

# MS Essentials

For people living with MS

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## Muscle spasms and stiffness

Muscle spasms or stiffness are common symptoms, affecting at least 20 per cent of people with MS at some time. 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.

Although we have split this book into separate sections on drug treatments and physical management, the best way to manage these symptoms is through a combination of therapies (a 'multidisciplinary approach'). Your health care professional can help you find the best approach to treat or manage your symptoms.

Through the booklet, we refer to many organisations that can help with particular issues – just look for the **i**. Where you see this symbol turn to 'Useful organisations' on page 21 for contact details.

### Contents

- 02 What do we mean by spasms, stiffness and 'spasticity'?
- 03 The effects of spasms and stiffness
- 04 What causes spasms and stiffness?
- 06 Assessing your symptoms
- 07 Finding suitable treatments
- 08 Physiotherapy and exercises
- 11 Aids and equipment
- 12 Drug treatments
- 17 Electrical stimulation therapies
- 18 Complementary therapies
- 18 Surgery for severe spasms
- 19 Further information

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# What do we mean by 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.

## Spasticity

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.

## Stiffness

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.

## Spasms

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' most commonly cause the legs to come together, making it difficult to separate the thighs. They can also pull the arm into the side of the chest, making it difficult to move the arm.

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.

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# 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 your 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 to 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.

## Night-time

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. But there are things you might like to try to lessen this problem, which we will discuss later in this booklet.

## Explaining the issues

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, but understanding the issues can help everyone deal with them. This booklet might be helpful if you are explaining your symptoms to others, and anyone can call the MS Helpline (see page 19). 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, you may still want to make your doctor or MS nurse aware of the issue. 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 aching joints and pressure sores, can be avoided.

‘Living with spasms and stiffness can be frustrating for everyone involved, but understanding the issues can help everyone deal with them.’

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, MS nurse or physiotherapist know. Pain is an 'invisible symptom' and people will not be aware of it – or be able to help you manage it – unless you explain it to them. This is true for health professionals as well as family members, friends or colleagues. 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 booklet *Pain and sensory symptoms*.

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## 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).

### Message relay

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.

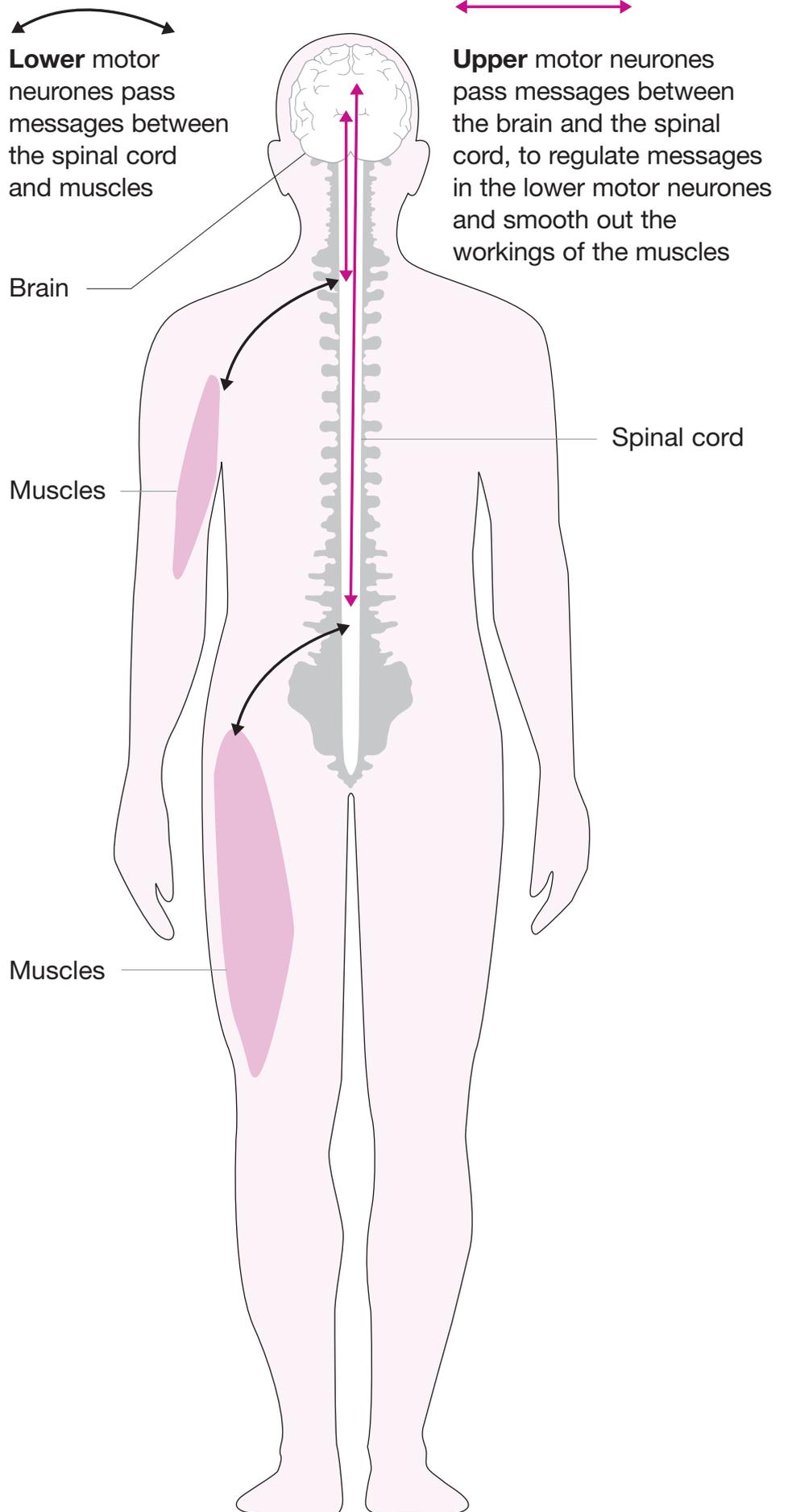
All these messages travel along nerve pathways made of many nerve cells known as 'motor neurones'. These motor neurones are the nerves that control the muscles.

