A close-up photograph of a person's bare back, focusing on the lower back area. Two hands are placed on the lower back, one on each side, with fingers spread, suggesting a massage or a point of discomfort. The skin is a warm, golden-brown tone. The background is a solid, vibrant blue.

Beating back pain

Information on preventing
and tackling back pain

BHMA®
British Holistic Medical Association

Beating back pain

If you get back pain you are not alone. Eight out of 10 people experience back pain at some point in their life and it is the second most common reason that people see a GP. Luckily, most acute (short-term) back pain eases off within a few days however, once you've had a bout of back pain it can come back - so knowing how to keep on top of your back health is key.

Persistent or 'long term' back pain, although less common, is the biggest cause of disability in adults under the age of 45.

If you're prone to back pain, or simply want to prevent it, this booklet will help you understand your back better and show you how to tackle back pain and reduce your risk of developing future back problems so you can beat back pain for good.

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How your back works

- Your spine is made up of bony segments (vertebra) that are stacked on top of one another.
- These vertebra are held together by tough fibrous straps called ligaments (which can be injured by extreme forces).
- Between each vertebra there are shock absorbing rubbery discs.
- Together, the flexible discs and the hard vertebra form the spinal column.
- The back muscles attached to the column and pelvis form a system of dynamic guy-ropes.
- These muscles do two things – by contracting and relaxing they pull the spine in different directions and their balanced tension holds you upright.
- The spinal column also protects the delicate spinal cord and the nerves that leave the cord by passing between the vertebrae.

The muscles of your back are in three layers, which, along with the girdle of abdominal muscles round your waist, make your back stable. Sitting and standing upright means your body is working against the pull of gravity all day long – this demands a lot from your spine and back muscles. **So, unless you're lying down, your back muscles are always at work.** Even when you're not doing much they are actively maintaining your posture and keeping your body stable so you can work with your arms and legs.

What causes back pain?

Most back pain happens when muscles are overused, overloaded or overstretched. This can cause relatively minor strains that trigger painful muscle spasm. Think about the way the back works. It depends on its muscles for stability as well as movement and power. The muscles act as guy ropes and also as 'check-straps' – a bit like a shock-cord that stops a window opening too far. The small spinal muscles restrain movement and when over stretched will tense up if they feel a spinal joint is being overloaded.

In a similar way, doing a stint of heavy work (like lifting or gardening) when you're not used to it will often trigger a gradual build up of back tension and discomfort. This is because under exercised, unfit muscles get sore after too much has been unexpectedly demanded from them!

Even though acute back pain is unlikely to be caused by serious medical conditions, the pain can be intense. However, most cases improve within a few days without the need for medical attention, and clear up entirely in less than six weeks. Back pain does commonly recur after a first attack though.

Back fact: most cases of low back pain clear up in a short time and are not due to serious problems.

Trigger points

After a stint of acute back pain, the back muscles may be left weaker than they were before, because you stop using them. You might even have noticed that the way you walk and sit is slightly different since you recovered from acute backache. This means there is an imbalance between the stronger muscles and the weaker ones making it more likely for the back muscles to react to overuse, overloading or overstretching.

Trigger points can develop in muscles that have become weak and sensitive. You may find there are tender points in some of your back muscles. These trigger points – irritable spots in over-stressed muscles – can cause local pain, stiffness, and may even direct pain to other parts of the body – like the buttock, hips or down the leg. Trigger points make muscles shorter, tighter and weaker, stiffer and more sore. This may mean your back gets irritated even from a small bit of activity. Trigger points can be relaxed by skilled massage or often just by using pressure from a back roller.

Less common causes of 'simple mechanical' back pain include:

- bulging or herniated disc (caused by pressure on a weakened disc making it irritate nearby nerves – especially the ones running to the leg which may cause sciatica)
- wear and tear of older discs and spinal joints
- spinal stenosis (narrowing of the spinal canal)
- sacroiliac joint strain or inflammation.

