



# Wellness practices and complementary therapies in multiple sclerosis

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The information in this guide should not be relied on to suggest a course of treatment for a particular individual. No therapy should be undertaken without the advice of a qualified healthcare team.

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Adapting information from our members

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# Introduction

There is currently no cure for multiple sclerosis (MS). However, it can be treated. Many disease modifying therapies (DMTs) can reduce the number and severity of relapses as well as slow disease progression.

MS treatment aims to improve quality of life for people living with MS, for example by reducing symptoms and maintaining mobility.

For people living with MS, treating symptoms is a priority. Symptoms such as tight or stiff muscles, movement problems, pain or fatigue may be reduced through engaging in overall wellness practices or by making use of complementary therapies. Certain therapies might help people feel more in control of their MS or make them feel better overall, reducing stress and helping with relaxation.

## Definitions

In this guide, we define wellness practices as a variety of practices that anyone can do, regardless of MS, to help maintain physical and mental wellbeing, such as relaxation, healthy diet and exercise. Unlike most complementary therapies, wellness practices can often be done at home without the

support of a practitioner. Each person with MS will have a different experience of which wellness practices work for them. **Some wellness practices may need to be adapted to your personal needs.**

We define complementary therapies as approaches that may be used alongside standard evidence-based treatments for MS. Complementary therapies are often paid for by individuals and performed by a practitioner in a professional setting, for example a clinic or studio. There is a wide range of therapies on offer. **Several complementary therapies may provide relief for some MS symptoms, but others provide no benefit at all, and some can even cause harm.**

## Purpose

This booklet gives an overview of wellness practices and complementary therapies that are sometimes used by people with MS in addition to DMTs. The authors reviewed available research to provide a summary of the evidence (or lack of

evidence) for each approach. This booklet also includes information about some therapies that we explain why we don't recommend people with MS use.

**While many wellness practices and complementary therapies are covered by this booklet, others exist.** Some approaches are not available in every country. To learn more about what is available in your country, please contact your qualified healthcare provider or national MS organisation. Find MS organisations in your country

here: <https://www.msif.org/living-with-ms/find-ms-support-near-you/>

The information in this booklet has been researched and reviewed in relation to adults (aged 18 and over) who have MS. There is very limited information available for the safety and effectiveness of any of these therapies for children and adolescents; therefore, the recommendations in this booklet are relevant for adults only.



Hands passing plants, Malaysia



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## Consulting your healthcare team

This guide should not be used in the place of medical advice. MS is complex and presents differently in every person. MS treatment should be adjusted to each person.



**If you're thinking of trying complementary therapies or wellness practices alongside your MS DMTs, consult your qualified healthcare team first.**

If you're using health insurance, you might want to check whether an approach is covered by your insurance scheme before starting it.

Managing your MS usually means working with a group of different healthcare specialists (a multidisciplinary team). Your qualified healthcare team is likely to include a neurologist, a general practitioner (GP), an MS nurse, rehabilitation specialists (for example, a physiotherapist or occupational therapist), mental health specialists (for example, a psychologist, mental health social worker, or psychiatrist) and a pharmacist.



Shahdar, person with MS, Malaysia



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## Standard therapies for MS

There are three main approaches to treating MS:

- treatments for a relapse
- disease modifying therapies (DMTs) designed to prevent relapses
- therapies for symptoms not related to a relapse.



## Treatment for a relapse

MS relapses are caused by inflammation (swelling) in the central nervous system that damages the myelin coating surrounding nerve fibres. This damage slows or disrupts nerve signals, causing the symptoms of MS.

Acute relapses are commonly treated with steroids. These can be given in a vein (intravenously) or by mouth (orally) for a few days. Methylprednisolone is the steroid most often used; prednisone is another commonly used steroid.

Steroids work by damping down the inflammation that's damaging the nerves. Steroids aren't thought to have any long-term benefit as an MS treatment but can be effective at:

- reducing inflammation
- shortening the duration of a relapse
- speeding up recovery from a relapse.

If steroids don't succeed in treating a relapse, a treatment called intravenous immunoglobulin (IVIG) can be used. IVIG can also be used in people who shouldn't take steroids (such as women in the early stage of pregnancy). Plasmapheresis (plasma exchange) is another treatment that can be used when steroids fail to treat a relapse. Plasmapheresis involves withdrawing blood, removing antibodies from the plasma thought to be active in MS, and replacing blood cells along with a new plasma fluid.

## Disease modifying therapies (DMTs)

DMTs are not a cure for MS. They aim to prevent or reduce the number of relapses and slow down the overall progression of the disease. DMTs can be given in various ways including injectable medications, oral medications and intravenous infusions (a drip).

The choice of DMTs will be guided by your MS disease activity (whether you are experiencing active relapses), the severity of your disease, and which treatments are available in your health care system. Read more about DMTs for MS [here](#).

## Therapies for symptoms not related to a relapse

In addition to DMTs, therapies for symptoms are often prescribed to help manage chronic features of MS, such as fatigue, bladder control issues, spasticity (stiffness in the limbs), pain, speech and swallowing dysfunction.

Although these therapies don't affect the course of your MS, they can improve your quality of life. Treatments can include rehabilitation (such as physiotherapy, occupational therapy and speech therapy) and medications targeted at the specific symptom. Over 30% of people with MS report depression; and treatment of mental health is a key aspect of MS care.



Oumaima, person with MS, Morocco



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## Section A: Wellness practices for people with MS

Everyone should look after their overall wellness, no matter what health conditions you are living with.

**Exercise, eating a healthy diet and mental health care are all important components of general wellness practices, as are limiting alcohol, not smoking and maintaining healthy sleep habits.**

People with MS may decide to do a variety of wellness practices to help maintain their physical and mental wellbeing. Unlike many complementary therapies, wellness practices can often be done at home without the support of a practitioner. In this section we cover exercise, healthy diets and a range of relaxation techniques.

