

# 19

# MS Essentials

For people living with MS

## Muscle spasms and stiffness

Muscle spasms or stiffness are common symptoms, affecting at least 20 per cent of people with MS at some time.<sup>1</sup> Spasms and stiffness affect people differently and can vary over time. Mild stiffness in the muscles can aid balance and mobility for some, but more severe stiffness or spasms can be tiring, frustrating and, for some, painful.

There are a number of treatments available, and health care professionals can help you find the best approach to treat or manage your symptoms. Many people find relief by identifying and avoiding things that trigger spasms. Working with health care professionals to plan stretching exercises, physiotherapy or drug treatments can also be important when tackling these difficult symptoms.

### Contents

- 02 Spasms, stiffness and 'spasticity'
- 04 What causes spasms and stiffness?
- 06 Assessing your symptoms and finding suitable treatments
- 08 Physiotherapy and exercises
- 11 Drug treatments
- 16 Electrical stimulation therapies
- 17 Complementary therapies
- 18 Surgery for severe spasms
- 19 Further information

# Spasms, stiffness and 'spasticity'

Muscles are involved in every movement you make. They get longer and shorter to move and hold the body. If MS causes nerve damage that affects muscle movements, there can be a wide range of problems, affecting different muscles in different ways. Some of the terminology used to describe these various problems can be confusing.

Health professionals sometimes talk about '**spasticity**' when describing the stiffness that you may experience. Spasticity means there is an increase in 'muscle tone'. In other words, when the muscle is moved, there is more resistance to this movement than there normally would be. Muscles feel more rigid. Increased tone can mean muscles are slow to relax, and this can cause '**stiffness**'. Depending on the muscles affected, this stiffness can make it difficult to perform delicate movements with the hands and fingers, or make larger movements difficult, which can affect walking, for example.

When affected muscles stretch, spasticity may also cause them to jerk in an uncontrolled way. This is one kind of muscle '**spasm**' that people with MS can experience. If muscles jerk repeatedly, this is known as 'clonus' – for example when a foot taps repetitively on the floor.

Some people with MS experience other spasms – sudden involuntary movements that can make the arms or legs move in different ways. These can occur even without the muscle being stretched. They are generally described as one of the following:

- 'Flexor spasms' cause a limb to bend upwards towards your body
- 'Extensor spasms' cause the limb to shoot out away from the body
- 'Adductor spasms' can cause the legs to come together, making it difficult to separate the thighs

All of these can vary in their severity and, as with many of the symptoms caused by MS, the precise impact will be different for everyone.

'As with many of the symptoms caused by MS, the precise impact will be different for everyone.'

## The effects of spasms and stiffness

Spasms and stiffness can range from a minor annoyance to problems that make daily life and activities uncomfortable, painful and difficult. For some people, muscle stiffness even has a positive effect. If leg muscles are weak, for example, a certain amount of stiffness can help keep the legs rigid and stable for walking and standing. If this is the case, it may be better to monitor the situation, to prevent further complications, rather than try and remove the stiffness completely. However, for others, severe ongoing stiffness or frequent spasms can disrupt mobility and have a significant impact on day-to-day life. Extremely strong spasms can jerk the body quite dramatically, causing limbs to move with considerable force, or be held in uncomfortable positions.

Spasms sometimes cause particular problems at night. The ‘jerking’ they can cause to the body – often the legs – might wake you or your partner several times a night. Not getting a good night’s sleep can make living with MS more difficult, possibly making other symptoms worse, such as fatigue and weakness.

‘Living with spasms and stiffness can be frustrating for everyone involved, and any treatments are likely to work better if they are understood by you and those around you.’

If you experience spasms and stiffness, you may also notice changes from month to month, day to day, or even at different times during the same day. This can make it a surprising, awkward and sometimes embarrassing issue to deal with. Living with spasms and stiffness can be frustrating for everyone involved, and any treatments are likely to work better if they are understood by you and those around you.

Even if you feel your spasms or stiffness are not major problems for you, it is sensible to make your doctor or MS nurse aware of the issue so that you can find appropriate ways to manage it and avoid complications later on. Left untreated, spasms and stiffness can result in problematic pressure on the skin or problems with posture. With suitable care, this can be minimised and knock-on effects, such as pressure sores and aching joints, can be avoided.

## Pain

Both muscle spasms and stiffness can be painful, though they are not always. You might feel the dull ache of stiff muscles, or a sharper pain if they spasm. Muscle problems can also interfere with good posture, causing back pain, for example. If pain is an issue for you, let your doctor or MS nurse know. Pain is an 'invisible symptom' and people will not be aware of it unless you explain it to them. This is true for health professionals as well as family members, friends or colleagues. By letting people know how spasticity affects you, they may be more able to help you manage it. There are treatments that can help control your spasticity and pain. Some drug treatments can help with both.