### 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



## Damage to the upper motor neurones

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. Symptoms can come and go, but may become more constant over time.

## Other causes

As well as these causes found in the brain and spinal cord, there can also be physical changes to the muscles and tendons themselves such as shortening (contractures), which may add to the problem. Treatments, therefore, may involve several approaches in order to tackle these different causes.

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## Assessing your symptoms

The effects of spasms and stiffness vary widely, so treatment needs to match your own individual 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.

## To treat or not to treat

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 for you to get about. For those 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 or physiotherapist.

## Measuring stiffness and spasms

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.

## A full assessment

Assessments should not rely just on the kind of physical examination described previously. 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 your 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.

## Ongoing assessment

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.

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## Finding suitable treatments

### 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.

### Triggers

Investigating potential triggers that cause or make your spasms or stiffness worse can help you to find solutions. If you know what is causing a problem, then this can help you deal with it. For example, something as simple as loosening tight clothing might provide some relief. The following are some of the more common triggers that you and your doctor or MS nurse might consider:

- an increase in your body temperature (perhaps because of a fever or too much 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

‘Investigating potential triggers that cause or make your spasms or stiffness worse can help you to find solutions.’

- pain
- a fractured bone (perhaps caused by a fall)
- problems with posture
- emotional stress

These triggers can also work the other way, as a ‘warning system’. If your muscle spasms or stiffness get worse, this can alert you that there is something else wrong that needs to be dealt with.

## Treatments for different types of spasms and stiffness

If treating suspected triggers 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. The following sections look in more detail at different treatments.

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## Physiotherapy and exercises

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

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. Always consult a health care professional before starting new exercise plans or trying out different therapies – it makes sense to know that a 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. They can also review your home exercise programme at least once a year to make sure it is still appropriate for you.

### 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. 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.

## 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.

The MS Society has produced an exercise DVD, *Exercising with MS*, which features a number of stretches for people with MS. You can watch the routines on the MS Society website or on YouTube (search 'exercising with MS'). For copies of the DVD, email [shop@mssociety.org.uk](mailto:shop@mssociety.org.uk) or call 020 8438 0999.

Before trying any of the exercises in the DVD, you should speak to your doctor to make sure that they are safe for you to do.

## 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.

### 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. However, this light pressure can also have the opposite effect and can cause a muscle to spasm.

## 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 kinds 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 and CDs are available from the MS Society library. Search online or call the librarian on 020 8438 0900.

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## Keeping cool

Not everyone with MS is affected by heat, but some people are particularly sensitive to it. 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.

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

### • Cooling and warming muscles

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. 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. For these people, exercising in a warm swimming pool may help with stretching and relaxing muscles.

### • Take care

Be careful with hot and cold therapies to avoid burning your skin. When applying cold directly to the skin, or when using cooling garments or cold water to cool the body, take care not to damage your 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's a good idea to consult your doctor, MS nurse or physiotherapist if you are thinking of using such techniques.

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## Aids and equipment

### Stretching 'locked' muscles

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 so that the leg can 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.

There is a range of equipment which might be helpful – ask a physiotherapist, nurse or occupational therapist if you think these techniques might benefit you.

### Sitting and lying

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. There are also special supports available to help people stay in position in bed or in chairs. The Disabled Living Foundation has information about this kind of equipment [\[i\]](#). 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.

