

Time matters in multiple sclerosis: diagnose early to maximize brain health

A guide for general practitioners and primary care providers

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Why MS matters

Multiple sclerosis (MS) is a leading cause of disability in young adults.¹ Disability cannot be reversed, but early treatment with effective anti-inflammatory disease-modifying therapies (DMTs) can protect brain health and improve outcomes for people with MS. Therefore, general practitioners (GPs) and primary care providers (PCPs), who are usually the first to encounter people with symptoms suggestive of MS, play a critical role in establishing a timely diagnosis and referring patients promptly to a neurologist.

MS Brain Health, a global initiative based on the internationally endorsed report *Brain health: time matters in multiple sclerosis*,² recommends a therapeutic strategy for people with MS that aims to maximize lifelong brain health. This concise guide explains how the recommendations from that report can be put into practice by GPs and PCPs.

Role of GPs and PCPs

1. Ensure a high index of suspicion of MS

Symptoms of MS vary among individuals and can be difficult to identify; however, the time course of an MS attack (relapse) is characteristic in patients with relapsing–remitting MS (85% of patients, typically aged 20–40 years). The classical presentation is of a gradual increase in symptom number and intensity over several days, followed by a stable period lasting days to weeks, with subsequent partial or full resolution.¹ The remaining 15% of patients have primary progressive MS; these individuals are typically aged 40–50 years and present with progressively worsening symptoms that do not resolve.¹

Symptoms for both groups of patients can be wide ranging (**Figure 1**), but particular neurological manifestations to look out for include:

- optic neuritis – reduced visual acuity, colour desaturation, sometimes preceded by periorbital/orbital pain on eye movement
- transverse myelitis – ascending sensory changes in one or both legs, sometimes with muscle weakness affecting legs, trunk, arms and bladder, Lhermitte’s sign (electric-shock-like sensations, often down the spine, brought on by neck flexion, which may precede or follow a relapse)
- brainstem inflammation – vertigo, double vision, dysarthria, ataxia.

MS also has many symptoms that are more difficult to distinguish from those of other conditions, including fatigue, depression, anxiety and cognitive impairment.¹ These symptoms may precede or accompany more obvious physical signs.

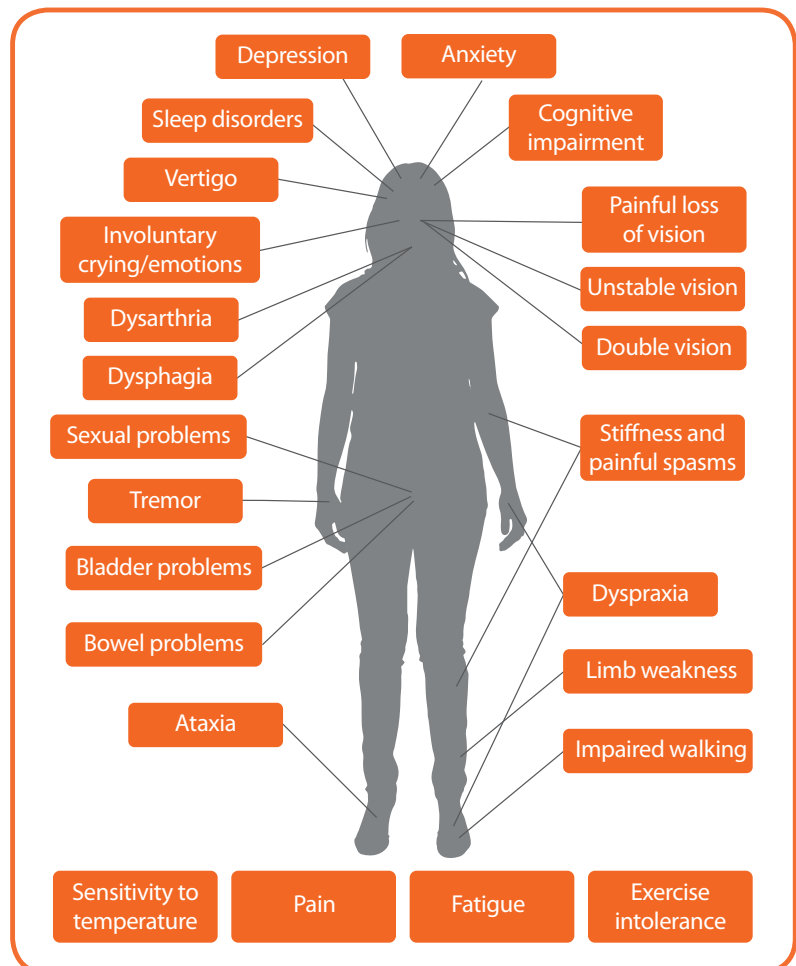


Figure 1. MS can present with a wide range of symptoms.