For more information about managing pain in MS, see the MS Society publication *Pain and sensory symptoms*.

---

## What causes spasms and stiffness?

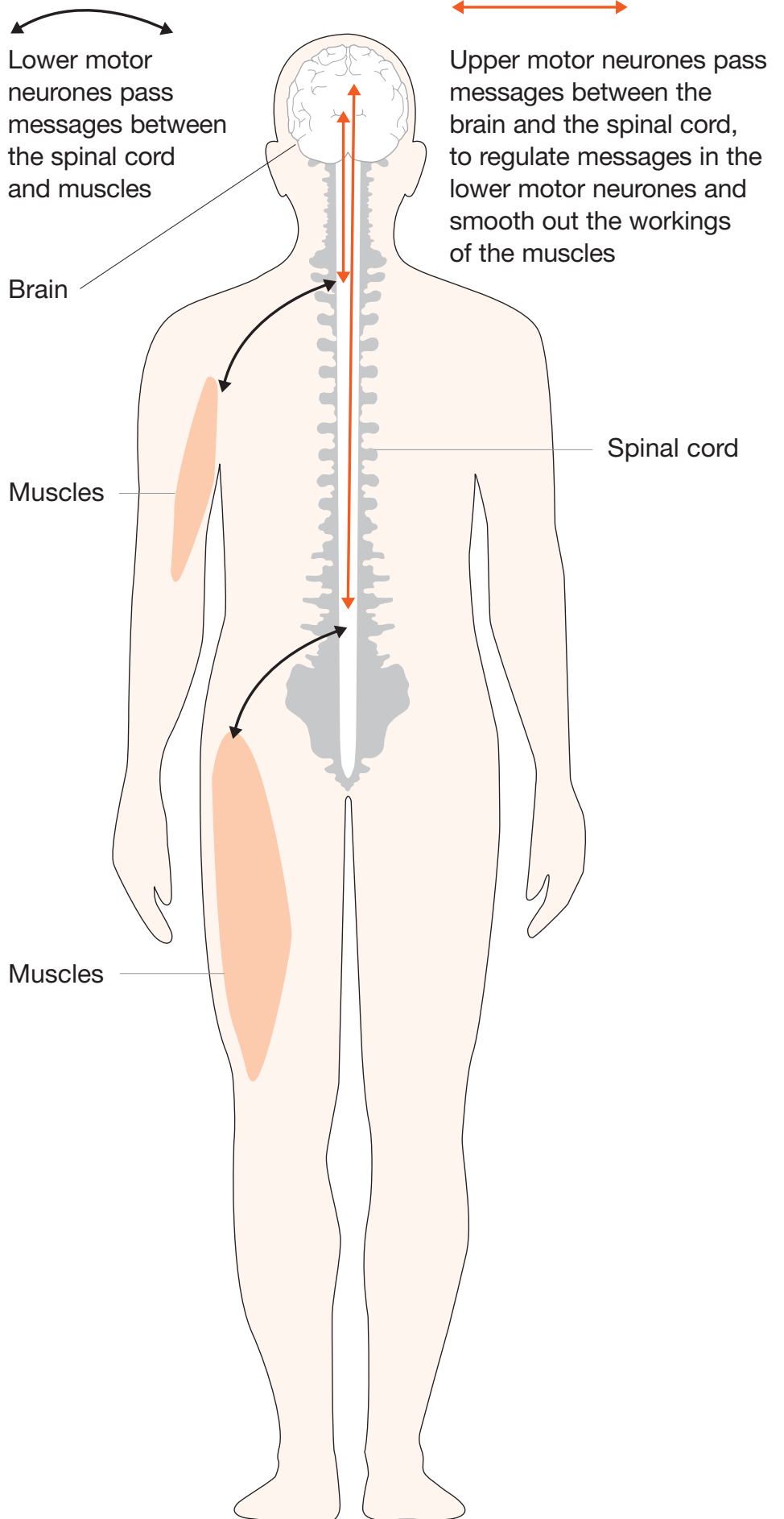
The exact causes are not fully understood, but both stiffness and spasms can be linked to the damage that MS causes to nerve fibres in the brain and spinal cord (the central nervous system).<sup>2,3</sup>

The movement of the body is controlled by a combination of messages passing back and forth, rather like a relay race. One part of this relay has messages running between the brain and the spinal cord. The other, between the spinal cord and the muscles themselves. All these messages travel along nerve pathways made of many nerve cells, known as 'motor neurones'.

As the diagram on the right shows, the nerve pathway connecting the brain and spinal cord is made of 'upper motor neurones'. The pathway between the spinal cord and muscles is made of 'lower motor neurones'.

Messages passing through the upper motor neurones regulate the activities of the lower motor neurones. This ensures smooth working of the muscles, good coordination and posture. For muscles to work properly, messages need to pass smoothly across both the upper and lower motor neurones.

