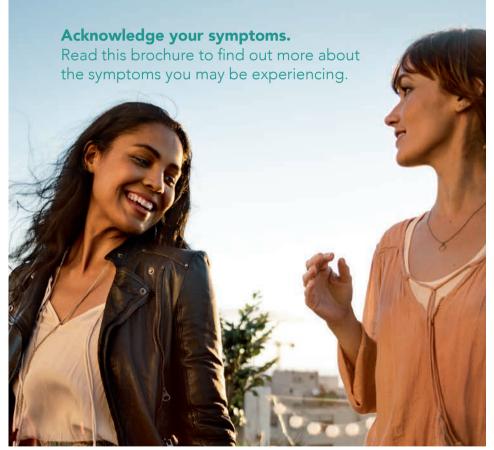
YOU ARE NOT IMAGINING YOUR SYMPTOMS



DO ANY OF THESE SYMPTOMS SOUND FAMILIAR?



- Issues with memory, attention or problem solving
- Depression or mood swings
- Vision problems
- Pain, weakness, fatigue
- Heat sensitivity
- Bladder problems
- Walking and balance problems

This guide contains questions that your doctor might ask you or your loved ones.

ISSUES WITH MEMORY, ATTENTION, OR PROBLEM SOLVING



- Are you forgetting names, phone numbers or recent conversations?
- Are you losing or misplacing things?
- Do you have difficulty remembering what you just learned?

Many people with MS experience challenges with memory, attention or problem solving. Memory loss is the most common mental change in people living with MS. It can occur at any time.

SOME TIPS



- Write important things down in a calendar or on a sticky note
- Keep your mind active with mind games, such as Sudoku or crossword puzzles
- Repeat information you want to remember out loud
- Plan ahead so you won't have to remember everything in the moment
- Set reminders on your phone, tablet, kitchen computer, timer, or watch
- Try to eliminate visual distractions and noise
- Do one thing at a time. Avoid switching back and forth from one topic or task to another

DEPRESSION OR MOOD SWINGS



- Are you experiencing sadness or loss of interest in everyday activities?
- Do you have a loss or increase in appetite?
- Do you feel tired?

Symptoms of depression appear to be common in people living with MS, and may be associated with some treatments. If you experience symptoms of depression or have thoughts of death or suicide, talk to your doctor, family and friends immediately.



DEPRESSION DOES NOT MEAN YOU ARE WEAK

- There is nothing to be ashamed about
- Depression is common in people with MS
- It is important that you get the help that you need

VISION PROBLEMS



- Have you experienced any changes in vision?
- Do you have any difficulty seeing or do you have double vision?
- Do you have any uncontrolled eye movements?

Vision problems are common in people with MS, but may be temporary.



ABOUT OPTIC NEURITIS

Optic neuritis is an inflammation of the optic nerve that is common in people with MS⁴. When the optic nerve gets inflamed, it may affect vision in a variety of ways:

- Sudden vision loss, usually in one eye
- Blurred vision or graying of vision (colours may appear to be washed out)
- Eye pain or seeing a dark spot in the center of your vision

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SOME TIPS



- If you have any questions or concerns about your vision or optic neuritis, speak to your healthcare provider
- Sometimes, an ophthalmologist will prescribe medication to alleviate optic neuritis



ABOUT NYSTAGMUS OR "DANCING EYES"

This is a condition in which your eyes move horizontally or vertically on their own. Sometimes, it is mild and symptoms may be reduced when you hold your head at an angle and sometimes, it may be more severe and can affect your ability to see.

SOME TIPS



- Tell your healthcare provider if you think you have nystagmus
- Some medications may help manage this condition



ABOUT DIPLOPIA (DOUBLE VISION)

Diplopia, or double vision, can happen when the muscles that control the eyes become weak and aren't in sync with each other. This may produce two side by side images or one image on top of another. Diplopia may be temporary or persistent and may resolve without treatment.