A note on long-term (chronic) back pain

Chronic low back pain is pain that goes on beyond 12 weeks. However, this is uncommon and it makes up only 1% to 5% of all low back pain cases. Chronic pain, though it may have started off as a muscle strain, seems to be due to a kind of “nerve memory” that lingers after the original source of irritation has resolved. The brain and spinal cord get used to this ongoing noise in the system and amplify and distort normal sensation and pain. This may cause normally non-painful sensations to become painful and make pain spread to other, previously unaffected areas. Emotional upset, and some medications can make this worse but distracting the nervous system through controlled active exercise can help wind the pain cycle down.

Back fact: long term (chronic) back pain makes up only 1%-5% of all low back pain cases.

Getting help with back health

Most cases (around 95%) of low back pain is 'simple mechanical low back pain' and not due to serious problems. However, you should get advice if your pain is severe, isn't improving or lasts longer than six weeks. If you have any of the following symptoms you should speak to your GP or call NHS Direct 0845 4647 (England and Wales only) **immediately:**

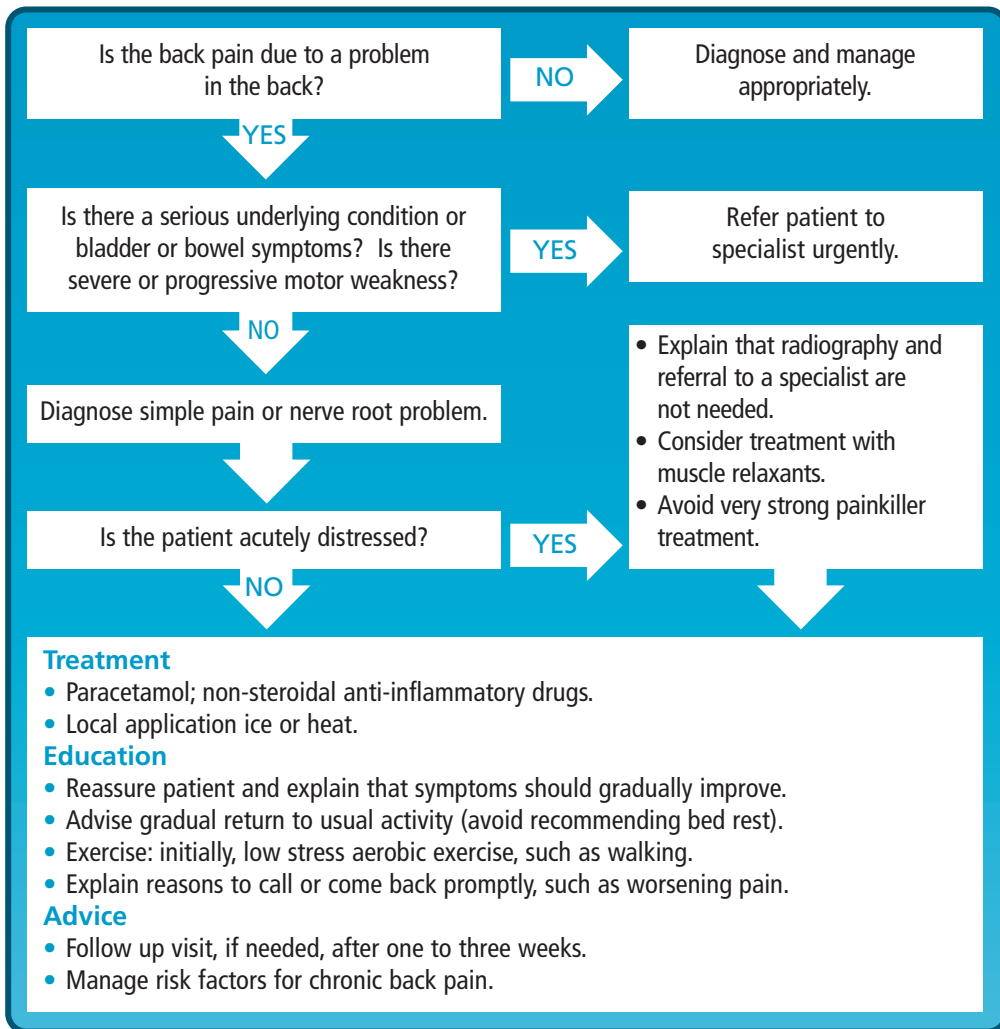
- if you have widespread weakness or disturbances of sensation – like numbness or feeling unsteady
- if you have loss of bladder or bowel control.
- if the pain doesn't ease off when you lie down
- if the pain is in your upper back
- if you're unwell (fever, upset stomach, urine problems or sudden weight loss)
- if you have had any serious disease in the past (cancer, HIV, long steroid courses)