## The messages that control our muscles



MS can damage the protective layer (called 'myelin') around the fibres of the upper motor neurones. This results in distorted messages between the brain and spinal cord. When this happens, these upper motor neurones can no longer regulate messages to the lower motor neurones. The lower motor neurones can then become overactive and hyper-sensitive, causing stiffness or spasms in the muscles.

Damage in different areas of the brain or spinal cord can cause different types of stiffness and spasms experienced in MS.<sup>3</sup> Symptoms can come and go, but may become more constant over time.

As well as these causes found in the brain and spinal cord, there can also be physical changes to the muscles and tendons themselves, which may add to the problem.<sup>2</sup> Treatments, therefore, may involve several approaches in order to tackle these different causes.

---

## Assessing your symptoms and finding suitable treatments

The effects of spasms and stiffness vary widely, so treatment needs to be tailored to your own needs and abilities. In order to do this, health care professionals should assess your spasms or stiffness, taking into account the nature of your symptoms, possible trigger factors that make them worse and – very importantly – the impact they have on your daily life.

For example, it is always worth considering if treating muscle stiffness is actually the best option. Stiffness in the legs, for example, might help, if weakness or balance problems would otherwise make it difficult to get about. For others with milder stiffness or spasms, treatments might cause more inconvenience than benefits. As with many MS symptoms, it can be a case of weighing up the pros and cons and discussing these with your doctor.

When making an assessment, health care professionals may use a scoring system to rate how stiffness and spasms affect you. If you have a stiff thigh muscle in your leg, for example, they may ask you to lie down whilst they bend the leg at the knee. A perfectly relaxed muscle should not resist very much. However, if they feel resistance in the bend, this is a sign of stiffness and they give this a score – the greater the resistance, the higher the number. In a similar way, a score can be given for the number and intensity of muscle spasms each day. Recording these scores before and after treatment allows you to monitor what is effective and what is not, and to make adjustments if you need to.

However, assessments should not rely only on this kind of physical examination.<sup>3</sup> Everyday activities, including walking, sitting and lying down can all have an effect on stiffness and spasms, so it can be useful to explain if there are particular times of the day, or particular circumstances when symptoms are better or worse. This might reveal the most appropriate treatments for you. You might want to keep a record of your own stiffness or spasms during a particular week or month, to help expose any particular patterns when discussing it with your doctor.

Assessments should be an ongoing process, not an isolated first step – your symptoms and circumstances can change and so the best treatments for you may also need to change. And you might need to try different approaches before finding what works best for you.

## Set realistic goals

At every stage of treatment, it is important to set goals – what results can be expected from a treatment and do these benefits outweigh the inconvenience and possible side effects? A physiotherapist, doctor or MS nurse can help ensure treatments have minimal side effects.

## Trigger factors

‘Investigating potential trigger factors that cause or make your spasms or stiffness worse is a vital step in finding solutions.’

Investigating potential trigger factors that cause or make your spasms or stiffness worse is a vital step in finding solutions. If identified and addressed, these may reduce or relieve the problem. For example, something as simple as loosening tight clothing might provide some relief. The following are some of the more common trigger factors that you and your doctor or MS nurse might consider:<sup>3</sup>

- an increase in your body temperature (perhaps because of a fever or excessive exercise)
- infections (for example, bladder or chest infections)
- if you are experiencing a relapse
- skin irritation (including pressure sores)
- a full bladder
- constipation, causing a full bowel
- overly tight strapping or clothes
- a fractured bone (perhaps caused by a fall)
- problems with posture
- emotional stress

## Types of spasms and stiffness

If treating suspected trigger factors does not provide adequate relief, there may be further investigation and treatments that could help. In deciding which treatments are most likely to work best, health care professionals will look at whether your spasms or stiffness are 'focal', (related to particular muscles) or 'generalised', (more widespread, affecting many muscles). You may have both, so a combination of therapies is sometimes needed.

Physiotherapy and exercises can help treat both types, but certain drug treatments are better suited to either 'focal' or 'generalised' spasms or stiffness.

---

## Physiotherapy and exercises

Movement, through physiotherapy and exercises, is an important way to manage muscle stiffness, whether it is mild or severe.<sup>2</sup>

Whatever exercise or stretching plans you agree with your physiotherapist, doctor or MS nurse, they need to be ones that you can continue to do yourself at home, either on your own or with help from family or carers. Therapies like this are most effective when they are done regularly.<sup>4,5</sup> Always consult a health care professional before starting new exercise plans or trying out different therapies. They can help you be confident the therapy will not be dangerous, or do more harm than good.

If you are unable to actively move the affected part of your body, it can be useful if a carer helps with what is known as 'passive movement' – where the arm or leg is moved by someone else, to stretch the muscle and keep the joint supple. A physiotherapist can help you and your carers learn appropriate techniques.

