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MADISON NEUROLOGY LLC

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Neurology Care 7 days a Week. Because Your Brain Matters.

Multiple Sclerosis (MS)

Patient education guide · Demyelinating & Autoimmune · Madison Neurology LLC

What is it?

Multiple sclerosis is an autoimmune disease in which the immune system attacks myelin — the insulating sheath around nerve fibers in the brain, spinal cord, and optic nerves — causing relapses (attacks) of neurological symptoms and, over time, potential accumulation of disability. It typically begins between ages 20 and 50 and affects women about three times as often as men. Modern therapies have transformed its course.

How does it happen?

MS arises from a combination of genetic susceptibility and environmental triggers — low vitamin D, Epstein-Barr virus infection (a strong association), smoking, and obesity. The immune system mistakenly targets myelin as foreign. It is not directly inherited, though family members have a modestly elevated risk.

Common symptoms

- Optic neuritis: painful vision loss in one eye
- Numbness, tingling, or weakness in the face, limbs, or trunk
- Balance and coordination problems; walking difficulty
- Fatigue — often the most disabling daily symptom
- Bladder urgency, spasticity, cognitive slowing, heat sensitivity (Uhthoff phenomenon)

How is it diagnosed?

Diagnosis requires evidence of inflammatory attacks separated in time and space: MRI lesions typical of MS in characteristic brain/spinal locations, often plus spinal fluid showing oligoclonal bands. Blood tests exclude mimics. Early, accurate diagnosis matters because treatment works best early.

How is it treated?

Disease-modifying therapies (DMTs) — now over 20 approved options, from injections and oral drugs (fingolimod, dimethyl fumarate, teriflunomide) to highly effective infusions (ocrelizumab, natalizumab, ofatumumab, ublituximab) — dramatically reduce relapses and slow disability. Acute relapses are treated with short courses of steroids. Symptom management (fatigue, spasticity, bladder, mood), rehabilitation, vitamin D, exercise, and not smoking round out care. Treatment choice is individualized to disease activity, lifestyle, and safety profile.

What does the future hold?

The outlook today is far better than a generation ago: with early, effective DMTs, many patients have few or no relapses and minimal long-term disability, work, raise families, and live near-normal lifespans. MS is a marathon condition best managed proactively with regular MRI monitoring and a neurologist-led team.

Questions patients commonly ask

Q: Will I end up in a wheelchair?

A: Most people with MS today do not, especially with early effective treatment — the natural history has been substantially improved by modern therapies.

Q: Can I have children?

A: Yes. Many DMTs can be continued or timed around pregnancy with planning; discuss family plans early with your neurologist.

Q: Does heat damage my nerves?

A: No — heat temporarily worsens symptoms (Uhthoff) but causes no damage; cooling strategies restore function within minutes.

National support groups & resources

- **National Multiple Sclerosis Society** — nationalmssociety.org — 1-800-344-4867
- **Multiple Sclerosis Association of America** — mymsaa.org — 1-800-532-7667
- **American Academy of Neurology — Brain & Life patient resources** — brainandlife.org

(Organization contact details were current at the time of compilation; please verify online.)

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