Seeing your GP

For most people with acute back pain the GP is the first port of call. Some people may go straight to a physiotherapist, osteopath or chiropractor who often work closely with GPs in managing back pain.

A GP will take a medical history and do a brief physical examination to rule out serious causes. **Special investigations and x-rays or scans are rarely necessary unless more serious causes are suspected.**

Here's how your GP may tackle back pain.



A note on complementary therapies

For information on complementary therapies (like **osteopathy**, **chiropractic** and **massage**) for treating back pain and details on how to find a well qualified practitioner visit The Complementary Medical Association website **www.the-cma.org.uk**. Some GP practices provide access to complementary practitioners so may be able to refer you.

Sciatica, trapped nerves and slipped discs

Simple low back pain can make the thighs feel achy even though there's no disc prolapse or 'trapped nerve' involved. Sciatic pain due to a disc prolapse causes one sided leg pain which is worse than the low back pain itself. The pain may shoot or spread right down into the lower leg and toes due to nerve irritation which can also cause numbness and pins and needles and sometimes even a slight weakness in the leg.

Get advice though if the nerve irritation symptoms are more severe, or getting worse or last longer than a month. Occasionally a disc that presses on nerves to the bowel or bladder may make it difficult to control bowel or bladder function, or cause numbness between the thighs (saddle anaesthesia). Contact your GP immediately or call NHS Direct (England and Wales only) on 0845 4647.

Back fact: **low back pain and sciatica are most common between the ages of 40 to 60.**

How can I treat back pain myself?

There is a lot that you can do to beat back pain.

- **Take simple painkillers.** Start with paracetamol and if you need stronger pain relief then try paracetamol/codeine tablets. It might also help to add ibuprofen* (400mg), but don't take this on an empty stomach. Ask your pharmacist for advice on simple pain relief.

Back fact: bed rest is not best as it prolongs the pain.

- **Warm and/or cold packs may help relax the sore muscles.** Place an ice pack or bag of frozen peas **wrapped in a towel** on the area. If ice doesn't help, try a hot water bottle. A warm bath or shower might also help. Some people find alternating heat and cold gives the most relief.
- **Avoid bed rest as it will only prolong the agony!** Try to stay as active as possible – without over doing it – and carry on with your normal daily activities like working. As soon as you can, start gentle mobilisation exercises to help relax the back and avoid further spasm. Gradually increase your level of physical activity each day. Use the basic stretching exercises in this booklet to keep your flexibility and ease the muscle tension.

* If you are asthmatic, have ulcers, suffer from indigestion, are on warfarin, or are pregnant speak to your GP or pharmacist before taking ibuprofen.

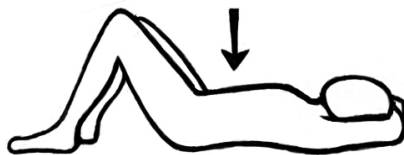
Stretch yourself: exercises to prevent and relieve back pain

When you first get acute back pain, you might find stretching painful – even getting out of bed can feel like a mission. Using these simple stretching techniques will help – remember staying in bed and immobile will only make back pain worse!

It is normal for the first movements after sitting or lying to feel particularly sore. So before you even get out of bed it may help to stretch your back slowly. Try the following exercises **while you're still in bed**. Once you get up, repeat them slowly and gently once more.

Pelvic tilt

Lie on your back with knees bent and your feet flat on floor. Tighten your buttocks and abdomen, flattening the small of your back into the floor as you breathe out. Hold for a slow count of five. Slowly relax the pressure as you breathe in. Repeat 5-15 times.



