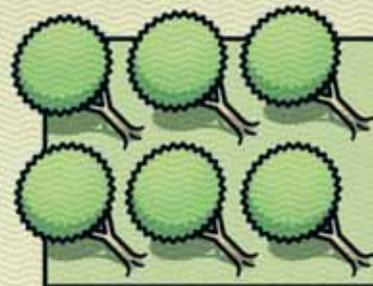
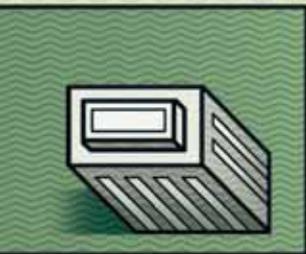
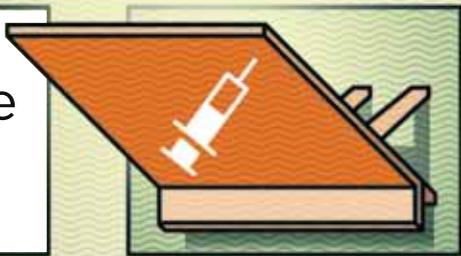


 thrive



The medication map

Weighing the benefits, risks and side effects of each MS medication goes a long way toward finding the right one for you.

by Donna Shryer

Choices, choices. That could be the mantra when it comes to finding the best disease-modifying treatment (DMT) for your multiple sclerosis. Today, people diagnosed with relapsing-remitting MS have 10 DMT options, all approved

by the U.S. Food and Drug Administration to slow the progression of MS, prevent relapse and help people with the disease live more active lives. It's a far cry from just 20 years ago, when no treatments were available.

People newly diagnosed with MS—or considering changing their treatment—can now weigh not just the efficacy, safety, risks and side effects of each DMT, but also the method of administration. DMTs today are available as injections, infusions and oral medications, allowing people to choose how, when and where to take their medication.

The menu of options

Five medications are injectables, or shots that people give themselves (either under the skin or into a muscle) on a schedule that ranges from daily to weekly. Four of these injectables—Betaseron®, Avonex®, Rebif® and Extavia®—belong to a class of medications called interferon betas. The fifth injectable, Copaxone®, is made of a synthetic protein called glatiramer acetate. Injectable therapies have been available for more than a decade, giving the medical community time to collect a significant amount of clinical evidence that demonstrates the drugs’ safety—which is why these medications are often referred to as frontline MS treatments. The other therapies have all received FDA approval for safety and efficacy, but they don’t have similar long-term usage data.

Two medications—Novantrone® and Tysabri®—are administered by intravenous infusion. This requires a visit to a medical facility, but treatment is needed only monthly or quarterly.

In 2010, the FDA approved Gilenya®, the first oral medication to treat MS, and two additional pills have since become available: Aubagio® taken orally once a day, and Tecfidera™, taken orally twice a day.

Each DMT works differently in the body to limit the damage caused by MS attacks. In addition, each has a different profile of risks and side effects and a different degree of effectiveness at slowing the development of new brain lesions, reducing exacerbations and slowing disability progression. In general, the newer drugs bring both greater efficacy and greater risk.

As people learn about new medications on the market or promising treatments being tested, they sometimes feel confused or overwhelmed, says Fred Foley, PhD, director of neuropsychology and psychosocial research at the Holy Name Hospital MS Center in Teaneck, N.J.

“There are few head-to-head trials and therefore no science-based answers that say which drug is superior for a particular symptom profile,” Dr. Foley says. And considering the additional factors besides efficacy can add up to information overload. At the end of the day, Dr. Foley adds, it comes down to deciding what fits best right now—with the awareness that your needs may change over time.

More power to you

“There will be valuable input from your healthcare team, family and friends, but it’s important to feel that you’re in charge of your disease,” Dr. Foley notes. “It’s how you achieve what we call MS self-efficacy—the expectation that you will overcome challenges when they happen. Be an active participant. Ask a lot of questions, speak up if side effects are unbearable, and be fully engaged in your disease management.”

Empowerment comes more easily with a trusted support network in place, explains Rosalind Kalb, PhD, vice president of Clinical Care at the National MS

Society. “You want a partnership between the person with MS and his or her doctors, nurses, family members and perhaps a psychologist or social worker,” she says. All of these people look at the treatment process from a different point of view.”

