

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.

Complementary and alternative therapies

Complementary therapy is an area of health care that is growing in popularity and many people find such therapies beneficial in offering relief from pain and improving their quality of life.

At present there is no evidence that complementary therapies increase bone density or reduce the risk of broken bones. Most of these therapies have not undergone the vigorous testing and trials expected of conventional medicine so you are unlikely to find proof that they work to reduce pain. However, for those people who have sustained fractures as a result of osteoporosis, this approach may offer additional relief from pain and other symptoms.

Complementary therapy is increasingly being used alongside conventional medicine as part of a person's pain management plan and many hospitals run pain clinics which offer a wide range of treatment options including complementary approaches. In all situations, it is important that the therapist is made fully aware of an individual's medical history before commencing treatment and it is important that you explain that you have osteoporosis and may be at a higher risk of breaking bones.

Some of the most commonly used therapies are described in this factsheet. A list of useful organisations and their contact details is also included.

Acupuncture

The word acupuncture comes from the Latin *acus* meaning 'needle' and *punctura* meaning 'to prick'. Certain strategic areas on the body are pierced with fine needles or stimulated with massage, heat or electricity, which can bring relief of symptoms both close to the needles and in distant parts of the body. Acupuncture has been found to be helpful in treating musculoskeletal disorders like rheumatoid arthritis, chronic pain and many other conditions. The needles used by acupuncturists are often disposable and, if not, should be carefully sterilised before use to avoid the risk of HIV or hepatitis.

Most people feel no pain with acupuncture, although some may experience a heavy, dull, aching sensation. Symptoms may be relieved immediately or over a period of time. However, others experience no relief with this therapy. Acupuncture may, for some people, relieve the pain associated with spinal fractures but this may only last while treatment is undertaken and can reoccur once treatment has stopped.

The cost of acupuncture and the number of sessions needed will vary according to the condition being treated. Your own doctor may offer acupuncture or may be able to refer you to a physiotherapist, nurse or other health professional who offers this service. Acupuncture can also be performed by non-medically qualified acupuncturists and by lay practitioners.

When choosing an acupuncturist it is recommended that you find out about the practitioner's qualifications and experience, and to ask whether they are certified with a recognised body.

A doctor qualified in acupuncture will be registered with the British Medical Acupuncture Society, and physiotherapists with the Acupuncture Association of Chartered Physiotherapists. The British Acupuncture Council represent the largest group of practitioners and hold a nation-wide register. At present, the practice of acupuncture is not statutorily regulated; however, there are proposals for both acupuncture and herbal medicine to have statutory status in the near future.

The National Institute for Health and Care

Excellence (NICE), the independent body that advises NHS doctors on best clinical practice, has released evidence-based guidelines regarding the management of persistent, non-specific low back pain. The guidelines recommend acupuncture among the first line treatments for those with back pain that has lasted more than six weeks.

Massage therapy

The practice of massage therapy is an ancient form of physical medicine and continues to be used widely and in many settings. Massage can help to increase relaxation, alleviate anxiety and stress associated with illness and improves general well-being.

Massage involves the stroking, pressing, kneading and warming of the skin and muscles. The masseur will usually use bare hands and may use oils to make it easier to slide their hands across the skin.

Research studies have so far not given a clear picture how massage works but it is thought that it can stimulate the blood and lymphatic circulation and help to remove toxins and waste products from the body. (The lymphatic system drains watery fluid from tissues of the body and returns it to the blood.) Massage can contribute to the relief of pain through the stroking action of the massage on the nerve endings in the skin, which may help to lessen the sensation of pain due to the release of endorphins – the body’s natural pain-reducing chemicals.

There are many different massage techniques. Some therapies are more rigorous than others and may not be suitable for those people at risk of broken bones due to osteoporosis.

Aromatherapy and aromatherapy massage

Aromatherapy aims to create a sense of well-being by using the essential oils of plants. They can be inhaled as a vapour or, in diluted form, massaged into the skin. Essential oils have been used medicinally for centuries and clinical trials have indicated effectiveness for bowel conditions, wound healing and relieving anxiety.

Oils which are associated with having a pain-relieving effect include camomile, lavender and rosemary, while bergamot and rose can help depression and irritability along with vaporised essential oils of lavender, orange, geranium, lemon and grapefruit.

Remember, oils should never be taken internally or applied undiluted to the skin. Gentle massage with diluted oils can help ease muscle spasm and pain. Aromatherapy as a treatment is usually arranged privately but some doctor’s practices and hospital

trusts do refer within the NHS system. If you are taking regular medication, check with your doctor or the Aromatherapy Council.