You may need to adapt some wellness practices to your personal needs. Each person with MS will have a different experience of which wellness practices work for them. Seek advice from your qualified healthcare provider before starting a new wellness practice.

Wellness practices should be used alongside standard

therapies for MS. No wellness practice or complementary therapy should be used instead of treatment with DMTs.

### Exercise

**Exercise can improve your quality of life and slow down the progression of MS.**

It's a myth that exercise can trigger MS relapses. In fact, sport and exercise can improve wellness at every stage of MS. Strength training, cardiovascular training and mobility exercises can improve your quality of life and help you to do everyday tasks. Symptoms such as fatigue, balance disorders, muscle weakness, and tight or stiff muscles (spasticity) can be helped by regular training.<sup>1,2,3</sup> Training two to three times a week is often sufficient.<sup>4</sup>

Exercise gets your circulation going and improves the oxygen supply around the body. This is important for the function and maintenance of nerve cells. Exercise can also encourage the body to reduce



inflammation and so supports the immune system.<sup>5</sup>

Exercise can strengthen connections between nerve cells,<sup>6</sup> helping them to coordinate muscle movements. Every movement we make requires a complex interaction between nerve cells and muscles. Strengthening these connections can help to counteract nerve damage.

It's important to adapt the type and intensity of exercise to your MS and fitness level. If you have higher levels of disability, are afraid of injury, or your MS symptoms are worsened by heat (known as the Uhthoff phenomenon), we recommend you consult your physician and physiotherapist. In any case, avoid exhaustion. Sometimes, people try harder than they should to prove to themselves or others what they can do. It is important to listen to your body.

In this section we summarise various forms of exercise. For further information, contact a healthcare professional or MS organisation.

## Cardiovascular training

Cardiovascular training (for example brisk walking, jogging, Nordic walking, using a stationary exercise bike or pedal bike, swimming, dance and Zumba) helps to maintain and develop motor skills (the coordination of movement). It gets the circulation going and helps to maintain mobility and improve coordination.<sup>7,8,9</sup>

In cardiovascular training, you sustain light-to-moderate exertion for around 20–30 minutes.

One type of cardiovascular training is high-intensity interval training (HIIT). During HIIT, you alternate short, very strenuous phases of exercise with rest phases. HIIT is particularly effective in training the cardiovascular system and coordination of muscles. Studies in people affected by MS have shown very good effects of HIIT, including for people with limited mobility.<sup>10,11</sup>

Exercise training can be performed using only the upper

limbs for persons with limited leg function or impaired balance.

## Balance training

Many people with MS have coordination difficulties and balance disorders. Motor coordination (the coordination of movement) can be practised and improved through balance training.<sup>12</sup> In this training, you can use swing sticks, vibration platforms and other training equipment to challenge your balance. Balance training is particularly useful when combined with other sport and exercise.

## Strength training

Strength training (for example, weightlifting and resistance training) aims to strengthen the muscles, joints and bones. In contrast to cardiovascular training, higher loads are moved over shorter periods of time. It's no longer believed that strength training is harmful to people with MS. On the contrary, strength training helps with everyday tasks (for example, lifting objects and climbing stairs), improves stability and bone strength, and protects against muscle loss.<sup>13,14</sup> A Danish



Izabela, person with MS, Poland



study showed that strength training in MS helps to protect nerve cells and total brain size.<sup>15</sup>

Strength training is a complementary therapy that's generally recommended for people with MS as long as the right technique and professional support are used to prevent injuries. Particularly good results have been achieved when people combine HIIT and strength training.<sup>16</sup>

## Pilates

Pilates is a form of exercise that aims to build strength and flexibility. You can perform the exercises at a level of intensity that is appropriate for your ability. There is some evidence that Pilates-based programmes can improve balance for people with MS.<sup>17</sup> Pilates may also have benefits for improving overall physical functioning and reducing how fatigued you feel. It is unlikely to be harmful.



Gopi, person with MS, India

## Yoga

Yoga is a holistic, traditional, functional life philosophy that began in India. It combines movement and spirituality. Nowadays, different types of yoga are practiced all over the world. Depending on the type of yoga, it may focus on meditation (for example, Jnana Yoga) or physical training (for example, Hatha Yoga).

Yoga is particularly suitable for maintaining mobility and coordination.<sup>18,19,20</sup> There is some evidence of positive benefits for people with MS, and it is unlikely to be harmful. Most people can perform yoga readily. However, certain yoga postures are potentially harmful to joints. There is a particular risk of injury if you force yourself into positions or stretches beyond your capability. So, be mindful of your physical limits and, if in doubt, seek advice from medically trained specialists. In addition, if you are sensitive or intolerant to heat, you should avoid Bikram yoga (hot yoga), as it could worsen MS symptoms.

## Healthy diet

### A healthy diet is important for general health.

Moreover, gut health can directly affect our metabolism, hormone production and immune system.<sup>21, 22</sup> The connections between digestion and chronic diseases are not fully understood.<sup>23</sup> However, it's suspected that diet can influence MS symptoms.<sup>24, 25</sup>

Eating a healthy diet means having freshly prepared, varied meals with lots of fibre, fruit and vegetables. Unsaturated fatty acids and natural sources of vitamin D and vitamin B12 are important, as well as calcium (found in eggs, dairy and meat, for example). Having enough fluid (about 2 litres of water daily) is important too. You should avoid alcohol, processed sugar and processed food products, or consume only a small amount.<sup>26</sup>





Hands handling food, Morocco

Because MS can reduce physical activity, some people with MS are more prone to weight gain.<sup>27</sup> Obesity may be an added health burden, making movement more difficult and speeding up the loss of mobility. In addition, excess body fat may send pro-inflammatory signals that influence MS symptoms.<sup>28</sup> Excess body fat is also linked to other diseases such as type 2 diabetes, dyslipidaemia (an imbalance of lipids in the blood), and high blood pressure.

