



What is osteoporosis?

Osteoporosis occurs when the struts which make up the mesh-like structure within bones become thin causing them to become fragile and break easily, often following a minor bump or fall. These broken bones are often referred to as 'fragility fractures'. The terms 'fracture' and 'broken bone' mean the same thing. Although fractures can occur in different parts of the body, the wrists, hips and spine are most commonly affected. It is these broken bones or fractures which can lead to the pain associated with osteoporosis. Spinal fractures can also cause loss of height and curvature of the spine.

This fact sheet explains how to relieve pain caused by fractures (broken bones) using pain relieving medications, and how you and your doctor can work together to find a medication that works best for you.

Pain with osteoporosis happens only if you have had a fracture (broken bone). Fracture pain can be acute (intense) for around six to eight weeks whilst the fracture is healing and then it gradually improves. Most people with fractures recover well and return to a full and active life, although sometimes a healed fracture may continue to cause pain. This persistent or 'chronic' pain can happen with any fracture, but it is more likely with spinal compression fractures

For more information on spinal and other fractures, see Chapter 1 of our booklet 'All about osteoporosis'.

As the experience of pain is very individual, a pain relieving medication which works on one occasion or for one person may not be as effective for another. If your pain has not been relieved to the extent that you were hoping for, you may feel frustrated, let down and left to cope with your pain alone. This fact sheet explains what may be done to help you take a pain relieving medication that works for you.

To find out more about different ways of relieving pain, including courses on managing pain and long term health conditions, see Chapter 5 in our booklet 'All about osteoporosis'.

For more information on tried and tested practical steps you can use to manage pain, see our fact sheet 'Living with osteoporosis: managing persistent pain after fractures'

About pain relieving drugs

How do I know which one would be best for me?

A pain relieving medication which works best for you will usually depend on the severity of your pain and what is causing it. For example, if pain is severe this usually needs something stronger than paracetamol to relieve it, and if you have 'nerve pain' (caused by a pinched or irritated nerve) this may need a different type of medication to relieve it than those used for 'musculoskeletal pain' (caused by fractures and injured tissues).

Pain relieving medications are mainly given as tablets to swallow but some can be dissolved in a glass of water or under the tongue. There are also liquid solutions to drink, skin patches, gels rubbed onto the skin and even pain relieving suppositories which are inserted into the rectum (bottom). Some can be bought over the counter in chemists and supermarkets; others are only available on prescription from a doctor or qualified health professional.

Mild pain:

Pain relievers such as paracetamol and the non-steroidal anti-inflammatory drug (NSAID) ibuprofen are often taken for mild pain. Ask your pharmacist or doctor for further advice if you are unsure if these are right for you.

Paracetamol is very commonly used to relieve

pain and can be bought over the counter. It is available as tablets, capsules and dissolvable tablets. Usually one or two tablets can be taken every four to six hours, but it is important to take no more than eight tablets in 24 hours as it can cause liver damage if the maximum permitted dose is exceeded. If you have a history of liver problems you should consult your doctor before taking it.

Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and naproxen are available over the counter in a number of different forms – tablets, capsules, gels and creams. NSAIDs have both pain relieving and anti-inflammatory effects and may be helpful in the early days after a fracture, although some doctors believe that they should be avoided soon after a fracture as they may reduce the inflammation necessary for good bone healing, although medical opinion differs on this. If bought over the counter, you may need to check with your GP or pharmacist if you can take an NSAID, especially if you have asthma or kidney, stomach or heart problems as they can sometimes affect these conditions. Always take an NSAID with or soon after food to reduce the risk of irritation and ulceration of the stomach lining. Use NSAIDs for only a few days unless your doctor advises otherwise.

Moderate (stronger) pain:

Stronger pain relievers which help to control moderate to severe pain include codeine, dihydrocodeine and Tramadol. These can also be combined with paracetamol – such as Co-codamol, Co-dydramol and Tramacet. A medicated pain relieving skin patch containing buprenorphine called BuTrans Patch is sometimes prescribed if these tablets are not suitable.

Co-codamol is a combination of paracetamol and codeine and comes in different strengths depending on the amount of codeine present. Those available over the counter in chemists will contain the lowest dose of codeine, whereas larger doses are available on prescription from a doctor. Your doctor or pharmacist can help you decide the dose you need.

If taking more than one pain relieving medication, always check that you are not taking more than one which contains paracetamol or an NSAID as there will be a maximum amount you can take daily.