### Staying mobile

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 'drop foot' – where the muscles cannot smoothly control the foot's actions when walking. There are a number of drop foot aids which might help, including carbon-fibre splints, elasticated systems (for example, 'Foot-up' and 'Musmate') and functional electrical stimulation (FES) (see page 17).

If you and your health care team think you might benefit from one of these aids, it's important to keep them informed about 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.

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## Drug treatments

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

### **Treating individual muscles – focal spasms and stiffness**

Sometimes, treatments can be targeted at particular muscles, or groups 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. The table on page 13 shows the neuromuscular blocks commonly used.

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

Spasms and stiffness do not always affect individual muscles. 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 drugs used to manage generalised MS spasms and stiffness.

## 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>	Between 12 hours and seven days after the injection.	Usually three to four months. Treatment can be repeated after three months.	You should expect to notice weakness in the treated muscle. A few people develop a resistance to one type of botulinum toxin. Using the smallest dose that is still effective can help reduce this.
<b>Alcohol or phenol injection</b>	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.

	How is it taken?
<b>Baclofen (Lioresal, Lyflex)</b>	Tablet or liquid
<b>Tizanidine (Zanaflex)</b>	Tablet
<b>Gabapentin (Neurontin)</b>	Tablet
<b>Dantrolene sodium (Dantrium)</b>	Tablet
<b>Diazepam and clonazepam</b>	Both tablet
<b>Baclofen pump (intrathecal baclofen)</b>	Baclofen is supplied continuously to the fluid around the spinal cord. A pump that is surgically implanted near the waistline controls the dose. This system is known as 'intrathecal' injection.
<b>Phenol injection (intrathecal phenol)</b>	Phenol is injected directly into the fluid around the spinal cord ('intrathecally').
<b>Sativex (nabiximols)</b>	Sativex is taken by spraying it under the tongue or to the inside of the cheek.

<b>How does it work?</b>	<b>Side effects and precautions</b>
<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 three to six 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 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>Diazepam is 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. Clonazepam is similar but may be particularly effective for night time spasms.</p>	<p>They may cause drowsiness and weakness but if taken at bedtime to reduce night spasms this is not usually a problem. Diazepam and clonazepam are 'benzodiazepines' – 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>Side effects are rare unless the dose is too high. Potential risks include infection, movement of the device and the wrong dose being given (overdose or underdose). 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 is a permanent treatment which 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 sometimes wear off but can be repeated if necessary.</p>	<p>Phenol can affect 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>
<p>Sativex is a cannabis extract which works on the cannabinoid receptors in the brain and spinal cord. It is licensed in MS as an add on therapy for those people whose spasticity and spasms have not responded to the other available drugs.</p>	<p>Side effects can include dizziness, sleepiness and feelings of light headedness. Occasionally the spray can cause soreness in the mouth so it is important to change the spray site regularly.</p>

## Sativex

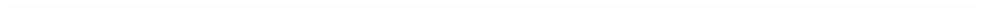
Sativex is an oral spray that contains chemicals known as 'cannabinoids', which are extracted from cannabis plants. It's currently the only treatment licensed specifically for managing muscle stiffness (spasticity) in people with MS.

## Access to Sativex

In late 2019 NICE – the body that decides what treatments should be available on the NHS in England – decided that Sativex can be available to people in England (it was already available in Wales). You need to have 'moderate' to 'severe' spasticity and other treatments haven't worked. We hope that Sativex will also become available in Scotland and Northern Ireland soon.

## How effective is Sativex?

Clinical trials of Sativex have found that it can be of some benefit to people who haven't responded to other drug treatments. You'll take it for four weeks, and if your spasticity symptoms haven't got better by at least 20%, you'll stop taking it. This drug doesn't work for a lot of people. In a trial only about half of people who took it saw their symptoms improve by 20% or more.



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# 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 the nerve fibres affected by spasticity. However, like all approaches to managing spasms and stiffness, they don't 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 'drop foot' – where the muscles cannot smoothly control the foot's actions during walking. FES pads are usually 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. NICE, the organisation that assesses treatments for the NHS in England and Wales, says that FES is safe enough and works well enough to be used on the NHS.

Contact the National Clinical FES Centre, which developed the device, for more information [\[i\]](#). For more about accessing FES services, see [www.mssociety.org.uk/FES](http://www.mssociety.org.uk/FES)

## TENS (transcutaneous electrical nerve stimulation)

'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. TENS machines may help control the pain that some people experience with muscle spasms. 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. 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.

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## Complementary therapies

Some people say that complementary therapies such as acupuncture, chiropractic, herbalism, magnetic stimulation, massage and yoga can help them. 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 a good idea 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. There's more information in the MS Society booklet *Complementary and alternative medicine*. Many MS therapy centres offer complementary therapies. Contact Multiple Sclerosis National Therapy Centres for your nearest centre. 