Some forms of dieting aid weight loss and improve general health. However, be aware that radical diets can weaken the body and be an extra burden. Diet pills that bind nutrients or have a laxative effect are dangerous. They can affect the absorption of medicines and important nutrients.

Some people need to follow specific dietary recommendations, for example if they take certain medications, have food allergies, or have certain food intolerances (for example, a

gluten intolerance). If you follow a specific diet (for example, vegan, vegetarian, keto or gluten free), let your doctor know. This is because it can affect your blood and laboratory test results.<sup>25, 29</sup> Specific types of diet are explored in more detail in Section B.

A nutritionist or dietician can give you professional advice to help you to plan your diet optimally and integrate it into your everyday life. They'll teach you about how nutrition, digestion and symptoms are interlinked and give you tips on adjustments to make to your diet.<sup>30</sup> Check the background and qualifications of any nutritionist, dietician or other professional you want to use before seeking their nutritional advice. Your healthcare team or national MS organisation can help you with this.

More information about diet and nutrition for MS can be found [here](#).

## Relaxation techniques

### Switching off mentally — everyone can benefit from that!

People with MS deal with the stresses of a chronic (long-term) illness daily. Relaxation is not found only on vacation — it can also be practiced and integrated into everyday life.

Relaxation in itself is not therapy, but with relaxation techniques you can positively influence the course of your MS and its symptoms.<sup>31, 32</sup> Relaxation is not only mental — it's also physical. When we relax, our breathing slows, muscle tone decreases, and stress hormones are reduced.

This can relieve tension and has been proven to help chronic pain.<sup>33</sup> Relaxation also has a positive effect on the cardiovascular, immune, nervous and digestive systems.

The effectiveness of relaxation has been proven, but how well each relaxation technique works



varies from person to person. You'll need to work out what's most beneficial for you.

If you have severe physical limitations, gentle methods of relaxation are most suitable. However, if you're active you may prefer techniques that involve movement. You might like to combine different relaxation techniques. Find something you can easily integrate into your everyday life because the more often you can relax, the better!

Many of the relaxation methods listed here use mindfulness and bodily awareness. For most people, these promote more positive self-perception and strengthen inner balance. However, some people find that negative thoughts worsen while doing some relaxation techniques, especially meditation. This can increase anxiety and discomfort.<sup>34</sup> If you have insecurities, anxiety or clinical depression, get a trained psychologist to help you discover the best relaxation techniques for you.

Relaxation techniques require you to consciously draw your attention inwards and observe your own thoughts. They're unsuitable for patients with psychoses and severe cognitive impairments, such as advanced dementia.<sup>34</sup>

Advanced physical MS symptoms can limit relaxation techniques in some people. For example, breathlessness or heart problems can stop you performing some breathing-based relaxation techniques because these could leave you more out of breath.<sup>35</sup> If in doubt, consult your healthcare team.

In some countries, costs for relaxation-based therapy may be covered by health insurance. However, the services covered vary depending on reason for use and service provider. It's best to ask your health insurance company in advance.

Some well-known relaxation techniques are explained in the following section. Please keep in mind that scientific studies

have typically only looked at the positive (not negative) effects of relaxation. In addition, there is no evidence that any of these methods have any effect on the disease course of MS.<sup>36</sup> Therefore, relaxation techniques should only be used alongside regular MS treatments.

## Imagination

Imagination can help you to develop a positive self-image through the power of your own thoughts. There are different approaches to imagination such as guided fantasy trips to beautiful places or creating images in your mind.<sup>32, 36</sup> There is limited evidence for positive benefits on the course of MS, but this approach is unlikely to be harmful.



Tarrbinder person with MS, Malaysia





## Mindfulness-based stress reduction

Mindfulness-based stress reduction is a relaxation technique that can be used as part of a person's clinical care. It combines mindfulness exercises, meditation techniques and slow movements. Studies show that mindfulness-based stress reduction can have a positive effect for the general population.<sup>37, 28, 29, 40</sup> However, these programs are not safe for people with certain psychological or mental health conditions. Ask your practitioner whether mindfulness-based stress reduction is suitable for you.

## Meditation

Meditation is a mental exercise to consciously direct your attention. Many cultures use meditation for relaxation or prayer. Meditation exercises often use a combination of breathing exercises, specific postures, speech formulas (mantras), prayers and singing. Similarly, a meditative state (where you're fully absorbed in the current moment) can be achieved in many ways. Meditation can be guided, or you can do it on your own.<sup>32</sup> There is limited evidence for positive benefits for people with MS, but this approach is unlikely to be harmful.

## Music and art therapy

Creative activities can help people to relax and have a proven positive effect on mental wellbeing.<sup>41</sup> Music and art therapies can help people with MS to switch off and live better with MS symptoms.<sup>42</sup> When painting, designing, dancing or making music, movement and

fine motor skills (movements to perform a task) are also trained.<sup>43,44,45</sup>

Music and art therapies can be used alongside medical therapies for MS. There are lots of different ways to explore music and art therapy, and MS organisations often provide them.



Kimiko, person with MS, Japan

## Qi gong and Tai Chi

Qi gong is a traditional Chinese method for training your body and mind. According to traditional teaching, Qi, the life energy, is harmonised and strengthened in the body through Qi gong. It includes mindfulness exercises, breathing exercises, gentle

movement and meditation. As Qi gong is mainly done standing up, it also trains balance.<sup>46,47</sup> There is limited evidence for positive benefits for people with MS, but this approach is unlikely to be harmful.