- **Range-of-motion exercises**

'Range-of-motion' describes the amount of movement you have in each joint. Good range of motion describes a joint which can move very widely. Poor range of motion is where a joint can only move to a limited extent. Exercises designed to help you keep maximum movement can bring benefits in two ways: they may reduce muscle stiffness and can also prevent knock-on problems like stiff joints from lack of use.<sup>3</sup> In severe cases, joints can become locked in one position, leading to postural and hygiene problems. A physiotherapist can show you active or passive exercises that match your abilities and help you avoid these problems. If you have muscle stiffness, it is important to begin these kinds of exercises as soon as possible, to minimise the risk of problems later.<sup>3</sup>

- **Stretching**

Along with range-of-motion exercises, stretching muscles can also help prevent long-term complications. When muscles are working normally, they stretch and contract, getting longer and shorter as the body moves about. Stiff or spasming muscles can be stuck for long periods of time in a shortened state. In the long term, this can lead to pain in the muscles, or in the tendons that connect them to the bone. Daily stretching, to lengthen affected muscles can help avoid this.<sup>3</sup>

- **Light pressure or stroking**

Sometimes, applying gentle pressure or lightly stroking a muscle can help get more out of range-of-motion and stretching exercises. Touching the muscle like this may calm the message pathways and relax the muscle, allowing you to stretch or move a little further.<sup>3</sup>

- **Strengthening**

If muscles do not get much use – perhaps because of stiffness, spasms, or other MS symptoms – they will get weaker over time. This can make daily activities and moving about more difficult. Strengthening exercises, sometimes involving lifting or moving weights, can help prevent this, by making the muscles stronger.<sup>3,5</sup>

- **Relaxation and breathing techniques**

Some people find that relaxation techniques and deep breathing, such as those used in yoga or t'ai chi, for example, help them relax when exercising. These kind of techniques can be learned with books or tapes, or through classes. If you join a class, you might want to explain your needs to the teacher beforehand so that they are aware of any adjustments you might want. It is important to take any exercise at a pace that suits you.

Relaxation tapes are available from the MS Society.

- **Heat**

Not everyone with MS is affected by heat, but some are particularly sensitive. Hot weather, an over-heated room and exercise can all make MS symptoms worse. This is a temporary effect – when the body cools down again, symptoms return to the level they were before.

If you are sensitive to heat, keeping cool during or shortly before exercise may help you exercise for longer, or more strenuously, without bringing on heat-related symptoms. This could be done with ice drinks, cooling garments or with regular breaks to prevent overheating.

'Some people find that relaxation techniques and deep breathing, such as those used in yoga or t'ai chi, for example, help them relax when exercising.'

Research showing benefits for these cooling techniques is not conclusive, and they may not help everyone, but they are unlikely to be harmful.<sup>4</sup> With the support of a health professional, you may find a cooling method that works for you.

Lowering the body's temperature, with cold baths or cooling garments, might also reduce some people's muscle stiffness temporarily. Applying cold packs or cold towels directly to affected muscles may give temporary relief for spasms or stiffness.<sup>5</sup> Again, research is not conclusive, but you may find such cooling techniques help your symptoms.

In contrast, some people with MS find that cool temperatures make their spasms or stiffness worse.<sup>4</sup> For these people, exercising in a warm swimming pool may help with stretching and relaxing muscles.<sup>5</sup>

Be careful with hot and cold therapies. When applying cold directly to the skin, or when using cooling garments or cold water to cool the body, care should be taken not to damage the skin. MS can cause changes to the way you experience temperature, distorting the feeling that would normally tell you when something is too hot or too cold. It is sensible to consult your doctor, MS nurse or physiotherapist if you are thinking of using such techniques.

## Aids and equipment

Braces and splints are sometimes used to hold a muscle in place for longer periods of time. This can be helpful if a muscle would otherwise be 'locked' in one position, which could make daily activities difficult, or cause problems in the long term. For example, if stiff muscles mean that a leg is bent at the knee, a splint may help stretch out the contracted, shortened muscles and enable the leg to be straightened. This might make it easier to stand, as well as stretching the muscle and moving the joint to avoid them 'seizing up'. Standing frames can serve a similar purpose, allowing someone to stretch the muscles by standing, even if normally this would be difficult or impossible.

How you sit or lie down can also help with managing spasms and stiffness and with preventing muscles from getting locked in a shortened position in the long term. Some people find that specially designed beds and chairs help them find a suitable posture. Others benefit from simply placing pillows or cushions where needed.

Correct positioning and support for the body when sitting or lying down can also help you avoid your skin rubbing and causing sores, and prevent aches and pains that can come from poor posture.

Some drug treatments for spasms and stiffness can cause muscle weakness, so you may find that certain aids, such as sticks and walking frames can help you stay mobile.

