of the UK (49%) report low back pain lasting for at least 24 hours at some time in the year. (1)

It is estimated that four out of every five adults (80%) will experience back pain at some stage in their life. (1)

Although in most cases back pain is nothing serious and disappears spontaneously, the sheer number of people affected makes it a very costly condition imposing a considerable burden on the individual and society.

Simple measures can be taken to reduce the chances of developing back pain and thereby reducing the impact of existing back pain.

### **NUMBER OF PEOPLE WITH BACK PAIN**



In industrialised countries, up to 80% of the population will experience back pain at some stage in their life. During any one year, up to half of the adult population (15%-49%) will have back pain. (1, 3)

The number of people with back pain increases with advancing age, starting in school children and peaking in adults of 35 to 55 years of age. Back pain is just as common in adolescents as in adults. (3)

### **CAUSES OF BACK PAIN**

In most cases it is very difficult to identify a single cause for back pain. In about 85% of back pain sufferers no clear pathology can be identified. (4)

The following factors could contribute to back pain: Having had back pain in the past, smoking and obesity. (3) Physical factors such as heavy physical work, frequent bending, twisting, lifting, pulling and pushing, repetitive work, static postures and vibrations. (5) Psychosocial factors such as stress, anxiety, depression, job satisfaction, mental stress. (3, 6)

### **RECOVERY FROM BACK PAIN**

Back pain is, in most cases, a self-limiting condition and 90% of people with acute back pain will recover within 6 weeks. (4)

Up to 7% of people with acute back pain will develop chronic back pain. These chronic patients have considerable discomfort and account for approximately 80% of the social and health care costs. (4)

### **THE COSTS OF BACK PAIN**

The National Health Service spends more than £1 billion per year on back pain related costs.

This includes:

£512 million on hospital costs for back pain patients.

£141 million on GP consultations for back pain.

£150.6 million on physiotherapy treatments for back pain. (2)

In the private healthcare sector £565 million is spent on back pain every year. (2)

This brings the healthcare costs for back pain to a total of £1.6 billion per year. (2)

In addition there are other (indirect) costs. The Health and Safety Executive estimates that musculoskeletal disorders, which include back pain cost UK employers between £590 million and £624 million per year. (8)

The total cost of back pain corresponds to between 1% and 2% of gross national product (GDP). (9) Other European countries report similarly high costs; back pain-related costs in



The Netherlands in 1991 were more than 4 billion euros.  
For Sweden in 1995 these were more than 2 billion euros. (10)

### **THE IMPACT OF BACK PAIN ON THE INDIVIDUAL**

Back pain, in particular persistent back pain (i.e. for longer than 3 months), can have a significant impact on people's lives. It frequently reduces their quality of life and adversely affects their family and social relationships. (7)

### **THE IMPACT OF BACK PAIN ON WORK AND SICK LEAVE**

Nearly 5 million working days were lost as a result of back pain in 2003-04. This means that on any one day 1% of the working population are on sickness leave due to a back problem. (11)

Back pain is the number 2 reason for long term sickness in much of the UK. In manual labour jobs, back pain is the number one reason. (12)

### **THE TREATMENT OF BACK PAIN**

Nearly 40% of back pain sufferers consulted a GP for help; 10% visited a practitioner of complementary medicine (osteopaths, chiropractors and acupuncturists). (13)

When experiencing back pain it is very important to stay active. Bed rest will only make the pain worse. (14, 15)

Physical exercise can be a very effective method to reduce the pain and discomfort that long-term pain sufferers experience. (15)

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Website [www.backcare.org.uk](http://www.backcare.org.uk)