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## 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 contractures have developed. For someone who is mobile, this may help them with walking. For those spending a lot of time sitting or lying down, it might help prevent further complications, such as pressure sores. However, orthopaedic surgery is more likely to bring benefits if stiffness is well managed – with physiotherapy or drug treatments, for example – to guard against similar problems coming back in the future.

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.

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## Further information

### **Read more**

Our free booklets help explain MS, look at its practical and emotional effects, and help you find your own ways to manage life with MS. Information is available in large print, audio format and a number of languages. For copies, email [shop@mssociety.org.uk](mailto:shop@mssociety.org.uk) or call 0300 500 8084.

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Just by being a member you strengthen the voice of all people affected by MS. You'll receive our national magazine – *MS Matters* with its insert *Research Matters* – local newsletters and details of local events, as well as being able to vote on how we are run. Help us continue our vital work and join online at [www.mssociety.org.uk/joinus](http://www.mssociety.org.uk/joinus) or by calling 0300 500 8084.

### **Get in touch**

The Freephone MS Helpline offers confidential emotional support and information for anyone affected by MS, including family, friends and carers. Information is available in over 150 languages through an interpreter service. 0808 800 8000 (closed weekends and bank holidays) or [helpline@mssociety.org.uk](mailto:helpline@mssociety.org.uk)

### **Near you**

Our volunteers run over 300 local branches and support groups. They provide information about MS and local services, and a chance to meet others affected by MS and take part in a range of activities.

In many parts of the country, you can pick up our booklets at MS Society Info Points. Larger information centres – including ones in our national offices in London, Belfast, Cardiff and Edinburgh – can help you with information about MS and services in your area.

Or come along to our local and national events and learn more about MS from expert care professionals, researchers and other people with the condition. Find out more online or call your national office.

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## Further reading

***Managing the symptoms of multiple sclerosis*** by Randall T. Schapiro. 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. Available online at [www.mstrust.org.uk](http://www.mstrust.org.uk)

***Yoga and multiple sclerosis*** by Loren M. Fishman and Eric L. Small. Published by Demos Medical Publishing (2007), ISBN: 1-932603-17-4. Includes some poses aimed at improving spasticity.

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## Useful organisations

### **Disabled Living Foundation**

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

Ground Floor  
Landmark House  
Hammersmith Bridge Road  
London W6 9EJ

Helpline 0300 999 0004 (weekdays, 10am-4pm)  
[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 2199  
Buckingham MK18 8AR

Telephone 0845 367 0977  
[www.msntc.org](http://www.msntc.org)

### **National Clinical FES Centre**

For information about FES (functional electrical stimulation).

Department of Medical Physics and Biomedical Engineering  
Salisbury District Hospital  
Salisbury  
Wiltshire SP2 8BJ

Telephone 01722 429 065  
[www.salisburyfes.com](http://www.salisburyfes.com)

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## References

A list of references is available on request. Call 0300 500 8084.

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## Authors and contributors

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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.

If you have any comments on this information or on the work of the MS Society, please send them to [resources@mssociety.org.uk](mailto:resources@mssociety.org.uk)

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This title will be reviewed within three years of publication.

The MS Society provides this information free of charge but if you would like to help cover the cost, which will help towards our essential work, please call 0300 500 8084 or visit the fundraising section of our website to make a donation. Anything you can give will be greatly appreciated.



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## MS Society

100,000 people live with multiple sclerosis in the UK. Every one of them shares the uncertainty of life with MS.

The MS Society is the UK charity fighting to improve treatment and care to help people with MS take control of their lives.

We're a world-leading funder of MS research. We've already made important breakthroughs, and we're now at the start of a generation of MS research that holds incredible promise.

With your support, we will beat MS.

## Contact us

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London NW2 6ND  
Telephone 0300 500 8084  
info@mssociety.org.uk

MS Society Scotland  
National Office, Ratho Park  
88 Glasgow Road  
Ratho Stations  
Newbridge EH28 8PP  
Telephone 0131 335 4050  
msscotland@mssociety.org.uk

MS Society Northern Ireland  
The Resource Centre  
34 Annadale Avenue  
Belfast BT7 3JJ  
Telephone 028 9080 2802  
information@mssociety.org.uk

MS Society Cymru  
Temple Court, Cathedral Road  
Cardiff CF11 9HA  
mscymru@mssociety.org.uk

MS Helpline  
Freephone 0808 800 8000  
(closed weekends and bank holidays)  
helpline@mssociety.org.uk

Online  
[www.mssociety.org.uk](http://www.mssociety.org.uk)  
[www.facebook.com/MSSociety](https://www.facebook.com/MSSociety)  
[twitter.com/mssocietyuk](https://twitter.com/mssocietyuk)

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