Some people with MS experience 'dropped foot' – where the muscles cannot smoothly control the foot's actions when walking. There are a range of dropped foot aids which might help, including carbon-fibre splints, elasticated systems (for example, 'foot-up' and 'Musmate') and functional electrical stimulation (FES) (see page 16). If you and your health care team think you might benefit from these aids, it's important to keep them informed of how you get on with it. Different aids suit different people, so if something is uncomfortable, or not quite right, there might be a more suitable alternative, or an adjustment that can be made.

If you think you would benefit from the techniques or equipment described, consult a physiotherapist, nurse or occupational therapist.

---

## Drug treatments

Physiotherapy and exercise are sometimes not enough on their own. Drug treatments can often help, especially when used together with physiotherapy.

### Treating individual muscles – focal spasms and stiffness

Sometimes, treatments can be targeted at specific muscles, or group of muscles that are affected. These treatments are known as 'neuromuscular blocks' (sometimes also called 'neurolytic blocks'). The drug is injected directly into the chosen muscle, leaving it in a relaxed, lengthened position. An effective neuromuscular block will stop the muscle being stiff and prevent spasms, but it will also make the muscle unable to contract and work and as a result cause weakness. For this reason, these treatments may not be suitable for everyone, but can be helpful if spasms or stiffness are making daily activities or mobility very difficult. Neuromuscular blocks need to be combined with physiotherapy to give the maximum relief.<sup>2,3</sup>

## Neuromuscular blocks for treating spasms and stiffness in specific muscles

	<b>How quickly does it start to work?</b>	<b>How long does it last?</b>	<b>Side effects and precautions</b>
<b>Botulinum toxin (sometimes known as 'botox')</b> <sup>4</sup>	Between 12 hours and 7 days after the injection.	Usually 3 to 4 months. Treatment can be repeated after 3 months.	You should expect to notice weakness in the treated muscle. Large doses are not recommended, so for maximum effect botulinum toxin is sometimes combined with alcohol or phenol injections. A few people develop a resistance to one type of botulinum toxin. Using the smallest dose that is still effective can help delay resistance building up. Alternating between two different types (type A and type B) might also help with this.
<b>Alcohol or phenol injection</b> <sup>2, 3, 6</sup>	Immediate.	The injection permanently destroys nerve fibres in the injected muscle. But some nerves partially re-grow, so the effects may wear off after several weeks or months. Injections can be repeated if needed.	You should expect to notice weakness in the treated muscle.

## **When many muscles are affected – generalised spasms and stiffness**

Spasms and stiffness do not always affect individual muscles that can be specifically targeted with treatments. To manage more generalised problems, other drugs may help. With these drugs, it can take some time to find the best choice for you – one that is effective without causing intolerable side effects. A combination of drugs may work, but it is always best to start with a single drug to see how that works first. The dose you take might then be increased over time, or combined with others, if the expected results are not seen at first. If you need to make changes to the doses or drugs you are taking, it is vital that you always discuss this with your doctor or MS nurse. Drugs should never be stopped suddenly.

It is important to remember that when taking any of these drugs you may notice weakness. This could be a side effect or might be because reducing stiffness has left muscles less able to support you.

These drugs should not be seen as an answer in themselves, but in combination with movement and physiotherapy they can be beneficial. The table on pages 14 and 15 describes some of the more common drugs used to manage generalised MS spasms and stiffness.

## Drug treatments for generalised spasms and stiffness

	How is it taken?
<b>Baclofen (Lioresal, Lyflex)<sup>3</sup></b>	Tablet or liquid
<b>Tizanidine (Zanaflex)<sup>3</sup></b>	Tablet
<b>Gabapentin (Neurontin)</b>	Tablet
<b>Dantrolene sodium (Dantrium)<sup>3</sup></b>	Tablet
<b>Diazepam (Diazemuls)<sup>3</sup></b>	Tablet
<b>Baclofen pump (also called 'intrathecal baclofen')<sup>3, 5</sup></b>	The drug is supplied automatically to the fluid around the spinal cord. A small pump that is surgically implanted near the waistline controls the dose. This system is known as 'intrathecal' injection.
<b>Liquid phenol (also called 'intrathecal phenol')<sup>2</sup></b>	The drug is injected directly into the fluid around the spinal cord ('intrathecally').