The Chinese tradition of Tai Chi is based on a self-defence technique and also led to a Buddhist-inspired movement theory called Tai Chi Chuan. Similar to Qi gong, Tai Chi is based on the combination of meditation and slow, mindful movement. Due to the influences from martial arts, flexibility, stability and balance are more important in Tai Chi than in Qi gong.<sup>48</sup> There is limited evidence for positive benefits for people with MS, but this approach is unlikely to be harmful.







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## Section B: Therapies that may have some benefit for people with MS

There are many types of therapy that are sometimes used by people with MS as a complement to their clinical care.

**In this section, we have described several of them but do not provide an exhaustive list. Some complementary therapies may provide relief for certain MS symptoms experienced by some people, but others provide no benefit at all.**

People often need to pay for complementary therapies privately. A practitioner often performs them in a professional setting, for example a clinic or studio.

There is a lack of evidence for many complementary therapies, especially in relation to MS, because very little research has been conducted. Many studies only include a few people or are not conclusive. Unlike DMTs, the therapies in this section are not proven to reduce relapses or to limit disability in MS. If you are interested in using complementary therapies, please ask your healthcare team whether they are safe for you to use.

If you're considering trying any complementary therapies, they should only be used alongside standard therapies for MS. No wellness practice or complementary therapy should be used instead of treatment with DMTs.

### Acupuncture and acupressure

Acupuncture is based on traditional Chinese medicine. It's based on the theory that, in a healthy person, the Qi (life energy) flows unhindered through meridians (energy channels in the body), while in people with an illness or ailment the Qi doesn't flow properly due to disturbances and blockages of energy.<sup>49</sup>

Acupuncture often involves a practitioner inserting needles into the skin along the meridians. This comes with a risk of infection and other side effects.<sup>50</sup> However, some types of acupuncture don't use needles, such as acupressure (which uses pressure from fingers) or red-light acupuncture.

To help you choose an acupuncture practitioner, get sufficient information on their training and qualifications. In some countries, you may find a registry of accredited acupuncture practitioners.

Scientists disagree about whether acupuncture works. There have been no large-scale controlled clinical trials to evaluate the safety and effectiveness of acupuncture in people with MS. However, some positive effects have been observed in people with MS who have chronic (long-term) pain.<sup>37,51,52,53</sup> Therefore, acupuncture may be used as a complementary therapy for MS as long as it is expertly performed by a trained professional. Check with your healthcare team before starting acupuncture.

## Animal-assisted therapy

Animal-assisted therapies can be used as a complementary therapy for both physical and mental illnesses. Therapy animals include dogs, cats, horses, llamas and dolphins.

People with MS can benefit from interactions with animals, as well as from exercise.<sup>54</sup> Working with trained horses (hippotherapy) can have particularly good results because riding can have a positive effect on MS symptoms.<sup>55, 56, 57</sup>

To support animal welfare, get sufficient information about the care of the animals before choosing an animal therapy provider. We recommend that you try to select providers who are recognised by a relevant professional association.



## Aromatherapy

Fragrant oils and incense have been used since ancient times. In aromatherapy, scents and plant extracts are combined in essential oils. These oils can be used in aroma lamps, baths, inhalation, compresses or massages. Some people find them soothing and relaxing.<sup>58, 59</sup> People with MS sometimes use aromatherapy with an aim to improve their sleep, mood or pain.<sup>58, 60</sup>

As long as you don't have any allergies and stick to the instructions, aromatherapy is usually harmless. It's important that you only use essential oils diluted as instructed and never eat or drink them. In high concentrations, essential oils are highly toxic and can cause organ damage.<sup>61</sup> This also applies to household products such as eucalyptus (cineol) and peppermint oil (menthol), orange/lemon peel, camphor, turpentine oil, tea tree oil and clove oil.

## Ayurveda

Ayurveda comes from Indian tradition and is based on philosophy, nutrition and traditional Indian medicine.<sup>62</sup> According to Ayurveda, illness is caused by an imbalance between mind, body and spirituality. Nowadays, individual parts of Ayurvedic are often used, such as Ayurvedic nutrition, yoga, meditation or massage (see also the chapter "Other methods").

There is no scientific evidence for positive effects of Ayurveda for people with MS. Many Ayurvedic treatments are harmless as a complementary therapy.<sup>63, 64</sup> However, Ayurvedic herbal medicines of unclear origin may be contaminated and so you must take care if purchasing them. Before taking medicinal plants/teas and changing your diet, always seek advice from your healthcare team.

## Biofeedback

The biofeedback method uses physical measures such as your pulse, breathing, heart rhythm and muscle tension. By monitoring physical reactions, the effects of relaxation methods or physiotherapy can be measured. Biofeedback is believed to train the connection between your perception, muscle activity and other body signals. This is said to have a positive effect on symptoms such as depression, sleep disorders, muscle tension and urinary incontinence.<sup>65</sup>

However, scientists disagree on whether biofeedback works.<sup>32, 66</sup> It has no side effects and can be used alongside conventional therapy. It's usually only available through a private service but is sometimes provided as part of rehabilitation or at a stay-in clinic.

## Cannabis therapy

There are different varieties of cannabis plant, and many different products can be derived from cannabis. Cannabis contains molecules called

cannabinoids, and the main ones studied are tetrahydrocannabinol (THC) and cannabidiol (CBD). THC is a psychoactive substance that changes the way the brain functions; it can alter perception, mood or behaviour. CBD is not psychoactive. Cannabis products may have either or both of these compounds in different concentrations and proportions.