Back stretch

Lie on your back, and use your hands to pull both knees up to your chest. At the same time slowly bend your head forward until you feel a comfortable stretch in this curled up position. Hold for 20-30 seconds.



Knee to chest stretch

Lie on your back with your knees bent and both feet on the floor. Place your hands behind one knee and slowly draw it towards your chest. Hold for 20-30 seconds then switch to stretch the other side. Hold for 20-30 seconds.



Gentle passive twisting

Lie on your back with your hips and knees bent, your feet flat on the floor and your arms resting slightly away from your sides. Gently flatten your neck and back into to the floor. Slowly and gently rotate your legs to the left. Slowly twist your body, keeping your right shoulder blade and forearm flat to the floor until you begin to feel a comfortable stretch in your spine and possibly in your right hip and the front of your right shoulder. Hold for 20-30 seconds, then slowly rotate the other way.



Once you're out of bed the cat and the lying extension exercises on the next page might help your back relax and get it ready to get moving too.

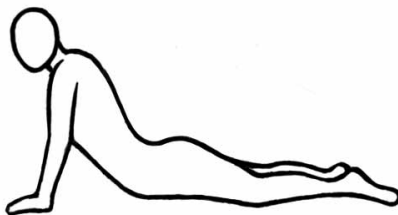
Cat exercise

Carefully get on to all fours. As you breathe in, gently arch your back like a cat and hold for a count of three, trying all the time to tuck your 'tail' under you. As you breathe out, let your back move back to its original position. If it feels comfortable to hollow your back slightly then do so. Repeat six times slowly so you feel the movement getting into the lowest part of your back.



Lying extension

Lie on your front and gently push yourself up onto your arms. If this is too difficult then gently push your chest away from the floor or up onto your elbows. **Stop if it's too painful.** Aim to relax in this position.



Starting a stretching routine

Everyone can benefit from building stretching in to their daily routine. If you keep your back muscles strong and your spinal column flexible your back will have more power and an easier range of movement. This means that your back is less likely to become painful through being overused or overstretched. If you don't stretch and strengthen your back muscles, and you overuse them even a little, they will tend to get stiff, sore and irritable.

The muscles, ligaments and tendons in the back, legs, buttock, and around the spine are designed for action and movement – not for sitting at our work station or watching the TV for hours on end!

If you have ongoing back discomfort you may find it takes weeks or months of stretching to get the spine more supple and the soft tissues to relax and lengthen again. **Persevere.** If you manage to do this then you will really feel the pain relief and will usually be able to sustain it. Just 10 minutes of stretching morning and night could be enough to change your life for the better!

Back fact: stretching exercises are good for back health – try to stretch every morning after getting up and then again before going to bed.

When starting your stretching routine:

- wear comfortable clothes that won't restrict you
- don't force the body into difficult positions – stretching shouldn't hurt more than a little
- move into the stretch slowly and avoid bouncing – this could actually bring on muscle spasm
- stretch on a clean, flat surface where you have room to move freely
- hold your stretches long enough (20-30 seconds) to allow muscles or joints to loosen up
- repeat the stretch, generally 3 times.

If you currently have low back pain or neck pain, check with your medical adviser, osteopath or physio about whether the following exercises should be done. If pain during exercise is more than mild or lasts more than 15 minutes, you should stop exercising until you can get some expert advice.

Neck and shoulder stretches

A stiff back can often trigger a stiff neck – and vice versa. These exercises help stretch the neck and shoulder area.

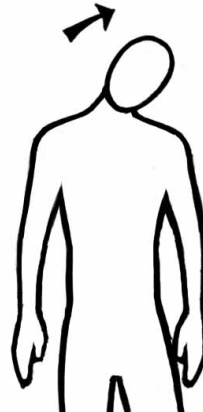
Chin to chest stretch

While standing or sitting, gently bend the head forward, bringing the chin towards the chest until you feel a stretch in the back of your neck. Hold for 20-30 seconds.