How does it work?	Side effects and precautions
<p>A muscle relaxant that works in the central nervous system. It can reduce the number of spasms and levels of muscle stiffness.</p>	<p>It may cause drowsiness, nausea, dry mouth and dizziness.</p>
<p>A muscle relaxant that works in the central nervous system. It can reduce stiffness and spasms and may be particularly useful to treat painful night-time spasms. Because its effects last for only 3-6 hours, it can be best used around specific times when relief from symptoms is most important, for example at bedtime.</p>	<p>It may cause drowsiness, fatigue, dry mouth and dizziness. Rarely, it can cause hallucinations. You should be carefully monitored for any effects on your liver, as it can cause problems for some.</p>
<p>An anticonvulsant drug that calms overactive messages in the central nervous system that might cause spasms. This drug is not used as commonly as baclofen or tizanidine to treat spasms and stiffness in MS, but it can be a suitable option for some.</p>	<p>It may cause drowsiness, fatigue and dizziness.</p>
<p>This drug works directly on muscles, reducing their ability to contract.</p>	<p>Side effects are common. They include drowsiness, fatigue, dizziness, nausea, speech difficulty and lack of coordination. You should be carefully monitored for any effects on your liver, as it can cause problems for some.</p>
<p>A muscle relaxant that works in the central nervous system. It can reduce stiffness and spasms. Because of side effects at higher doses, it may be more useful at night. Diazepam is no longer widely used to treat MS spasms and stiffness, but can help some people if other treatments have not worked.</p>	<p>It may cause drowsiness and weakness. Diazepam is a 'benzodiazepine' – a type of drug that can be addictive with long-term use, so should not be taken for too long. Your doctor can advise you on this.</p>
<p>For those with more severe spasms or stiffness, who do not gain adequate benefit from tablet medications, this can be helpful. By delivering the drug directly to the area in which it works, it can be more effective. Because of this, doses can be kept lower, keeping side effects to a minimum. Fitting the pump, adjusting the doses and refilling it should always be done by fully trained professionals.</p>	<p>Feeling 'lightheaded', confusion and headaches can all be side effects at first, but these normally resolve over time. Potential risks include infection, movement of the device and the wrong dose being given. Newer models of pump mean that pump failure is now rare.</p>
<p>It can be helpful for some people, to treat very severe spasms that do not respond to physiotherapy and other drug treatments. Phenol destroys the nerves that control sensation and movement, so by injecting it at a certain point around the spinal cord, it can stop spasms in the lower parts of the body. The effects of an injection can last several months and injections can be repeated if necessary.</p>	<p>Phenol can effect any nerve in the lower spinal cord, so it can cause the legs, bladder and bowel to become very weak. It is only used where a person already has limited control of these parts of their body.</p>

## Cannabis-based drugs – Sativex

Researchers have isolated certain ingredients in cannabis known as ‘cannabinoids’ and are testing any possible benefits for people with MS.

Sativex is one drug containing a cannabis extract that has been researched to see if it can help with spasms, stiffness and pain. It is taken by spraying it under the tongue or to the inside of the cheek. The dose of Sativex is controlled by varying the number of sprays taken. Side effects can include dizziness, sleepiness and feelings of intoxication, and the long-term safety of the drug is not yet known.<sup>7</sup>

At the moment, Sativex is available in Canada, but does not have a UK licence. GPs in the UK have occasionally prescribed Sativex on a ‘named patient’ basis for people with MS, but this is the exception rather than the norm. Access to this drug may change. Contact the MS Society information team for further details of the current prescription process, or visit [www.mssociety.org.uk](http://www.mssociety.org.uk).

In the meantime, cannabis is still an illegal drug in the UK and it is not recommended that it is sought from alternative sources where its safety is not known. For further information, see the MS Society publication on *Complementary and alternative medicine*.

---

## Electrical stimulation therapies

Used in combination with the treatments above, some people find electrical stimulation therapies useful. These therapies use electrical impulses to stimulate the muscles and nerve fibres affected by spasticity. However, like all approaches to managing spasms and stiffness, they do not work for everyone. Access to these kinds of therapies varies around the country. Your doctor, physiotherapist or MS nurse can refer you to an appropriate service, if there is one near you, where a health professional trained in using this equipment can discuss the options with you.

### Functional electrical stimulation – FES

A device which stimulates the muscles and nerve fibres of the ankle and foot, called functional electrical stimulation (often known as ‘FES’), can help combat ‘dropped foot’ – where the muscles cannot smoothly control the foot’s actions during walking. FES pads are attached to the surface of the skin to electrically trigger the required muscles as you walk. This may be a helpful addition to physiotherapy for some.<sup>2</sup> More information is available from the National Clinical FES Centre, which developed the device: [www.salisburyfes.com](http://www.salisburyfes.com) or call 01722 429 065.

## Transcutaneous electrical nerve stimulation – TENS

'TENS is based on principles similar to those of acupuncture – that stimulation of the nerves can affect the way pain signals get through to the brain, potentially easing the pain that is felt.'