Recreational cannabis (for example, marijuana or hash) is illegal in many countries, with some forms having very high levels of THC. The potential side effects of cannabis use are anxiety disorders, depression, gastrointestinal problems, fatigue and dizziness. Smoking cannabis increases the risk of cancer and stroke. There is also a risk of developing psychological and physical symptoms of dependency.<sup>67,68,69,70</sup>

CBD oil can be obtained in some countries as a food supplement. There is no evidence that products containing CBD have any benefit for MS. Short-term side effects of CBD include



drowsiness, diarrhoea and loss of appetite. Long-term side effects of CBD are unknown. Other cannabis products may come from an unknown origin, with no way of knowing the types and concentration of the cannabinoid components, or how pure the products are.

Sativex® is a mouth spray made from equal amounts of THC and CBD. It is the only cannabinoid-based drug that is licensed in some countries to treat moderate-to-severe muscle spasticity for people with MS who have not responded adequately to other anti-spasticity treatments. Research shows it has a modest benefit on these symptoms for some people.<sup>71,72,73</sup> In some countries, other cannabis-based medicinal products that are licensed to treat other conditions (such as nabilone, used for cancer patients) may sometimes be prescribed 'off-label' to help relieve pain for people with MS.

As some of the side effects of cannabis-based medications



include effects on memory and thinking, it is possible that medicinal cannabis could exacerbate cognitive problems for people with MS. Therefore, any decision to use medicinal cannabis should be made with advice from your qualified healthcare providers.

In some countries, cannabis is legal to use; some countries allow cannabis consumption under medical supervision; in other countries all forms of cannabis use (including medicinal) are illegal. If you are considering using any medicinal product based on cannabis, it is important to know what is legal in your country, state or territory. Contact your local MS organisation for more advice.

## Chiropractic therapy

Chiropractic medicine is based on the idea that poor alignment of the bones in the spine can cause abnormal pressure on the spinal nerves and lead to various health conditions. Spinal manipulation methods (known

as 'adjustments') are believed to normalise bone position and relieve pressure on the nerves. Research of the benefit of chiropractic for people with MS is limited and some studies are poor quality, but chiropractic has been shown to relieve pain in people with back problems.<sup>74</sup> Therefore, many health insurance companies pay for chiropractic if it's done by a doctor with the appropriate training.

When done by a trained doctor, side effects are rare. However, incorrect manipulation of the spine can cause severe damage to the discs between your vertebrae, bones and vessels, with a risk of spine trauma and stroke.<sup>74</sup>

## Cold therapy

Cold therapy, also known as cryotherapy, is based on the finding that some people with MS find cold beneficial. The cold can be applied in a range of ways, including cold showers and baths, cooling pads, cold

clothing and cold chambers.

A cold stimulus can temporarily relieve pain and so is a suitable complementary therapy to treat pain.<sup>75</sup> However, no long-term improvements in pain have been seen.

You should only have cold therapy for a short time and under supervision (for example, in a physiotherapy practice) in order to prevent tissue damage.

## Craniosacral therapy

Craniosacral therapy is a hands-on procedure where the so-called 'craniosacral rhythm' is harmonised with gentle touch. This is meant to improve the body's energy flows.

There is no scientific proof that craniosacral rhythm exists. However, the procedure is safe as a complementary treatment if carried out by a trained professional and shows pain-relieving effects in some people experiencing chronic pain.<sup>76, 77</sup>



## Dietary supplements

We recommend only taking dietary supplements after getting expert advice. Taking too much can lead to health issues. Also, some supplements can interact with medicines, stopping them working as well or causing side effects. Therefore, you should always discuss dietary supplements with your healthcare team before starting them.

People with MS often take vitamin D supplements. Low vitamin D levels have been linked to poorer cognitive function in people with MS, and there is some evidence that vitamin D supplements could



improve cognition.<sup>78, 79</sup> Vitamin D is also important for bone health and reducing the risk of fractures. Currently, there is no evidence that vitamin D impacts the course of MS.<sup>80</sup> Taking too much vitamin D is dangerous. It can cause gradual poisoning, increasing calcium in the blood (hypercalcaemia) which can lead to severe side effects and organ damage. Therefore, check how much vitamin D you should take with your healthcare team.

Omega-3 fatty acids, for example from fish oil capsules, have an anti-inflammatory effect and show positive effects in people with MS.<sup>81</sup> In the event of taking too much, however, cholesterol levels can rise, the tendency to bleed increases, and the immune system can weaken. Check with your healthcare team about omega-3 fatty acids.

You should also consult your healthcare team if you are thinking of taking any type of herbal food supplement (see section on Herbal medicine).

## Homeopathy

According to homeopathic teaching, a “potentised” (meaning diluted and shaken) dose of a poison can heal exactly the symptoms that a high dose would cause. This is the ‘principle of similarity’. Homeopathic remedies are based on extremely diluted substances — so much so that there is typically nothing left of the poison. According to the theory, repeated dilution with water, ethanol or glycerin releases the spiritual power of the respective substance. Scientific studies have not found any effectiveness.<sup>82,83,84</sup>

Homeopathy should only be considered as an addition (not alternative) to DMTs. Serious side effects of ingredients given at homeopathic doses are usually rare, even if the substance would be partly toxic at higher doses.



## Hypnotherapy

In hypnotherapy, the person being treated is put into a trance-like state using hypnosis. In some countries, hypnotherapy is recognised as a method of psychotherapy. Hypnosis can reduce pain and anxiety, but it can also increase them.<sup>85, 86</sup> Its effectiveness in MS varies from person to person. Hypnotherapy should only be done by a professional trained in psychology, such as a psychiatrist.

## Magnetic field therapy or magnetic field resonance therapy

In magnetic field therapy, also known as magnetic field resonance therapy, magnets are put on the body. The magnets come in a range of forms: from magnetic shoe inserts, magnetic jewellery and magnetic mats to devices that make pulsating magnetic fields.

People providing magnet therapy say the function of the body's cells is stimulated by the magnetic field. However, the effectiveness of magnetic field therapy in treating health conditions is not proven.<sup>87, 88</sup> Magnetic therapy is dangerous for pregnant women and people with a pacemaker or other metal implant.