SOME TIPS



- Talk to your healthcare provider if you are experiencing double vision
- Using an eye patch may help for carrying out short tasks, but is not recommended for long periods of time since it will slow the brain's ability to accommodate to the problem



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FATIGUE



- Are you sleeping well?
- Are you feeling exhausted, even after enough sleep?
- Is this effecting your ability to participate in your daily routine?

Fatigue is one of the common symptoms of MS. It can feel like lack of physical or mental energy not caused by activity and not relieved by rest.

FIVE OTHER FACTORS THAT MAY CAUSE FATIGUE:

- **1. Weather -** Fatigue can worsen with an increase in heat and humidity.
- **2. Other medical conditions -** Even something as simple as a minor infection can sap energy.
- **3. Medications -** Some medications can cause fatigue as a side effect. Make sure your doctor has the most up-to-date list of all medications you are taking.
- **4. Sleep problems -** Problems falling asleep, staying asleep, or getting the right kind of sleep prevent people from feeling refreshed when they wake up.
- 5. Depression and anxiety These are common in MS and may contribute to fatigue. If you or others close to you notice changes in your mood, or loss of interest in once-favorite activities, be sure to tell your healthcare provider.



DEALING WITH FATIGUE:

There are a number of options you can discuss with your doctor that may help reduce fatigue as a symptom of MS.

6 WAYS OF DEALING WITH FATIGUE:

- 1. Conserve energy Whilst physical activity and exercise is important, it is also recommended for you to rest whenever you can. This will help leave strength for the things you really want to do. Plan and pace your activities. Set priorities. Learn to let go of any guilt that may be associated with leaving tasks unfinished and don't be afraid to ask family and friends for help.
- **2.** Occupational therapy This kind of therapy can help simplify tasks at work and home.
- 3. Physical therapy This can help improve movement and function. It can teach you energy-saving ways of walking (with or without assistive devices) and performing other daily tasks that may have become more difficult lately.
- **4. Sleep regulation** This may involve treating other MS symptoms that interfere with sleep (eg, spasticity, urinary problems), scheduling naps, and using sleep medications on a short-term basis.
- **5. Psychological interventions** Stress management, relaxation training, joining a support group, or psychotherapy can teach you ways to deal with your emotions effectively.
- **6. Medications** Talk to your doctor about specific treatments that may help relieve fatigue.

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PAIN



- Are you experiencing and stabbing pain or burning in the face or back?
- Does the pain interfere with your ability to function or perform your daily routine?

Pain syndromes are common in MS, ranging from acute to chronic. In one study, more than half of people with MS (55%) said they had "clinically significant pain" at some time.

SOME TYPES OF ACUTE AND CHRONIC PAIN RELATED TO MS ARE:

Acute pain

Trigeminal neuralgia is a stabbing pain in the face. It can occur as an initial symptom of MS. It can be confused with dental pain. However, this pain is due to nerves, not cavities.

L'hermitte's sign is a brief, stabbing, electric shock-like sensation that runs from the back of the head and down the spine. It can be brought on by bending the neck forward. It can be a signal of a lesion in the upper region of the spinal cord.

Dysesthesia is an unpleasant sensation, typically described as burning, which can be evoked or spontaneous.

