

Pain

Fact Sheet

Multiple
Sclerosis
Trust

MS

Information

Education

Research

Support

Pain

Date of revision: April 2009

Contents

Section	Page
Pain in MS	2
Describing pain	3
Neuropathic (nerve) pain	3
Nociceptive (musculoskeletal) pain	6
Further treatment options	8
Pain clinic	
TENS	
Complementary therapies	
Links and references	9

Pain in MS

Pain and altered sensations are symptoms experienced by a large proportion of people with MS. Whilst estimates of how common these symptoms are vary, some reports suggest that up to 80% of people with MS may experience pain at some stage.¹

The management of pain in MS is not always easy and some types of pain will never go away entirely. If the pain cannot be eradicated, the aim of treatment is to minimise the level of pain and to develop coping strategies so that the individual can manage the pain and carry out normal day-to-day living.

Treatment depends largely on the cause of the pain; therefore it is important to be open to a range of possible treatment options, which may include drugs, non-drug treatments such as physiotherapy or a combination of the two.

It is recognised that many factors can make pain worse for people with MS. These include heat, cold, poor sleep, extreme fatigue, mobility problems, financial insecurity, feelings of low self-esteem, loneliness or isolation, and depression or anxiety. It is important to realise that pain may not happen on its own, and that dealing with some of the other issues can help to improve pain levels.

It also needs to be remembered that people with MS can experience pain due to problems other than their MS. Other possible causes such as arthritis, rheumatism, previous injuries and surgery need to be taken into consideration.

Different types of pain are managed in different ways, so a careful assessment of the factors that may be contributing to the symptom is necessary in order to find appropriate treatments.

Describing pain

Pain is very subjective and is best described by the person experiencing it. No two people will experience pain in the same way.

Pain is often categorised in terms of how long it lasts. Acute pain is generally described as an intense, sharp, burning or shooting feeling. It is usually experienced intermittently, with very sudden onset and either improving or disappearing equally quickly.

Chronic pain is long-lasting or persistent pain, sometimes described as a deep-seated, continual pain. The intensity of chronic pain may fluctuate over a period of time without ever fully disappearing.

There are two broad types of pain based on how the pain is caused:

- neuropathic or nerve pain is caused by damage to the nerves in the brain and spinal cord
- nociceptive or musculoskeletal pain is caused by damage to muscles, tendons, ligaments and soft tissue

Neuropathic (nerve) pain

Neuropathic pain is caused by areas of damage that disrupt how the nerves carry messages within the brain and spinal cord. In MS, for reasons that are not fully understood, the immune system attacks the myelin sheath, a layer of fatty protein that protects the nerves and aids transmission of messages. When this is damaged, messages between the brain and spinal cord and the rest of the body can be interrupted or delayed, interfering with the body's normal ability to function. Sometimes the brain interprets the disrupted messages received from the nerves as pain, even though there is no physical cause of pain.

Neuropathic pain can be treated with anti-convulsants, such as carbamazepine (Tegretol) and gabapentin (Neurontin), or antidepressants, such as amitriptyline (Triptafen). These drugs can affect the chemical transmission of pain signals resulting in a reduction of symptoms, but they often cause side effects such as drowsiness, dizziness, nausea and blurred vision although these will eventually wear off. Treatment usually starts with low doses that are built up slowly.

Examples of neuropathic pain

- *Dysaesthesia or paraesthesia* (altered sensation). These are common symptoms in MS, but they are experienced differently from person to person.

The pain can be described in a variety of ways including:

- pins and needles
- numbness
- itching
- burning
- prickling
- crawling
- tightness
- dull ache
- nagging

Usually experienced in the extremities, these changes can occur anywhere in the body. These sensations can be uncomfortable and unsettling and may be painful and distressing.

Banding, sometimes called the 'MS hug', is another form of altered sensation. This is a feeling of constriction, tightness or being squeezed around the chest.

Altered sensations are generally treated with one of the standard drug therapies, although symptoms such as numbness and loss of sensation may not be treated unless they are causing particular distress.

- *L'hermitte's sign/syndrome* - a sudden sensation resembling an electric shock, which passes down the back of the neck and into the spinal column and can radiate out to the fingers and toes. This is rarely treated as the pain

is so sharp and sudden that it does not usually last long enough for treatments to take effect.