Reflexology

Reflexology focuses on the feet and has been adopted from eastern medicine. It works on the theory that certain areas on the feet correspond to different parts of the body and the health and wellbeing of an individual depends upon free-flowing energy within the body. If this flow is impeded, ill-health will follow. By massaging the corresponding points on the feet, the energy is allowed to flow freely again.

Reflexology can be used for relaxation that, in turn, allows for the uninterrupted flow of energy which may, in turn, help reduce pain. Reflexology may also increase blood and lymphatic circulation, help digestion and also the immune system.

The feet are massaged, using oils in some cases, by the therapist who, after consultation with the client, will concentrate on the appropriate areas of the feet.

If you have had broken bones in your feet due to osteoporosis, inform the therapist accordingly at the first appointment and they will then decide if treatment is appropriate. The massage used does not have to be vigorous or deep, and gentle massage may be more helpful in aiding relaxation.

Homeopathy

Homeopathy is thought to be a means of stimulating the body’s own healing mechanism. It was established in the late 18th century and the name homeopathy is derived from the Greek homoios meaning ‘like’ and pathos meaning ‘suffering’. It is based upon the theory that substances which, in high doses cause overdose, in small doses will cure. Homeopathy aims to stimulate our body’s natural defence system. It may be useful for both chronic and acute pain.

Homeopathy should only be undertaken with the advice of a qualified, registered homeopath, particularly in the cases of pregnant women and young children. Please consult your pharmacist before purchasing over-the-counter products and let him / her know if you are taking any prescribed medicines.

Herbal medicine

Herbal medicine is one of the oldest forms of medicine, having been used in all cultures and civilisations for centuries. Herbal preparations form the basis for many of our modern drugs: aspirin is based upon an extract

of willow, which was used by the American Indians for the relief of pain, and the heart drug digoxin is derived from extract of foxglove.

Devil's claw and willow bark may have anti-inflammatory and pain-relieving properties, and herbs such as lemon balm, camomile, passion flower and valerian may have an anti-spasmodic effect on the muscles. There are some plants that should be avoided because they are potentially harmful so it is important to seek expert help. Medicinal herbal preparations should be used with care during pregnancy or when taking other medications and only under the supervision of a herbalist. Further information and a list of practitioners can be obtained from the National Institute of Medical Herbalists.

Natural progesterone

The main ingredient in natural progesterone cream comes from an extract from wild yams and is claimed to be similar to the natural hormone, progesterone, produced in the body. This is then mixed with other ingredients to make it a cream that can be rubbed into skin and absorbed. There are claims made that natural progesterone creams can be used to help with menopausal symptoms and to prevent osteoporosis and strengthen bones.

Medical research has shown that the hormone oestrogen, given to post-menopausal women in hormone replacement therapy (HRT), reduces the risk of osteoporosis and fracture. However, given on its own to women who had not had a hysterectomy, it increased the risk of endometrial (womb) cancer. Progestogen, a synthetic form of progesterone is, therefore, given as well as oestrogen to reduce this risk of cancer. Progesterone, in a natural form, is rarely used in HRT because it is used up quickly by the body and, at the dose needed to protect the womb lining, seems to make women sleepy.

Natural progesterone cream was developed because it was believed, by those who claimed its benefit, that it was progesterone rather than oestrogen that reduced menopausal symptoms and prevented osteoporosis in post-menopausal women. It was also believed that in this 'natural' form it would not cause side effects or harm.

Historically, HRT has played a key role as a treatment for menopausal symptoms and to prevent osteoporosis. However, with drug treatments developed specifically for osteoporosis over the last decade or so and the knowledge of potential health risks associated with longer-term use of HRT, it is now much less commonly used.

Natural progesterone cream is often marketed as a natural alternative to HRT and, therefore, appeals to women seeking an alternative option to drug treatments for osteoporosis.

Although there are some side effects associated with the use of the synthetic progestogens in various HRT preparations, as natural progesterone is an unlicensed product, any possible side effects are not officially documented.

There has been some scientific research into the effect of progesterone on bone density, although none of these studies have looked at whether or not it reduces a person's fracture risk (likelihood of breaking a bone). Further research is needed.

One American study investigated the effects of natural progesterone cream on both menopausal symptoms and bone density. Although it seemed effective in controlling hot flushes, there was no effect on bone density observed in the first year. This has been confirmed by a small British trial which showed no changes in bone density over two years, but a trend towards improved menopausal symptoms. This study by Southampton University has been presented at major osteoporosis conferences but is, as yet, unpublished.

Osteopathy and chiropractic

Although osteopathy and chiropractic are two separate disciplines they have many similarities; both therapies consist of a number of different techniques, one of which includes manipulation of the bones of the skeleton. Chiropractors tend to focus on the joints of the spine and nervous system and osteopaths place more emphasis on soft tissues and muscles and mobilisation of joints. The aim of these therapies is to help to improve the function of joints, ease pain and reduce muscle spasm.