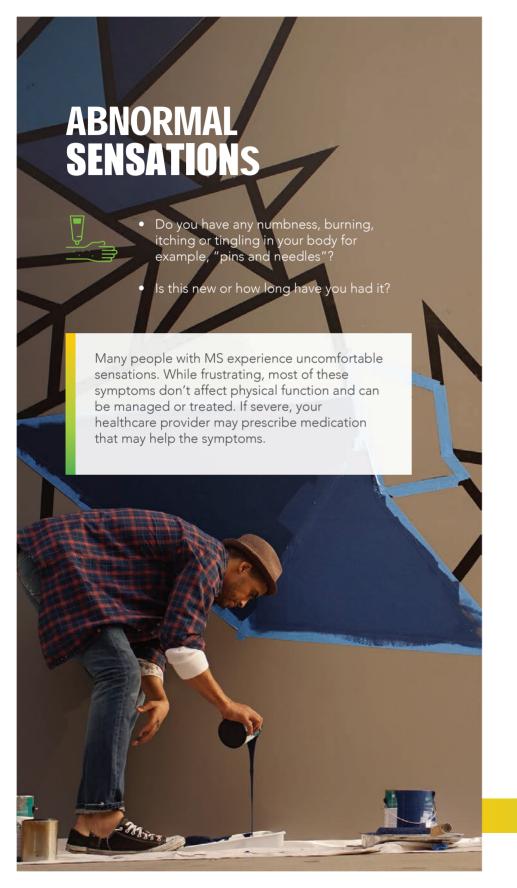
Chronic pain

- Burning, aching, prickling, or "pins and needles"
- Pain of spasticity, such as tightness or aching in joints, and muscle spasms or cramps—called flexor spasms—may occur
- Back and other musculoskeletal pain, especially lower back pain, can have many causes.
 They include:
 - o Spasticity
 - o Pressure on the body caused by immobility
 - o Incorrect use of mobility aids
 - Poor walking posture, unusual walking pattern, and balance problems

DEALING WITH MS PAIN SYMPTOMS

Pain is a symptom of MS, but you do not have to simply accept it. You should talk to your healthcare provider about pain. An evaluation to pinpoint the source of the pain is essential. Fortunately, there are a number of medications that can help. Speak to your healthcare provider for more information.

Non-pharmacological treatments may also help and might include exercise, heat, massage, ultrasound, and physical therapy. In addition to medication, biofeedback, meditation and similar techniques may also be helpful. Again, talk to your healthcare provider about what might be right for you.



WALKING AND BALANCE PROBLEMS



- Do you trip, fall or feel off-balance or dizzy?
- Do you have problems walking (for example, swaying, foot drop, numbness in the feet)?

Problems with walking are fairly common in MS.

FIVE MS SYMPTOMS THAT CAN AFFECT WALKING ARE:

- **1. Muscle weakness -** Can cause toe drag, foot drop, and other gait abnormalities.
- **2. Spasticity** Can interfere with walking because it most commonly affects the leg muscles.
- **3. Loss of balance -** Can cause swaying and a "drunken" type of gait known as ataxia.
- **4. Numbness -** Can occur in the feet. Numbness can make a person with MS unable to feel the floor or know where his or her feet are. This is called sensory ataxia.
- **5. Fatigue** May cause problems with walking as exhaustion increases.

DEALING WITH WALKING/BALANCE ISSUES:

When it comes to managing walking/balance issues related to MS, exercise, physical therapy, walking aids, and, in some cases, a review of your medications can help. However, MS is different for everyone. So, each person's walking issue needs to be examined on an individual basis.



BOWEL OR BLADDER PROBLEMS



- Have you had a change in bowel habits?
- Are you urinating more often than usual or feel an urgency to urinate right away?
- At night?
- Are you unable to hold urine in the bladder?

Some MS lesions can block or delay nerve messages that control the bladder and bowel. The most common bladder problem is called "spastic (overactive) bladder". This happens when the bladder is unable to hold the normal amount of urine or does not empty properly. The most common bowel problem in people with MS is constipation.

NINE TIPS FOR DEALING WITH BOWEL/ BLADDER ISSUES DUE TO MS:

- Change your fluid intake. For example, limit fluid intake a few hours before bedtime, or cut out caffeine.
- 2. Get examined and treated early if you develop bladder or bowel issues, so that you can avoid any complications, like bladder infections.
- Drink at least 6 to 8 glasses of fluid (preferably water) daily, but limit your fluid intake a few hours before bedtime to avoid frequent urination during the night.

- Avoid bladder irritants such as alcohol, caffeine, and artificial sweeteners.
- **5. Include plenty of fiber in your diet.** Fresh fruits and vegetables, whole-grain breads, and cereals all contain fiber.
- **6. Add exercise to your routine.** Consult your healthcare provider first.
- 7. Use medicines such as stool softeners, enemas, suppositories or laxatives to help a bowel movement. Talk with your healthcare provider before using any of these options.
- **8. Establish a regular time and schedule** for emptying the bowels.
- Wait no more than 2-3 days between bowel movements.