Side stretch – ear to shoulder

This exercise stretches the parts of the neck from below the ears to the top of the shoulder. Gently stretch the neck to one side as if you're trying to touch your shoulder with your ear until you feel the stretch in the side of your neck. Hold for 20-30 seconds then switch to stretch the other side. Hold for 20-30 seconds.



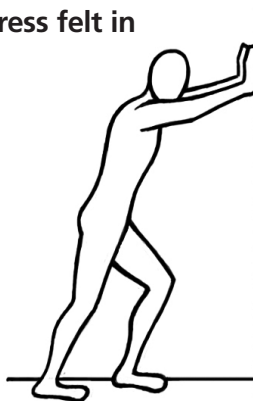
Hips, buttocks and hamstring stretches

The hips and buttocks work hard to support the lower back. Stretching these muscles can help make your back more supple.

The hamstrings run through the back of each thigh. Tightness in this muscle limits motion in the pelvis which can increase stress across the low back and affect correct posture. Stretching the hamstrings can gradually lengthen them and reduce the stress felt in the lower back.

Hip and calf stretch

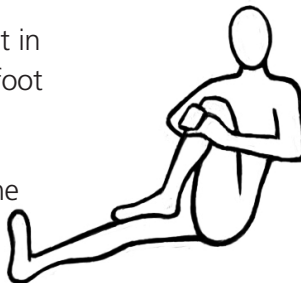
Keeping your back leg straight and your foot (which should be turned slightly outward) flat on the floor, lean in to a wall until you feel a stretch in the calf. Hold for 20-30 seconds. Repeat stretch on alternate leg.



Hip and hamstring stretch

Sit on the floor with your right leg straight out in front. Bend your left leg, and cross your left foot over, placing it outside your right knee.

Pull your left knee across your body toward the opposite shoulder. Hold for 10-20 seconds breathing easily. Repeat on the other side.



Chair hamstring stretch

This method avoids straining your back. Sit on a chair and rest your legs straight out in front on another chair. Reach slowly towards your toes until you feel a stretch at the back of your thighs or knees. If you can't stretch your legs out straight, you may find it easier to stretch one leg at a time, or to use a lower chair to rest them on.



Your back stretching routine should always include 30 seconds of hamstring stretches. The hamstring muscles take some months to lengthen out, so you should try to do these stretches twice a day even if you don't manage the other other stretches.

Back stretches

Many people find their back feels stiff first thing in the morning. This exercise along with the pelvic tilt, back stretch and knee to chest stretch (see page 12) should help restore some suppleness, improve your range of movement and reduce your back pain and discomfort.

Sitting back stretch

Sit on a low chair and curl your spine down towards your feet. Try not to bend too much from the hip but rather curl your spine down, one vertebra at a time, starting at the top and stopping when you feel a good stretch in your lower back. Don't let your bottom lift up.



Strengthening your core muscles

These simple stabilisation exercises can help prevent low back pain.

Having strong core support muscles reduces the stresses on the lower back and pelvis. This involves strengthening the abdominal muscles in the front and the gluteal muscles at the back. Remember to take a few days off between strengthening exercises to let the body rest.

You may be interested in the following simple stabilisation exercises if you have had some episodes of back pain and are aware that you're likely to have more in future. You should in that case have been checked over by your GP or a specialist at some point and been told that you have simple mechanical back pain. These exercises are suitable for someone with long term low back discomfort rather than acute pain. As with any exercise programme, you should warm-up with a gentle stretching routine (see pages 15-19), and cool-down by walking around for five minutes after your low back stretching and strengthening routine.

The routine should generally be helpful unless you have certain patterns of muscle imbalance or spinal stiffness. If this is the case then your problem is unlikely to respond to this kind of training. So if the routine doesn't make your low back or leg pain better or even seems to make it worse then ask your doctor or physiotherapist, osteopath or specialist who has experience with rehabilitation exercises.

Abdominal muscle strengthening

This is not an abdominal crunch or a sit-up. The aim isn't to build a "six pack", but to work the transversus abdominis muscle (**TVA**). The TVA is the sheet of muscle that wraps round the side of the abdomen, and stretches between the lower ribs and the top of the pelvis. It is one of the main muscles stabilizing the lumbar spine and pelvis.