- *Optic neuritis* - a sharp, knifelike pain behind the eyes caused by inflammation of the optic nerve, which also causes disruption to vision. Optic neuritis is a common early symptom of MS, though can occur at any time. It usually responds successfully to treatment with steroids, therefore relieving the pain.
- *Trigeminal neuralgia* - an intense, severe stabbing and burning sensation down the side of the face that eases to an ache and burn. This pain follows the path of the trigeminal nerve, which provides feeling in the side of the face and controls chewing and swallowing. It is thought that the pain, which normally only affects one side of the face at a time, arises from damage where the nerve connects to the brain. The pain can be excruciating and can be set off by something as simple as eating, talking or smiling. It is usually sudden in onset and can reduce or disappear over a period of time. However it can become chronic.

Trigeminal neuralgia can be difficult to treat. First-line treatment is with a standard drug therapy for neuropathic pain. It is also useful to identify whether the pain has any triggers, for example eating ice cream, and learning to avoid them or reduce their likelihood. In extreme cases, surgery can be carried out to cut the nerve's connection to the brain, but this may leave the face numb.

Nociceptive (musculoskeletal) pain

Nociceptive pain, or musculoskeletal pain, is the type of pain experienced when someone hurts themselves, has an accident or surgery. It results from damage to muscles, tendons, ligaments and soft tissue.

Nociceptive pain is generally more successfully managed than neuropathic pain. Common pain relieving drugs such as paracetamol, ibuprofen or aspirin can be used. The National Institute for Health and Clinical Excellence (NICE) Clinical Guidelines for the management of multiple sclerosis say that specialist therapists should assess every person with MS who has musculoskeletal pain.² For instance, a physiotherapist could identify changes in posture and offer exercises to strengthen certain muscle groups to improve function and help to reduce pain. An occupational therapist could determine whether any new equipment might be required to help relieve pain such as an appropriate walking aid or wheelchair, or equipment to make tasks in the home or workplace easier.

Examples of nociceptive pain

- *Pain in the hips and bottom of the spine*

Many people with MS experience lower back pain. This can be caused if immobility or fatigue means that they are sitting down for much of the time. Similarly, alterations in the way someone walks can put extra stress on their back or hips, leading to pain.

- *Pain in the muscles, tendons or ligaments*

This can occur if the limbs are stiff and kept in a fixed position for long periods of time. Muscles that aren't exercised can become stiffer and shorter, which is called a contracture, restricting the range of movement possible. Ligament damage can also occur in MS if alteration in walking causes someone to over extend their knee, leading to swelling and pain.

Spasms and spasticity can also cause pain in the soft tissues. When a muscle contracts, suddenly in the case of spasms or over a longer period of time in the case of spasticity, this can cause pain in the affected limb.

The NICE Clinical Guideline recommends the drugs baclofen or gabapentin as the first line of treatment for spasticity². Other treatment options include tizanidine, diazepam, clonazepam or sodium dantrolene. A combined approach to treating spasticity, using both drug treatment and exercise, is often employed. Physiotherapy is used alongside medication to improve muscle function through a range of exercises and thus reduce painful sensations. (More information is available in our factsheet *Spasticity and spasms*)

Further treatment options

Pain clinic

If pain does not respond to treatment, it is possible to get a referral from a GP or neurologist to a specialist pain clinic. Services vary in the treatments offered and not all areas will have a specific pain clinic. Usually input is from a multidisciplinary team of doctors, nurses and therapists using a combination of drugs, therapy and coping strategies to help the person with MS minimise the effects of pain and to allow them to carry on with normal day-to-day living.

TENS

TENS (transcutaneous electrical nerve stimulation) is mentioned in the NICE Guidelines as a treatment for musculoskeletal pain that doesn't respond to medication.² A TENS machine applies a small electrical current to the area of pain, producing a slight tingling, prickling sensation. The electrical sensations are transmitted along nerves more quickly than the pain sensations, reducing the effect of pain. It is also thought that TENS encourages the body to produce chemicals that have a pain relieving effect.^{3,4}

Complementary therapies

Some people with MS prefer trying a non-drug approach. There is limited scientific evidence to support the use of acupuncture⁵, aromatherapy⁶ and magnetic therapy⁷ (using devices producing pulsing magnetic fields) as treatments to alleviate pain, if only for short periods of time.