There has been some clinical evidence to suggest that spinal manipulation techniques can have a positive effect on chronic low back pain. It is very important that people with osteoporosis do not undergo any skeletal manipulation due to the risk of fracture. However, since both osteopathy and chiropractics use a wide range of approaches, they can still be considered as a source of pain relief as long as the practitioner is made fully aware of an individual's medical history before commencing treatment.

In the UK both practices are statutorily regulated. Osteopaths must be registered with the General Osteopathic Council and chiropractors with the General Chiropractic Council.

Exercise and movement therapies

The Alexander Technique

This is a method of breathing and exercise that focuses on improving posture and mobility. Frederick Matthias Alexander first developed the technique in the 1890s. Alexander had a career in the theatre and as a young actor kept losing his voice during stage performances. He realised that the functioning of his own voice was dependent on a correct posture and balance of tension in his body. He later went on to develop his methods and teach others.

The Alexander Technique aims to improve the alignment of the head, neck and back, to improve co-ordination and balance and to help with body functions such as breathing and digestion. Some people with postural changes caused by spinal fractures have found this a helpful technique to learn.

Pilates

This is an exercise technique which also concentrates on correct body alignment. It was originally developed by Joseph Pilates in the 1920s and practised by dancers to improve fitness.

Pilates consists of a specific programme of exercises to help to improve flexibility and strength; it also focuses on using the body's deep core muscles in the trunk and pelvis. These are muscles that help to support the body's skeletal structure.

This type of exercise may be helpful for people who have fractures in the spine as a result of osteoporosis.

However, it is important to avoid any movement or stretching exercise which involves bending forward or touching your toes or undertaking neck exercises where you roll your head backwards or circle your head, which could be potentially dangerous for those people at risk of broken bones.

Tai Chi

Tai Chi is an ancient form of Chinese martial arts; it uses the principles of deep breathing and relaxation combined with slow controlled movements. Tai Chi is good as an intervention to help to reduce the risk of falling and, therefore, breaking a bone if you have osteoporosis. This is because it improves posture and balance in older people.

Yoga

Yoga originates from India and has been practised for over 5,000 years. It is based on Hindu philosophy and

follows a system of exercises to encourage physical and mental well-being. It involves learning a series of different movements, physical postures, breathing techniques and meditation. There are many different types of yoga being practised; however, the most common yoga technique is Hatha Yoga.

Pilates, Tai Chi and Yoga are exercise methods which use controlled and focused movements and can help to improve posture and develop muscle strength. For some people they may actually help to alleviate pain symptoms resulting from spinal fractures. As long as special care is followed with regard to the potentially dangerous movements which have already been mentioned, these approaches may provide an alternative exercise activity for older people and those with osteoporosis.

It is always recommended that you check with a health care professional (such as your GP) who has a knowledge of your medical history and risk of fracture before taking up any new exercise. Additionally, as with any organised exercise class, it is wise to inform your instructor if you have osteoporosis so he/she can adapt the movements to suit you.

Useful contacts

British Medical Acupuncture Society

Royal London Hospital for Integrated Medicine
60 Great Ormond Street
London WC1N 3HR

Tel: 020 7713 9437

www.medical-acupuncture.co.uk

The British Acupuncture Council

63 Jeddo Road
London W12 9HQ

Tel: 020 8735 0400

www.acupuncture.org.uk

Aromatherapy Council

www.aromatherapycouncil.co.uk

The Society of Teachers of the Alexander Technique

1st Floor, Linton House, 39-51 Highgate Road
London NW5 1RS

Tel: 0207 482 5135

www.stat.org.uk

General Chiropractic Council

44 Wicklow Street
London WC1X 9HL
Tel: 020 7713 5155
www.gcc-uk.org

British Reflexology Association

Monks Orchard
Whitbourne
Worcester WR6 5RB
Tel: 01886 821207
www.britreflex.co.uk

The Institute for Complementary Medicine and Natural Medicine

ICNM Can-Mezzanine
32-36 Loman Street
London SE1 OEH
Tel: 020 7922 7980
www.icnm.org.uk

British Homeopathic Association

Hahnemann House
29 Park Street West
Luton LU1 3BE
Tel: 01582 408675
www.britishhomeopathic.org

The National Institute of Medical Herbalists

Clover House, James Court
South Street
Exeter EX1 1EE
Tel: 01392 426022
www.nimh.org.uk

General Osteopathic Council

176 Tower Bridge Road
London SE1 3LU
Tel: 020 7357 6655
www.osteopathy.org.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.