When you're working the TVA it's important to maintain a neutral lumbar spine. This is the back's optimal position when you're standing or sitting. It is the mid-point in the lumbar spine's range of motion and is where it's least vulnerable to strain. When you start the TVA exercise you need to make sure you're not pushing your back flat into the floor, or on the other hand, letting your low back tense up into a curve that lifts it away from the floor. This is called 'pelvic neutral'.

Take a little time to feel what that's like. Lie on your back on the floor with your knees bent. Knees and feet should be about shoulder-width apart. Not sure if you're in neutral? Imagine there is a clock face glued to the front of your pelvis – 12 o'clock being nearest your head. First rock your pelvis forward by flattening your back into the floor to make your clock face tilt up towards your head – so the 6 o'clock is higher than 12 o'clock. Hold, and take a couple of shallow breaths.

Now make your pelvic clock tilt downward by rocking your pelvis the other way so your back arches very slightly and the 6 o'clock is lower than the 12 o'clock. Hold and take a couple of shallow breaths.

Now come back to the middle of that range of movement. You should still have a small natural arch to your back (not quite enough to get your fingers under). Relax, and get the feeling of what pelvic neutral feels like!

Your “pelvic clock” is now horizontal. This is pelvic neutral!

Your TVA in action!

Lie on the floor with your knees bent and find your pelvic neutral. Put your hands on the front part of your groin area, with your thumbs touching at the navel and your fingers touching at the midline, about 2-3 inches below the navel. Now imagine zipping yourself into tight trousers. You’ll automatically find the area under your thumbs and fingers hollows toward your spine – even if only for an instant. This is your TVA in action. Pay attention to keeping the rest of your body relaxed, and hold your pelvic neutral.



The TVA core strengthening exercise (the basic movement in Pilates)

First find your pelvic neutral:

Lie on your back on the floor with your knees bent. Knees and feet should be about shoulder-width apart. Breathe out and flatten your back into the floor for the count of one and two and three. Now breathe in and exaggerate the hollow of your back so that it arches a little off the floor for the count of one and two and three. Now drop into pelvic neutral.

Now the TVA exercise

First tighten up your tummy so that you feel you're drawing your tummy button towards your spine as though you were trying to zip yourself into a very tight pair of trousers.

Now, as you breathe out, reach up toward the ceiling as if trying to grab a cross-bar that's hanging from the ceiling above your shoulders, and as you do this let your head and shoulders rise easily off the floor, but only to the point where the lowest part of your shoulder blades are just lifting the floor.

Simply hold this for the count of three. Then as you slowly breathe out, lower your shoulders to the floor again. Relax and breathe in, and at the end of the next exhalation repeat the reach and lift. **Stop if it causes pain.** Otherwise, repeat until you feel you can't keep your spine in the neutral position any longer, your breathing rhythm gets hard to maintain, you feel too tired to continue or if you feel any acute pain.

Do this every alternate day until it gets easier - then try and do it daily but with weekends off.

Back fact: Back pain can usually be prevented by having a better posture, doing regular stretching sessions, sitting, standing and lifting properly, taking regular exercise and maintaining a healthy body weight.

Buttock strengthening exercise

The gluteus maximus is one of the strongest muscles in the body and covers a large part of the buttock. To strengthen this muscle, **stand** upright and relaxed with your feet shoulder-width apart and your toes pointing slightly outwards but without tensing up your knees. Make sure your pelvis is in "neutral" then gently zip and hollow your lower abdomen as in the previous exercise as you breathe out. Now tense your buttocks and hold for 3 seconds. Relax and breathe in slowly. Check that you are in pelvic neutral.

Stop if it causes pain.

Repeat 3-5 times gradually increasing until you feel you can't keep your spine in the neutral position any longer, your breathing rhythm gets hard to maintain, you feel too tired to continue or if you feel any acute pain. Do this every alternate day until it gets easier – then try and do it daily but with weekends off.

Other healthy back activities

Your healthy back routine could include stretching, swimming, walking, pilates and movement techniques. Tai Chi improves coordination and develops better posture and muscle balance. Any mild discomfort felt at the start of any form of exercise should lessen as muscles get stronger.