Your healthcare provider can help you establish an effective bladder/bowel management program.

Occasionally, it may be necessary to consult a gastroenterologist. He or she is a healthcare provider who specializes in treating the stomach and bowel.

HEAT SENSITIVITY



 Do your symptoms get worse when you are feeling hot?

The symptoms of MS often worsen with increased body temperature¹⁶. This can be caused by factors such as intense exercise, fever, sun exposure or sitting in a hot tub.

A definitive symptom of MS 'heat fatigue' is when vision becomes blurred when the person with MS is overheated; this is a phenomenon known as Uhthoff's sign. These temporary changes can result from even a very slight elevation in core body temperature, as little as 0.5°C. An elevated temperature further impairs the ability of a demyelinated nerve to conduct electrical impulses. For many years, the "Hot Bath" test was used to diagnose MS. A person suspected of having MS was immersed in a tub of hot water, and the appearance of neurologic symptoms or their worsening was taken as evidence that the person had MS.

It is important to remember that heat generally produces only temporary worsening of symptoms and does not cause actual tissue damage (demyelination or damage to the axons themselves), however the use of the "Hot Bath" test has been erroneously associated with permanent tissue damage. Heat-related symptoms are generally rapidly reversed when the source of increased temperature is removed.

SLEEP ISSUES



• Are you having trouble sleeping?

Some factors known to contribute to sleep problems included anxiety, night-time leg cramps, fatigue and nocturia.

Getting a good night's sleep helps to alleviate many common symptoms of MS, including chronic fatigue, mood and memory problems. Sleep quality can be improved by establishing regular habits or good 'sleep hygiene'.

SOME SLEEP HYGIENE RECOMMENDATIONS INCLUDE¹⁷:

- Stay as physically active as possible during the day, but allow plenty of time to wind down before bedtime.
- Avoid getting overtired by doing too much, as being too tired can make it difficult to get to sleep.
- Ensure some daily exposure to sunlight and avoid bright lights in the evening.
- Avoid unnecessary stress or stimulants (e.g., caffeine, chocolate, alcohol) in the late afternoon and evening.
- Establish a bedtime routine that can include, for example, relaxation, a warm 'milky' drink, taking a warm bath.

- Keep the same nightly ritual every evening throughout the week.
- Only use the bed as a place for sleeping, not for other activities such as watching TV.
- Instead of lying in bed awake, after 15 minutes of not sleeping get out of bed and do something calming or boring, and return to bed after a short period of time.
- Avoid getting too hot; keep the bedroom at a comfortable temperature.

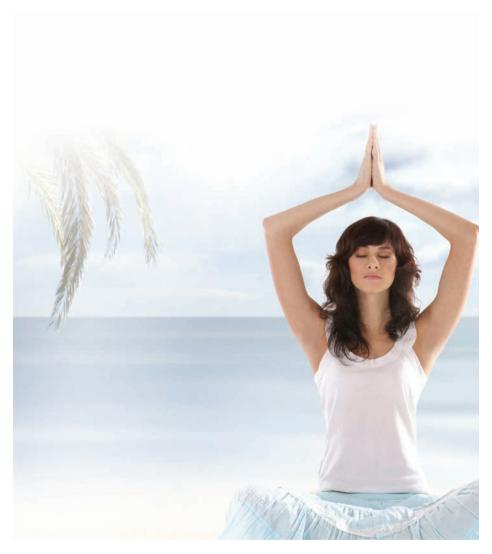
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* More references available upon request



The information provided herein is intended to support and not replace the advice of your Healthcare Professional. Always seek the advice of your treating Healthcare Professional if you have any questions regarding your individual treatment plan. Report adverse events to drug.safety.southeastafrica@merckgroup.com. ZA-NONNI-00099 | July 2024