This is another form of electrical stimulation that is applied through pads attached to the surface of the skin. Transcutaneous electrical nerve stimulation machines (often known as 'TENS') may help control the pain that some people experience with muscle spasms.<sup>5,8</sup> TENS is based on principles similar to those of acupuncture – that stimulation of the nerves can affect the way pain signals get through to the brain, potentially easing the pain that is felt. It may be particularly useful for managing the pain of spasms at night, especially if these spasms disrupt sleep.<sup>5</sup> However, as with all treatments for pain, it does not suit everyone and some people have reported skin irritation and some discomfort, rather than improvements.<sup>9</sup>

---

## Complimentary therapies

Some people feel they benefit from complementary therapies such as acupuncture, chiropractic, herbalism, magnetic stimulation, massage and yoga. Some of these may be available through the NHS, though you may be asked to contribute towards costs for certain services. Others will need to be paid for privately. Before beginning any complementary therapy, it is sensible to consult your doctor. Some therapies may interact with medications, or might even do more harm than good. If you do decide to use a complementary therapy, wherever possible use practitioners who are registered with a nationally recognised body. For more information, see the MS Society publication *Complementary and alternative medicine*.

---

## Surgery for severe spasms

Occasionally, surgery can help restore movement and posture, or can be used to relieve severe, ongoing spasms.

‘Orthopaedic surgery’ corrects problems with bones and muscles. This kind of surgery can sometimes restore the position of feet, ankles and hips if severe muscle stiffness has caused joints to become locked. For someone who is mobile, this can help them with walking. For those spending a lot of time sitting or lying down, it can help prevent further complications, such as pressure sores. Orthopaedic surgery is more likely to bring benefits if stiffness is managed – with physiotherapy or drug treatments, for example – to guard against similar problems coming back in the future.<sup>3</sup>

In rare circumstances, when other treatments have not relieved severe spasms and stiffness, operations on the spinal cord might be considered. This kind of ‘neurosurgery’, however, is not usually necessary.

---

## Further information

### MS Society publications

The MS Society has publications on a wide variety of topics, including information for people just diagnosed, types of MS, managing relapses, and social services. For a publications list and order form visit the website [www.mssociety.org.uk](http://www.mssociety.org.uk) or call 020 8438 0799 (Monday to Friday, 10am-3pm).

### MS Society website and magazine

Keep up to date with news relating to MS with the MS Society website [www.mssociety.org.uk](http://www.mssociety.org.uk) and members' magazine, *MS Matters*. Details about *MS Matters* are on the web and in the Society's publications list.

### MS Helpline

The award winning MS Helpline offers confidential emotional support and information to anyone affected by MS, including family, friends, carers, newly diagnosed or those who have lived with the condition for many years. Information about MS is available in over 150 different languages by speaking to a Helpline worker via an interpreter. Call freephone **0808 800 8000** Monday to Friday, 9am-9pm, except bank holidays, or email [helpline@mssociety.org.uk](mailto:helpline@mssociety.org.uk).

### MS Society National Centre, Information Centre

Based at the MS National Centre in London, the Information Centre is equipped for visitors to read or locate books and journals or view videos and DVDs. The Information Centre also runs an information line: 020 8438 0799, Monday to Friday, 10am-3pm, which you can call to request publications, research articles or other information about MS.

### Local information centres

There are MS Society local information and support centres in many locations around the country. These centres are staffed by volunteers who can help you with information about MS and services in your area. Call 020 8438 0799 for the details of your nearest centre.

### Local branches

The MS Society has a network of some 340 local branches across the UK. The branches – run by trained volunteers – provide information about MS and local services, a chance to meet others affected by MS and take part in a range of activities. For more information check the MS Society website or call 020 8438 0759.

---

## Further reading

***Managing the symptoms of multiple sclerosis*** by Randall T. Shapiro. Published by Demos Medical Publishing (Fifth edition 2007), ISBN: 978-1-932603-36-1. This book includes diagrams for exercises that may help with managing spasticity.

***Exercises for people with MS*** by Liz Betts. Published by, and available from, the MS Trust (2004), ISBN: 1-904156-05-3. This book includes exercises and information about positioning that might be helpful in managing spasms. To contact the MS Trust, telephone 01462 476 700 or download or order online at [www.mstrust.org.uk](http://www.mstrust.org.uk).

---

## Useful organisations

### Disabled Living Foundation

Provides information and advice to disabled people and others who use equipment or assistive technologies to enhance their independence.

380-384 Harrow Road  
London W9 2HU

Helpline 0845 130 9177 (Monday to Friday, 10am-1pm)  
Textphone 020 7432 8009  
[www.dlf.org.uk](http://www.dlf.org.uk)

### Multiple Sclerosis National Therapy Centres

A group of self-help centres offering a wide range of drug-free symptom management therapies.

PO Box 126  
Whitchurch  
Shropshire SY14 7WL

Telephone 0845 367 0977 (Monday to Friday,  
8.30am-8.30pm, weekends, 8.30am-5pm)

[www.ms-selfhelp.org](http://www.ms-selfhelp.org)

### Forum of Mobility Centres

A network of independent centres across the UK, offering information and assessments for driving and vehicle adaptations.

c/o Providence Chapel  
Warehorne  
Ashford  
Kent TN26 2JX

Telephone 0800 559 3636  
[www.mobility-centres.org.uk](http://www.mobility-centres.org.uk)

### DIAL UK

Provides information and advice on all aspects of living with a disability.