2. Refer people with suspected MS to a neurologist

Increasingly lengthy delays in referral to an MS neurologist are associated with greater levels of disability at the time of specialist evaluation.³ Therefore, patients presenting to their GP/PCP with symptoms suggestive of MS should be referred promptly to a neurologist, ideally one who has a special interest in MS.

The face of relapsing MS has changed – it is now a highly treatable disease. The pace of changes in treatment options and monitoring processes is fast and exciting, with many highly effective DMTs now available. Regular specialist contact is needed to treat to target and to prevent long-term disability; neurologists who specialize in MS, together with their multidisciplinary teams, are best placed to provide diagnostic evaluation and specialist care and management.

First-person account⁴

I started getting a lot of pain in my legs and lower back. Along with the pain, I was getting weird nerve sensations in my legs and my legs felt as though they were getting weaker and weaker. This continued from 2003 to this day. I saw orthopaedic specialists on nine occasions and they put the problems down to the sciatic nerve. In 2010 ... I registered with a new doctor. He told me he was referring me to a neurosurgeon [sic] to get this checked out properly. In early 2011, I was sent for full body magnetic resonance imaging scans and lumbar punctures ... finally ... [in] February 2012, I was diagnosed with primary progressive MS I have fought for 9 years to try and work out what was going on in my legs.

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3. Provide shared care, support and monitoring

Symptomatic treatments

Once MS has been diagnosed and treatment with a DMT established, GPs/PCPs will ideally collaborate with the MS team in providing treatments to reduce symptoms such as pain, constipation, bladder dysfunction, anxiety and depression.

Prevention and treatment of infections and comorbidities

People with MS may be at increased risk of infections and significant comorbidities. Immunizations should be updated before DMT treatment starts, and common infections (e.g. urinary tract infections) should be treated quickly and appropriately. Comorbidities including obesity, hypertension, diabetes, depression and anxiety have been associated with poor outcomes in people with MS.⁵ Therefore, comorbidities should be managed by health promotion, screening and early treatment, as appropriate.

Monitoring of MS therapies

Patients receiving DMTs will be monitored by the MS team for safety events; the requirements for each drug and each individual will vary. GPs and PCPs need to be vigilant and look out for signs of rare events that warrant referral of the patient to an MS specialist. These events often present as fever/malaise and include progressive multifocal leukoencephalopathy (presenting with altered cognition, personality changes and/or focal neurological symptoms), cytomegalovirus, herpes zoster, herpes simplex, meningitis, liver toxicity and secondary autoimmune conditions.^{6,7} Patients experiencing potential relapses or DMT side effects should be urgently assessed by their MS team, who will evaluate the need for possible acute treatment.

Pregnancy in patients with MS

In pregnant women with MS, most DMTs should be stopped and some may require an accelerated elimination protocol. Pregnancy should be discussed with all women with MS of childbearing potential, and those who are considering pregnancy should discuss this with their neurologist.

Lifestyle factors

Patients should be encouraged to exercise, to keep their weight under control, to adopt a healthy diet, to avoid smoking, to limit alcohol intake and to keep their minds and bodies as active as possible. For more information, see *Six ways to lead a brain-healthy lifestyle* (available from: www.msbrainhealth.org/resources).

References

1. Multiple Sclerosis International Federation. Atlas of MS 2013. Available from: <http://www.msif.org/wpcontent/uploads/2014/09/Atlas-of-MS> (Accessed 6 September 2017).
2. Giovannoni G *et al.* *Mult Scler Relat Disord* 2016;9 Suppl 1:S5–48.
3. Kingwell E *et al.* *J Neurol Sci* 2010;292:57–62.
4. Jarvis N. The years of pain that lead to a diagnosis. *Multiple Sclerosis Trust*, 2012. Available from: <http://www.mstrust.org.uk/mystory/nick-jarvis.jsp#nj> (Accessed 11 February 2015).
5. Marrie RA. *Nat Rev Neurol* 2017;13:375–82.
6. MS Society. Disease modifying therapies (DMTs) for MS, 2016. Available from: https://www.mssociety.org.uk/sites/default/files/Disease%20Modifying%20Therapies%20%28DMTs%29%20August%202016a_0.pdf (Accessed 6 September 2017).
7. National Multiple Sclerosis Society. Disease-modifying therapies for MS, 2017. Available from: <http://www.nationalmssociety.org/NationalMSSociety/media/MSSNationalFiles/Brochures/Brochure-The-MS-Disease-Modifying-Medications.pdf> (Accessed 6 September 2017).

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