Buprenorphine (BuTrans) Transdermal Skin Patch is available only on prescription from your

doctor. The skin patch releases a strong pain relieving medication slowly over several days which is absorbed through your skin, providing constant pain relief. One patch is applied to non-hairy skin on your upper body (such as the tops of your arms, chest or top part of the back). It stays in place for a week then is peeled off and replaced with a new patch on a different area of the upper body. You can shower, bathe and swim with it in place but it's important to avoid direct heat over or near the patch, such as from a hot water bottle or an electric blanket, as this may cause your body to absorb more medication than intended. It is usually possible to take paracetamol or an NSAID as well if required but check first with your doctor.

Severe pain:

Sometimes it's necessary to take a strong pain relieving medication such as morphine to reduce severe levels of pain. Morphine medications can be taken as slow release tablets, liquid preparations or as a medicated skin patch. These may be helpful after an operation to repair a broken hip or sometimes with a new spinal fracture. They may be needed for a few days or for several weeks or months, but it's usually possible to change to something milder, such as Co-codamol or Tramadol, as pain improves. Your GP may therefore suggest reducing the dose or trying a milder pain relieving medication for a while to see if the pain has improved. It is usually possible to also take paracetamol or an NSAID with morphine medications if required, but check first with your doctor.

For more information on a stepped approach to choosing the right pain relieving medication (analgesics) for you, see the diagram of the 'Analgesic Ladder' further on with the question 'My pain relieving medications are not helping. Should I let my doctor know?'

I have stabbing and burning pain in my back that isn't relieved with my usual pain relieving medications. Why is that?

This may be nerve (neuropathic) pain which sometimes happens if a spinal compression fracture has pinched or irritated a nerve. Nerve pain is often described as burning, stabbing, aching or shooting, and may be like electric shocks or painful tingling or pins and needles. Sometimes pain can be caused by even the lightest of touch to the area, or a mild bump may cause unusually intense pain.

Traditional pain relieving medications such as paracetamol, NSAIDs and morphine may not help very much. However small doses of some anti-depressant or some anti-epileptic medications can sometimes help to reduce pain.

Antidepressants work by altering the balance of chemicals that relay pain messages. Anti-epileptic drugs such as gabapentin and pregabalin reduce the ability of nerves to transmit pain signals. For these effects to happen they need to be taken regularly and you will need to wait a few weeks before they start to help. A low dose is prescribed at the start, but if this is not relieving the pain your doctor may gradually increase the dose.

Sometimes fracture pain and nerve pain occur together and a combination of medications may be required.

Are there drugs to help with muscle spasms in my back?

Sometimes, muscle spasms can occur after a spinal compression fracture. If they happen very frequently, your doctor may prescribe a muscle relaxing medication, such as diazepam (Valium). Unfortunately these medications are not suitable for everyone as they may make some people feel sleepy, unsteady and more prone to falls, and are usually prescribed for short term use only.

I'm worried about taking pain relieving medications in case I experience side effects. What can I do about this?

As with any medication, there is a possibility that you may experience a side effect, but there are steps you can take to lessen or avoid them.

Constipation:

Constipation may occur, particularly with codeine and morphine medications, and unfortunately it can deter many people from taking stronger pain relievers when they need them. But it's worth remembering that unrelieved pain in itself can worsen constipation problems as pain is likely to make you less active or it may be painful to 'bear down' when trying to push out a bowel motion.

Don't wait to see if constipation happens when taking a stronger pain relieving medication.

Constipation is best prevented by taking some simple steps straight away, such as drinking more fluids and increasing fibre in your diet. If required, taking a mild laxative prescribed by your GP may help.

For more ideas on preventing constipation, see our fact sheet 'Living with osteoporosis: daily living after fractures'

Indigestion and stomach irritation:

Ibuprofen and other NSAIDs can cause indigestion especially if taken on an empty stomach. To avoid this always take them with food or a snack. You are more likely to have indigestion problems with an NSAID if you take other medications that can also cause it, e.g. aspirin or some osteoporosis drug treatments such as alendronic acid, or if you smoke. Giving up smoking can really help to reduce indigestion. If NSAIDs are going to be taken for more than a short period of time or if you are at risk of indigestion or stomach problems your doctor may also prescribe some stomach protective medication for you, such as omeprazole.

Nausea (feeling queasy) and vomiting:

Some people feel queasy and sick when starting a stronger pain relieving medication such as codeine or morphine, and a few find that it re-occurs if the dose is later increased. But the good news is that it usually goes away after a few days of taking the medication. If you have this problem, try some 'home remedies' to lessen the nausea. Sipping fizzy drinks slowly through a straw can be helpful – try soda or mineral water. Also ginger biscuits, crystallised ginger, peppermints or peppermint tea may be worth a try. Make sure that you are not constipated as this can make nausea worse. If nausea is severe let your doctor know as you may be able to have an anti-sickness medication for a week or two until the sickness settles.