## Manual therapy

In manual therapy, a physiotherapist uses special hand movements and mobilisation techniques. Mobilisation can be passive (meaning a practitioner moves

your body) or active (meaning you move your body yourself). In some cases, special devices are also used for traction (pulling), such as sling tables or spinal stretchers.

Mobilisation can sometimes reduce acute (sudden and severe) symptoms. However, combining mobilisation with exercises to strengthen the musculoskeletal system is usually required to reduce symptoms long term.<sup>89</sup>

Only specially trained physiotherapists should carry out manual therapy. It can be prescribed by a doctor. There is limited evidence of positive effects of manual therapy in MS,<sup>90</sup> but it is unlikely to be harmful.



Gao Wen, person with MS, China

## Massage

**Massage therapy can relax muscles, helping to reduce stress made worse by muscle tension.**

While massage can help relieve stress and promote relaxation, there is no evidence that it has any effect on the course of MS. There is some evidence that it can help with MS symptoms. Different types of massage are described in the following section.

### Classic massage/ Swedish massage

In classic massage (also known as a Swedish massage or medical massage), a therapist uses hand movements to stretch, pull and apply pressure to the skin and muscles. This reduces tension, hardening and stress and also improves blood circulation.

There is limited evidence that classic massages may have a positive effect on the nerves, helping to treat muscle weakness, muscle stiffness and tightness

(spasticity), sharp pain from nerves (neuralgia) and sensory disorders.<sup>91</sup> Classic massage is unlikely to be harmful.

### Lymphatic massage

Lymphatic drainage is a special type of massage. Lymphatic massage is used to treat the accumulation of lymph fluid in the body, known as lymphoedema. For this purpose, pressure, suction or both are applied to the body using specific grips. This increases blood flow, activates the lymph vessels and supports the circulation of lymph fluid.<sup>92</sup> Lymphatic massage is often used in people with MS as part of physiotherapy. In some countries, it's covered by health insurance. Lymphatic massage can reduce local swelling and therefore pain.<sup>93</sup> However, it's not been proven to alter the disease course of MS.<sup>94, 95, 96</sup>

### Shiatsu

Shiatsu is a system of massage originating from Japan that focuses on the prevention of

poor health. It uses pressure from fingers with the aim of improving blood circulation through the body. There is very limited research on the effect of Shiatsu for people with MS, but it is unlikely to be harmful.

### Underwater massage and underwater pressure massage

Underwater massage is conventional massage used for muscle relaxation that takes place in a warm water bath. The warmth and buoyancy of the water can increase the relaxing effect of the massage. The scientific evidence for underwater massage is the same as for conventional massage.

Underwater pressure massage is similar but is done with water jets rather than a therapist. This exerts more pressure on the tissue and is individually adjusted by the size of the nozzle and the amount of water.



Some people with MS find hot baths uncomfortable. If this happens to you, mention it to your practitioner – the temperature should always be set to your comfort level.

## Wellness massage

Wellness massages are used primarily for relaxation. Types include reflex zone massage, hot stone massage and meridian (energy channel) massage. There is no evidence for positive effects in people with MS, but they are unlikely to cause harm.

## Other massage techniques: Bowen therapy and myotherapy

Bowen therapy involves gently stretching soft tissue in your body, focusing on muscle, tendons and ligaments, with the aim of stimulating the nervous system, promoting relaxation and reducing pain. Myotherapy is a form of massage therapy that focuses on areas with tight muscle fibres. It aims to reduce tension and pain in the muscle. There is no evidence for positive

effects of either of these therapies in people with MS, but they are unlikely to cause harm.

## Neural therapy

Neural therapy is claimed to eliminate or temporarily switch off so-called 'interference fields' in the body using injections of small amounts of local anaesthetic. Examples of anaesthetics used are procaine, lidocaine, mepivacaine and prilocaine.

The practice is based on the belief that any body part has the potential to become an 'interference field' and thus cause chronic diseases. In most cases, these are areas of long-term inflammation, such as the tonsils, sinuses, the tooth and jaw region, the thyroid gland or scar tissue.<sup>97</sup>

There is no scientific proof that 'interference fields' exist or that neural therapy is effective in MS.<sup>98,99</sup> If used incorrectly, local anaesthetics can cause abnormal heart rhythm and damage the central nervous system.

## Orthomolecular medicine

Orthomolecular medicine is based on micronutrients (vitamins, minerals and trace elements) but goes beyond nutritional supplements. It's based on the belief that diseases arise from biochemical imbalances in the body and can be cured by correcting the imbalance. In orthomolecular medicine, high doses of micronutrients are given. The effect of orthomolecular medicine for people with MS has not been reliably studied and it is not considered to be an evidence-based therapy.

## Osteopathy

Osteopathy is a hands-on therapy. Osteopathy tends to use gentle touch and pressure massage and 'adjusts' all parts of the body. Depending on the school and training, there can be overlap between use of osteopathy and chiropractic. Osteopathy is often claimed to have pain-relieving effects.<sup>100,101</sup>

Osteopathic manipulation is generally well tolerated. There's a low risk of spinal trauma with low back manipulation and stroke with neck manipulation.