Some people with MS have reported benefits from the following therapies, possibly due to their relaxing effects. There may be others that are helpful:

- cognitive behavioural therapy
- distraction techniques
- reiki
- relaxation techniques
- visualisation techniques
- yoga

Links and references

Pain organisations

- **The British Pain Society**
the representative body for professionals involved in the management of pain in the UK.
The British Pain Society, Third Floor, Churchill House, 35 Red Lion Square
London WC1R 4SG
Tel: 0207 269 7840 info@britishpainsociety.org www.britishpainsociety.org
- **Pain Concern**
a charity offering information and support for people who experience pain by people who experience pain. Provides a 'listening ear' helpline.
Pain Concern, PO Box 13256, Haddington, EH41 4YD
Helpline: 01620 822572 info@painconcern.org.uk www.painconcern.org.uk

References

1. Archibald CJ, et al.
Pain prevalence, severity and impact in a clinic sample of multiple sclerosis patients.
Pain 1994;58(1):89-93.
2. National Institute for Clinical Excellence.
Understanding NICE guidance - information for people with multiple sclerosis, their families and carers, and the public.
London: NICE; 2003.
3. Mattison PG.
Transcutaneous electrical nerve stimulation in the management of painful muscle spasm in patients with multiple sclerosis.
Clinical Rehabilitation 1993;7:45-48.
4. Sjolund BH, et al.
Transcutaneous nerve stimulation of peripheral nerves.
In: Bonica JJ. *The management of pain*. 2nd edition.
Philadelphia: Lea & Febiger; 1990. p. 1852-1861.
5. Wang Y, et al.
A pilot study of the use of alternative medicine in multiple sclerosis patients with a special focus on acupuncture.
Neurology 1999;52:A550.
6. Howarth AL, Freshwater D.
Examining the benefits of aromatherapy massage as a pain management strategy for patients with multiple sclerosis.
Nursing Times Research 2004;9(2):120-128.
7. Guseo A.
Pulsing electromagnetic field therapy of multiple sclerosis by the Gyuling-Bordas device: double-blind, cross-over and open studies.
Journal of Bioelectrics 1987;6:23-35

Publications

We hope that you have found this information helpful. The MS Trust offers a wide range of publications, including our quarterly newsletter *Open Door*, which provides an update on research and latest developments. Our website is regularly updated www.mstrust.org.uk

**Contact us to receive our newsletter or to request another publication.
All our services are free within the UK, but your donation
allows us to continue our work.**

MS Trust Information Service

The MS Trust Information Service is here to answer YOUR questions about MS. To contact us you can:

phone 01462 476700 (Lines are open Monday – Friday 9am-5pm)

email infoteam@mstrust.org.uk

write MS Trust
Spirella Building, Letchworth Garden City, SG6 4ET

Can you help us to help others?

Each year we send out more than 50,000 booklets and answer more than 1,500 personal enquiries. We depend on voluntary donations to help fund this unique service and we would not be able to continue our work without the generosity of our supporters.

Use this form to make a donation and/or to receive more information about the MS Trust

Name (Mr/Mrs/Ms/Other) _____

Address _____

Telephone number _____

Email _____

Please add me to your mailing list to receive Open Door, your quarterly newsletter
 Please send me a publication list

I would like to make a donation to support the charity's work and enclose a cheque payable to the MS Trust.

*Credit or debit card donations can be made via our secure website
or by telephoning 01462 476700.*

If you Gift Aid your donation we can claim the tax back from the money you give

I would like the MS Trust to treat this donation and all donations I have made for the four years prior to this year and all donations I make from the date of this declaration until I notify you otherwise, as Gift Aid donations. Date: ____/____/____ Signed: _____

You must pay an amount of Income Tax and/or Capital Gains Tax in each tax year (6 April 2009 to 5 April 2010) at least equal to the tax that the MS Trust will claim from HM Revenue and Customs on your Gift Aid donation(s) for that tax year. Please notify us if you change your name or address.

The MS Trust will use your details to keep you informed about our work, including our fundraising and to pass to our wholly owned subsidiary companies MS Trust (Education) Ltd and MS Trust (Trading) Ltd which exist only to carry out our educational objectives and to raise funds for the MS Trust.

We will not sell or pass your details to anyone else (unless we are required to by law).

If you object to either use of your details, please let us know.