St Catherine's  
Tickhill Road  
Doncaster DN4 8QN

Telephone 01302 310 123  
Textphone 01302 310 123 (use voice announcer)  
[www.dialuk.info](http://www.dialuk.info)

---

## References

- 1 National Institute for Health and Clinical Excellence (2003) *NICE Clinical Guideline 8. Multiple Sclerosis: management of multiple sclerosis in primary and secondary care*. London, NICE.
- 2 Thompson, A. J. *et al.* (2005) Clinical management of spasticity. *Journal of Neurology, Neurosurgery and Psychiatry*, 76, 459-63.
- 3 Haselkorn, J.K. and Loomis, S. (2005) Multiple sclerosis and spasticity. *Physical Medicine and Rehabilitation Clinics of North America*, 16, 467-81.
- 4 Brown, T.R. and Kraft, G.H. (2005) Exercise and rehabilitation for individuals with multiple sclerosis. *Physical Medicine and Rehabilitation Clinics of North America*, 16, 513-55.
- 5 Multiple Sclerosis Council for Clinical Practice Guidelines (2003) *Spasticity management in multiple sclerosis. Evidence-based management strategies for spasticity treatment in multiple sclerosis*. Teaneck, NJ, Consortium of Multiple Sclerosis Centres.
- 6 Valerie, L. Stevenson and Louise Jarrett (2006). *Spasticity Management. A practical multidisciplinary guide*. Abingdon, Informa Healthcare.
- 7 Perras, C. (2005) Sativex for the management of multiple sclerosis symptoms. *Issues in emerging health technologies*, Issue 72. Ottawa: Canadian coordinating office for health technology assessment (CCOHTA).
- 8 Miller, L. *et al.* (2007) The effects of transcutaneous electrical nerve stimulation (TENS) on spasticity in Multiple Sclerosis. *Multiple Sclerosis*, 13, 527-33.
- 9 Carroll, D. *et al.* (2000) Transcutaneous electrical nerve stimulation (TENS) for chronic pain. *The Cochrane Database of Systematic Reviews 2000*, Issue 4, Art. No: CD003222.

---

## Authors and contributors

Written by James Bailey

With thanks to Cath Heynes, Irene Nicol, Monica Poole, Dr Stephen Smith, Dr Valerie Stevenson and all the people affected by MS who contributed to this publication.

Disclaimer: We have made every effort to ensure that the information in this publication is correct. We do not accept liability for any errors or omissions. The law and government regulations may change. Be sure to seek local advice from the sources listed.

Suggestions for improvement in future editions are welcomed. Please send them to [infoteam@mssociety.org.uk](mailto:infoteam@mssociety.org.uk).

© Multiple Sclerosis Society 2008

First edition, June 2006

Reviewed and reprinted by the information team, February 2008

Winner of 'best patient information leaflet' at the 2007 Association of Medical Research Charities (AMRC) Science Communication Awards.

## **Multiple Sclerosis Society**

Multiple sclerosis (MS) is the most common disabling neurological condition affecting young adults and we estimate that around 85,000 people in the UK have MS. MS is the result of damage to myelin – the protective sheath surrounding nerve fibres of the central nervous system. This damage interferes with messages between the brain and other parts of the body.

For some people MS is characterised by periods of relapse and remission while, for others, it has a progressive pattern. For everyone, it makes life unpredictable.

The MS Society is the UK's largest charity dedicated to supporting everyone whose life is touched by MS. It provides respite care, a freephone MS helpline, grants for home adaptations and mobility aids, education and training, MS specialist nurses and a wide range of information. Local branches cater for people of all ages and interests and are run by people with direct experience of MS.

The MS Society also funds over 50 vital MS research projects in the UK.

Membership is open to people with MS, their families, carers, friends and supporters. You can help the work of the MS Society by:

- becoming a member
- making a donation
- offering your time as a volunteer

### **Contact information**

MS National Centre  
372 Edgware Road  
London NW2 6ND  
Telephone 020 8438 0700

MS Society Scotland  
National Office  
Ratho Park  
88 Glasgow Road  
Ratho Station  
Newbridge EH28 8PP  
Telephone 0131 335 4050

MS Society Northern Ireland  
The Resource Centre  
34 Annadale Avenue  
Belfast BT7 3JJ  
Telephone 028 9080 2802

MS Society Cymru Wales  
Temple Court  
Cathedral Road  
Cardiff CF11 9HA  
Telephone 029 2078 6676

National MS Helpline  
Freephone 0808 800 8000  
(Monday to Friday, 9am-9pm)

[www.mssociety.org.uk](http://www.mssociety.org.uk)

Registered charity 207495