## Reflexology

Reflexology has its roots in traditional Chinese medicine. It involves pressure applied to specific points on the feet that are believed to correspond to different areas of the body, promoting healing. There is limited research on the effects of reflexology for people with MS. Some small studies have shown benefits for muscle stiffness, bladder and sensory symptoms and fatigue. Reflexology is a low-risk therapy but should be used with caution in those with foot conditions, such as gout, ulcers, vascular disease or arthritis.<sup>101,102</sup>



## Reiki

Reiki practitioners believe that healing currents of energy surround us and these can be directed into the body through touch. In this way, reiki masters aim to heal energy blockages and disturbances. Reiki sessions are gentle and have no side effects. However, there is no scientific proof that they work.<sup>103</sup>

## Respiratory therapy

Respiratory therapy helps you to think about and control your breathing. There are many different techniques that can strengthen the respiratory muscles and help reduce stress.<sup>99</sup>

However, if you perform respiratory therapy incorrectly it can lead to hyperventilation (breathing too fast or deeply) or respiratory problems. When used in people with MS-related breathing problems or lung conditions (for example COVID-19), serious complications can occur.<sup>104</sup> For this reason, you should always have a

professional with you when you practice respiratory therapy.

## Singing bowl therapy

Singing bowls are bowl-shaped ritual objects from Tibetan Buddhism. In singing bowl therapy, they're placed on or above the body and struck with a mallet. The resulting vibrations and tones are intended to harmonise and heal the energies of the body. There is no proof that singing bowl therapy works, but there are no known side effects either.<sup>105, 106</sup>



Singing bowl therapy



## Specific types of diet

**Eating a healthy diet is important for general health and wellness (see Section A).**

There is no diet that can change the course of MS, however specific foods or types of diet are the subject of many research studies. Evidence is limited on the effectiveness of specific diets, and most have not been studied in a rigorous, controlled way. Strict diets can be hard to follow, and it is important to make sure you're not missing out on the healthy nutrition you need. Speak to your doctor or nutritionist/dietitian before making any major changes to your diet, particularly if you have any other health conditions as well as MS.

## Modified Mediterranean diet

This diet is rich in olive oil, fish, nuts, fruits and vegetables. People on this diet do not eat any meat or dairy and limit most processed foods and salt. There is some limited evidence that people with MS undertaking a modified Mediterranean diet may experience weight loss, reduced fatigue, reduced disability and improved quality of life.<sup>107</sup>

## Ketogenic diet

A ketogenic diet (or modified Atkins diet) involves consuming low amounts of carbohydrate – the exact amount recommended varies but could be less than 50g per day. People on this diet get more of their energy from fats and protein instead. There is some limited evidence that people with MS following a ketogenic diet may experience weight loss, reduced fatigue, depression and/or disability, and improved quality of life.<sup>108,109</sup> However, the effectiveness and safety of a long-term ketogenic diet is not yet known.



## Modified palaeolithic diet (Wahls diet)

A palaeolithic diet includes fruits, vegetables, nuts, fish and meat but avoids dairy, eggs, gluten and processed foods. The Wahls diet is based on a palaeolithic diet and is part of a wider protocol that includes vitamins, meditation and exercise. There is some limited evidence that following the Wahls diet along with exercising may reduce fatigue for people with MS.<sup>110</sup>

## McDougall diet

The McDougall diet is plant based, vegan and very low fat. People on this diet avoid eating meat, dairy, eggs and oils. There is some limited evidence that this type of diet may lead to weight loss and reduced fatigue for people with MS.<sup>111</sup>

## Swank diet

The Swank diet is low in fat, with people consuming less than 40 grams per day of unsaturated fats and less than 15 grams per day of saturated fats. There is some

limited evidence that this type of diet may be associated with a decreased risk of disability over time for people with MS.<sup>112</sup>

## Intermittent fasting / caloric restriction

Caloric restriction involves reducing the number of calories you consume every day. Intermittent fasting involves a substantial reduction in calorie intake on some days of the week. There is some limited evidence that this type of diet may be associated with weight loss and improved emotional wellbeing for people with MS.<sup>113</sup>



Sharifah, person with MS, Malaysia

## Transcutaneous electrical nerve stimulation (TENS)

In TENS, a low-frequency electrical current is passed through the entire body to stimulate the nerves that sense touch (sensory nerves). TENS temporarily interrupts the transmission of pain signals to the brain. It's widely used to treat chronic (long-term) pain.<sup>114</sup> However, the long-term effects of TENS in people with MS are not yet clear.<sup>115, 116</sup>

TENS devices are available for home use, and health insurance companies sometimes help with costs. You must not use these devices during a relapse, when pregnant or if you have an electrical implant (for example, a pacemaker or defibrillator). Before starting TENS therapy, seek advice from a medical specialist.

## Ultrasound therapy

Ultrasound therapy uses high-frequency sound waves and is usually given at a physiotherapy practice. Therapists can use a

device to give the therapy through the skin, or it can be given using a water bath (similar to a hydroelectric bath).

Ultrasound waves are reflected differently by different parts of the human body. This depends on the density of tissues. For instance, bones reflect sound waves more strongly than the surrounding tendons and muscles. This creates heat, which is thought to help chronic muscle pain.<sup>117</sup>

However, the effectiveness of ultrasound therapy in MS has not been scientifically proven.<sup>118, 119</sup> You must not have ultrasound therapy during an active relapse, if you have a high level of inflammation, or if you have other conditions or diseases.

# 6



## Section C: Therapies that should be avoided by people with MS due to concerns about safety or potential harm

The therapies described in this section are ones that should be avoided by people with MS. This is because there are concerns about their safety or they may cause harm.

### Amalgam removal

Tooth fillings with amalgam may release small amounts of mercury.<sup>120</sup> Mercury is a heavy metal that collects in cells and damages the immune and nervous systems. A few people with MS have reported that their symptoms reduced after amalgam removal. However, in large analyses of scientific studies, no connection between MS remission and amalgam removal was found.<sup>121, 122, 123</sup>

Amalgam removal is costly and risky as mercury is inhaled during drilling and can also be swallowed. Thus, the mercury exposure during the removal of amalgam is higher than when the fillings remain in the tooth.<sup>124</sup>

### Bee venom therapy (apitherapy)

In bee venom therapy (apitherapy), up to 40 bee stings are administered per session. This is intended to stimulate and strengthen the immune system. The venom is injected either with a needle or using live bees.<sup>125</sup> A study of people with MS found

that bee venom was not effective. However, if it causes an allergic reaction, this can be life-threatening. Infections can also occur around the injection and sting sites.<sup>126, 127</sup>

### Anti-Candida therapy

Candida albicans is a yeast found in skin, the intestines and vagina. Normally, it does not cause any problems, but fungal infections (candidiasis) can occur when there is an overgrowth of the yeast. Candidiasis can be treated with fungicides (antimycotics).