Other side effects:

You may not experience any side effect, but if you should, it's more likely to happen when you start a pain relieving medication or if there has been a recent increase in dose. Depending on the side effect it may be worthwhile giving your body a chance to get used to the medication to see if the side effect settles down on its own. If it provides good pain relief but it's giving you a minor or 'tolerable' side effect you may feel it's worth putting up with it for the pain relieving benefits.

If you are older and frailer, you may feel sleepy, a little muddled, unsteady and more prone to falling when taking strong pain relieving medications such as morphine, and sometimes codeine. Your doctor may be wary of prescribing them for this reason, especially if you live alone. However, being

in a lot of pain can also make you feel very tired and unsteady so your doctor may try a small dose of pain relieving medication at first which can be gradually increased if needed.

Let your doctor know if you feel that any side effect is lasting too long or is not worth the pain relief that the medication gives you. Your doctor may be able to reduce the dose or prescribe an additional medication to counteract side effects, or there may be an alternative medication that suits you better. If, though, you are concerned about any particular side effect you should stop taking the medication and let your doctor know.

Otherwise, it's best not to stop taking a pain relieving medication or change the amount you take without discussing it first with your doctor. Some medications, such as morphine and nerve pain medications, should not be stopped suddenly and your doctor may recommend that you gradually reduce the dose first. Stopping nerve pain relievers too quickly after you've been taking them for a long time may cause headaches and difficulty sleeping.

If you should have problems taking a medication because of side effects don't feel that you have to manage without any pain relief. Talk to your GP or ring the helpline at the National Osteoporosis Society.

I'm worried that I'll become addicted if I take a stronger pain relieving medication. Is this true?

A strong pain relieving medication like morphine is usually prescribed for a few days or weeks when pain is at its worst. After this, the doctor may change it to something less strong such as Co-codamol. If pain is severe and persistent you may need to take morphine for longer, however you should be able to stop taking it when you are ready to.

The only step that is required is to gradually reduce the dose over a period of days before stopping. Ask the doctor's advice about how to do this. If you should stop it suddenly, you might experience some withdrawal symptoms such as muscle aching and feeling anxious and queasy. This does not mean that you are addicted to morphine. 'Being addicted' means that there is a psychological or emotional dependence and this is unusual when morphine is taken to relieve pain.

My pain relieving medications are not helping. Should I let my doctor know?

Remember to take your pain relievers regularly as prescribed. This helps to keep on top of the pain and prevents it escalating. Taking less than the recommended dose when the pain is severe is not going to bring it under control. It may also mean that you end up feeling worn out and irritable with yourself and those around you.

If you've been taking the prescribed dose but still your pain is not controlled enough then it's important to let your doctor know. It's impossible for the doctor to predict which pain relieving medication (analgesic) and dose will suit you best, therefore the doctor will usually follow a gradual, step-by-step approach, called the 'analgesic ladder' to find the right one for you (see below). If a pain relieving medication is not enough to keep your pain at bay, the doctor may first increase the dose. If you are already taking the maximum dose that it's possible to take, the doctor may decide to 'go up a step' and prescribe a stronger pain relieving medication, then use a gradual dose increase if required. It's important not to increase the dose yourself without first checking with your doctor.

Ask your doctor how long you should try a new pain reliever before feeling it's not working. You may need to allow a week or two to give it a chance, but if pain is severe let your doctor know rather than persevere without guidance

Very occasionally, if you have had a recent fracture and everything has become a huge struggle at home because pain is severe and is not improving or there have been troublesome side effects with pain relieving medications, your GP may suggest admission to hospital. Sometimes the closer assessment and expert pain management that is possible in hospital makes it easier to break a cycle of pain and speed up the process of finding a pain relieving medication that works for you.

You should not put up with severe pain but you may need to be realistic about the amount of pain relief that a medication alone can achieve, especially with chronic pain. It may be possible to reduce pain to a level that's acceptable and tolerable to you rather than relieve it completely. So it's also worth trying 'non-medication' ways to lessen pain and the impact it has on your life

The Analgesic Ladder



Step 1 - Mild Pain

Paracetamol

NSAIDs e.g. Ibuprofen

Step 2 - Moderate Pain

Codeine

Co-codamol (codeine and paracetamol)

Dihydrocodeine

Co-dydramol (dihydrocodeine and paracetamol)

Tramadol

Tramacet (tramadol and paracetamol)

Buprenorphine Transdermal (BuTrans) Skin Patch

Step 3 - Strong Pain

Morphine (oral liquid solution & slow release tablets)

Oxycodone (immediate release & slow release tablets)

Fentanyl skin patch

(for more information, see our fact sheet 'Living with osteoporosis: managing persistent pain after fractures'). There is no easy solution that will stop all pain, but a good working partnership between you, your GP and your family and friends is a good starting point.

I'm going to see my GP. How can I help the doctor understand about my pain?