Yoga and pilates are excellent activities for improving your posture and flexibility while at the same time strengthening your core muscles. Find out about classes in your area through the local paper, library, gym, health centre, internet or phone directory.

Watch your back at work

Remember to look after your back when you're at work. Avoid staying in fixed positions for big chunks of time – like when you're sitting at a desk or driving. Having a stretch every so often will help you avoid getting back pain and will relieve muscle tension. Try the neck and shoulder stretches (page 17) or sitting back stretch (page 19) that you can easily do at your workstation or during breaks.

Tips for desk workers

1. Sit with your knees about level with your hips. Your chair seat should end about 2/3 down your thighs. Seat height should allow your feet to rest flat on the floor and your knees should fit easily under your desk or table top.
2. Adjust your computer screen so you can just see over your monitor without looking upward. If you have to use a laptop for long periods of work – beware! They can make you slump and strain your neck. Get a plug-in keyboard and place the laptop at the right level.
3. Place items that you use most often in your workstation within arms' reach to avoid straining your neck.
4. Keep frequently used items on shelves that are at a height between your shoulders and hips.
5. Do not twist and bend at the same time, especially while lifting.
6. If you have to move something heavy by yourself, pushing is better than pulling.



Reduce your risk of back pain: do's and don'ts

Do

- Switch heavy objects you carry from side to side.
- Sit up straight. Use a lumbar support cushion or rolled up towel in the hollow of your back.
- Get sufficient rest on a bed that provides good back support and doesn't sag.
- Drink at least a litre of water a day.
- If you're on the phone a lot, use a speaker phone, a shoulder rest, or a headset.
- Get advice if your back ache won't go away.

Don't

- Carry a heavy bag on one shoulder.
- Slouch in your chair, hunch your shoulders, or keep your head tilted or rotated to one side.
- Sleep on your stomach or a saggy mattress.
- Drink lots of caffeine, fizzy drinks, or alcohol.
- Cradle a phone between your ear and shoulder or always use the same ear when talking on the phone.
- Don't imagine your back pain will just go away without you having to do some preventive exercises.

More information

BackCare, the charity for healthier backs, offers a wide range of publications to help you deal with and prevent back pain. For more information and to become a member of BackCare visit **www.backcare.org.uk** or call the **BackCare Helpline** on **0845 130 2704** (all calls charged at local rate). This helpline is open every weekday. Times vary – see website for details or call the office on 020 8977 5474.

Health and Safety Executive (HSE). For more information on the HSE's 'Better Backs' campaign visit: **www.hse.gov.uk/msd** or call the **HSE Infoline** on **0845 345 00 55** for guidance and expert advice on workplace health and safety.

To find a **chiropractor** in your area contact the General Chiropractic Council, tel: 020 7713 5155. **www.gcc-uk.org**

To find an **osteopath** in your area contact the General Osteopathic Council, tel: 020 7357 6655. **www.osteopathy.org.uk**

To find a **massage therapist** in your area contact the **General Council for Massage Therapy**, tel: 0151 430 8199. **www.gcmt.org.uk**

For information on other **complementary therapies** for treating back pain and details on how to find a well qualified practitioner visit The Complementary Medical Association website **www.the-cma.org.uk**

Information on a wide range of health topics, including back pain, is available from the **NHS Direct** website at **www.nhsdirect.nhs.uk**; on NHS Direct Interactive on digital satellite TV (simply press the interactive button on your remote control), or by calling NHS Direct on **0845 4647*** (England and Wales only, people in Scotland can call NHS 24 on **08454 242424**).

*Calls are charged at BT local rates. Calls from mobiles or other networks may vary.
A confidential interpretation service is available in many languages. For patients' safety all calls are recorded.

www.bhma.org

This booklet contains general information produced on behalf of the British Holistic Medical Association which can be used as the first step to help you decide the best course of action to take when you or your family are not well. In the absence of any examination it is not possible to reliably diagnose and treat a medical condition. Diagnosis can only be carried out by a suitably qualified health professional consultation.

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