Some people speculate that yeast can damage the immune system and that people with MS should therefore have 'anti-Candida therapy'. This consists of avoiding yeast products and taking certain vitamins and antifungals. The effectiveness of anti-Candida therapy is not proven.

Antifungal drugs can have serious interactions with MS medicines and, depending on the dosage, can lead to organ damage.<sup>128</sup> You should only take antifungals as prescribed by a doctor.



## Chelation therapy

Chelating agents such as meso-2,3-dimercaptosuccinic acid (DMSA) and 2,3-dimercaptopropane-1-sulfonic acid are substances that can bind heavy metals in the body. They're used as a medicine to treat people with heavy-metal poisoning.

In alternative medicine, chelation therapy has been used in people with MS under the claim that it binds free radicals and cleans the arteries. This has been scientifically disproven. No therapeutic benefit has been demonstrated in MS.<sup>82</sup>

Chelating agents cause serious side effects such as an irregular heartbeat and organ damage. [129] Therefore, chelation therapy should not be used in people with MS unless they have an urgent medical need.

## Electrical Muscle Stimulation (EMS)

EMS stands for electrical muscle stimulation or

electromyostimulation. During EMS, your muscle fibres are stimulated directly by applied electrical impulses.<sup>130,131</sup> In contrast to physical exercise, EMS doesn't involve the nerves being stimulated, muscle control, or signals via the spinal cord. It is possible that the electrical impulses used in EMS could cause complications, especially for people having an MS relapse.

## Enzyme therapy

Enzyme therapy claims to target immune complexes in the body. Immune complexes are combinations of an antigen and an antibody. In a clinical study of almost 300 people with MS, no benefits were found for an enzyme therapy called Phlogenzym®.<sup>132</sup> Although enzyme therapies usually have few side effects, allergic reactions can occur. If enzyme therapy is given intravenously (by a drip), very serious side effects can occur.<sup>133</sup>

## Experimental drugs and poisons

We strongly discourage the use of experimental drugs and poisons. Sale of these substances on the black market is illegal and where they come from is dubious. This also applies to Cobra toxin (derived from snake venom), about which repeated unfounded claims have been made in MS.<sup>134</sup> The side effects can be life-threatening.<sup>99</sup>

## Fresh cell therapy

In fresh cell therapy, cells from unborn or young lambs and calves are injected into the buttocks. There is no evidence to suggest that this is helpful. However, there is a risk of activating viruses that can cause disease, of severe allergic reactions and of transmitting diseases. Fresh cell therapy has been prohibited by law in some countries.<sup>135</sup>

## Herbal medicine

Herbal medicine (phytotherapy) is probably the oldest healing practice. Various plants and herbs that are thought to have medicinal effects are used worldwide for various diseases and ailments.<sup>136</sup>

It's important that you tell your healthcare team before taking any medicinal plants and herbs. Even if some herbal medicines might stimulate healing, they can have risks. Some seemingly harmless herbs can cause significant side effects or interact with other drugs, while others are directly harmful.<sup>137, 138, 139, 140, 141</sup>





## Hyperbaric oxygenation

In hyperbaric oxygenation you inhale compressed pure oxygen (100% medically pure oxygen). This is said to increase the oxygen content of the blood and thus have a positive effect on bodily functions. Originally, the method was used to treat divers and people with carbon monoxide poisoning.

There is no evidence of benefit of the use of hyperbaric oxygenation in people with MS.<sup>142</sup> Serious side effects can include damage to the airways due the pressure of compressed oxygen, eardrum injuries and seizures.

## Immune augmentation

In immune augmentation, an overreaction of the immune system is provoked, for example by an infusion (drip) of echinacea or vitamin C. However, because the immune system plays a role in MS,<sup>143, 99</sup> immune augmentation is potentially dangerous for people with MS.

## Intestinal cleansing

Intestinal cleansing (also known as intestinal rehabilitation therapy) is proposed to 'detoxify' the body and thus strengthen the immune system. Fasting, laxatives or enemas might be used for this purpose.

There is no scientific proof that intestinal cleansing has benefits for people with MS. In fact, it could prevent the absorption of MS medicines. Fasting or depletion of nutrients weakens the body and immune system. In addition, some approaches to intestinal cleansing can lead to infections of the gastrointestinal tract, complications from existing intestinal diseases, and haemorrhoids. Therefore, we don't recommend gut cleansing for people with MS.



# Conclusions

MS cannot be cured, but it can be treated. New therapeutic approaches are constantly being developed, including DMTs, symptom treatments and complementary therapies.

We encourage you to keep up to date with these through the [MS organisation in your country](#). You can only make good decisions about managing your MS with your healthcare team if you understand the various forms of therapy available.

Exercise is proven to be effective in helping with some MS symptoms. Whilst the link between diet and MS is not yet fully understood, we do know that a healthy, varied diet has a positive effect on overall health.

To help manage your MS symptoms, you could also consider physiotherapy,

occupational therapy and relaxation methods. Some other therapies described in this guide have been shown to have a positive impact on common symptoms of MS, including pain. Research continues in this area.

If in doubt, always ask your healthcare team whether a particular complementary therapy is suitable for you to use alongside your medical treatment. In this way, you can develop a comprehensive therapy plan that is tailored to your personal needs.

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