To help you best manage your pain, it's useful to have a good working partnership with your doctor. If possible arrange a double appointment which will allow more time and avoid a rushed discussion. Go prepared with a list of your questions and some notes about your pain. Here are some points to include which will help your doctor's assessment of your pain

- **Where are you having pain?** It's important to be specific and if you can, point to where it hurts. Let the doctor know if you have pain in more than one place.
- **What does the pain feel like?** Sometimes pain can feel different depending on what is causing it. Describing the pain as best you can helps the doctor to work out what the cause might be and what might relieve it. Sometimes, finding the

right words to describe pain can be difficult. The table overleaf has some examples, but you may have your own. One or more of these words may be used:

- **How bad is the pain?** To help you explain how bad your pain is, try 'scoring' it on a scale of 0 to 10 (0 means no pain, 10 is the most severe pain you can imagine experiencing). Put a score to your pain when it is at its worst and best. In preparation for the appointment, you may find it useful to keep a daily log or diary and jot down these scores at intervals throughout the day for one or two weeks. You could write additional comments with the scores, such as what you were doing when the pain was worse or what improved your pain. Your doctor will be familiar with this approach. After the appointment it's better to stop filling in your pain diary unless you have been asked to carry on, as this can make it difficult to move your attention away from your pain and get on with your life. However, it may be useful to re-start it if pain has changed or worsened or if you are monitoring the effects of your pain relieving medication for your next doctor's appointment.

Some words describing pain		
Aching	Tearing	Tingling
Dull	Wrenching	Burning
Heavy	Throbbing	Sickening
Tender	Pricking	Mild
Pinching	Sharp	Annoying
Gnawing	Shooting	Intense
Cramping	Stinging	Unbearable

- **When do you experience pain?** Explain if pain is constant or comes and goes, if pain sometimes flares up (temporarily worsens), how long the flare up lasts, and what can make the pain better or worse. Try to be specific about how pain affects your daily life - what can you no longer do or have difficulty doing because of pain?
- **What has helped relieve your pain?** It will help your doctor to know what pain relieving medications you have tried so far and how much they helped - this includes both shop-bought and prescribed medication. If you can, make a note of the dose you took and how frequently you took it. Take the medication packets with you to the appointment if this helps you to remember. Also include anything else you tried, such as applying warmth to the area, a TENS machine, resting in bed or a chair, a change of activity, relaxation or exercise - anything you felt made a difference. Scoring the pain before and after can help you and the doctor work out what worked best for you.

Useful Contacts

Pain Concern

Produces information on pain using a variety of media including podcasts; provides support to people with pain and those who care for them, and campaigns to raise awareness about pain and improve the provision of pain management services.

Helpline: 0300 123 0789

<http://painconcern.org.uk/>

Action on Pain

Provides support and advice for people affected by chronic pain. The helpline is run by volunteers who either have chronic pain or are affected by it in one way or another.

Helpline: 0345 603 1593

<http://www.action-on-pain.co.uk/>

The Pain Toolkit

This website includes a handy guide with tips and skills to support people managing persistent pain. Pete Moore, who has persistent pain, put these tools together with the help of friends, family and health care professionals.

<http://www.pain toolkit.org/>

BackCare

Aims to reduce the burden of back pain by providing information and education to all people and organisations affected by back pain and funds scientific research into the causes, prevention and management of back pain.

Helpline: 0208 977 5474

www.backcare.org.uk/

Healthtalk.org

Provides free, reliable information about health issues by sharing people's real-life experiences. You can watch online videos of people sharing their stories about a range of illnesses and conditions, including chronic pain.

www.healthtalk.org/

PainSupport

Aims to help people in pain to move forward in their lives with better pain self-management, with or without pain relieving drugs. The website provides information on pain management and pain relieving techniques and has books and CDs for sale and free downloads. It features a Discussion Forum and a regular newsletter.

<http://painsupport.co.uk/>

The **National Osteoporosis Society** is the only UK-wide charity dedicated to improving the prevention, diagnosis and treatment of osteoporosis and fragility fractures. The Charity receives no Government funding and relies on the generosity of individuals to carry out its vital work.

For osteoporosis information and support contact our Helpline:

 **0808 800 0035**

 **nurses@nos.org.uk**

To become a member or make a donation:

 **01761 473 287**

 **join online at www.nos.org.uk**

To order an information pack or other publications:

 **01761 471 771**

 **info@nos.org.uk**

or download from our website at www.nos.org.uk

This fact sheet is one of a range of publications produced by The National Osteoporosis Society. If you would like more general information about osteoporosis see our booklet *All about Osteoporosis*.

This information reflects current evidence and best practice but is not intended to replace the medical advice provided by your own doctor or other health professional.