Family support is particularly important when it comes to DMT



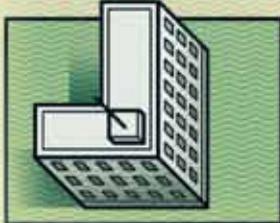
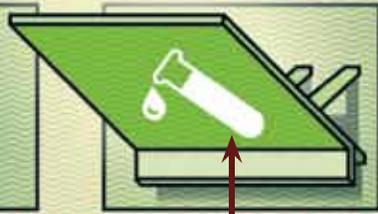
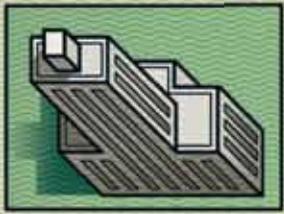
COURTESY OF JEANNIE SAUR

Jeannie Saur, diagnosed with relapsing-remitting MS in 1997, found an MS treatment that works for her lifestyle.

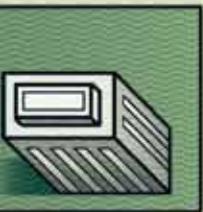
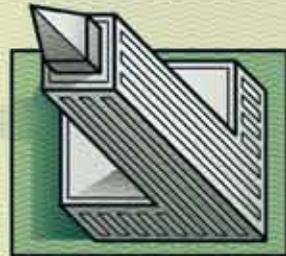
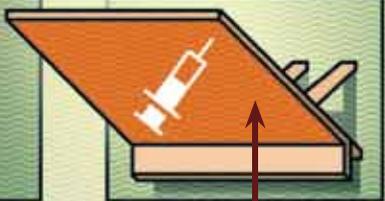
compliance. Jeannie Saur, a 47-year-old resident of Westminster, Colo., found this out firsthand. Diagnosed with relapsing-remitting MS in 1997, Saur began

Finding what works

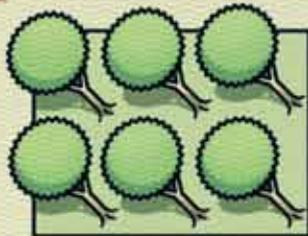
People with MS have more medication options than ever before. Finding the right one is an individual journey.



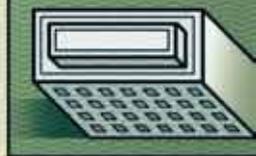
Infusion



Injection



Oral





Had it with shots? Learn more about needle fatigue at nationalMSSociety.org/needlefatigue.

treatment with intramuscular injections. After seven years she “ran out of injection points,” and moved to subcutaneous injections for the next seven years. Then she hit a bump in the road. “I was so tired of injections and felt what’s called **needle fatigue**,”

she explains. “Since I was doing great, I made a very emotional decision to stop taking medication. But my husband took a more realistic view and told me, ‘You may feel healthy now, but the fact is you need to stay on your medication to stay healthy.’”

Saur’s husband was right: Even when you don’t have active symptoms, MS can be operating in the background, causing irreversible damage (lesions) to the brain and spinal cord. In fact, lesions occur 10 to 20 times more often than symptoms are felt by a person with MS.

The only time physicians may recommend stopping MS treatment altogether is during pregnancy, nursing or when men or women are trying to conceive. Discuss this with your healthcare team if you’re planning to grow your family.

So, rather than give MS free reign, the Saurs investigated newer oral MS medications and took their findings to Saur’s neurologist for feedback. “We decided an oral therapy was the best fit for me, and it’s been terrific. I’m back in charge now! But to get here, I really needed my small circle,” she says.

Taking sides

Personal preferences should always figure into the DMT decision-making process, says Dr. Kalb. “We want people to get on and stay on their medication, and the only way this is going to happen is if it also fits comfortably into someone’s lifestyle.”

Side effects, for instance, can be a deal breaker when it comes to DMT compliance. Medication side effects can range from mild and annoying to uncomfortable and problematic. For Claire Gordy, diagnosed as an 18-year-old college freshman in 2000, severe flu-like reactions to each interferon therapy she tried sent her straight to bed. Side effects for other DMTs can range from headaches and skin flushing to vision changes.

For milder side effects, Dr. Kalb suggests giving them a month or so to diminish. Then, if they’re not fading fast enough, talk to your neurologist. “Today, with 10 choices, a person with MS can speak up. You no longer have to settle,” she says. “If you find yourself talking to the family doctor or a general neurologist who isn’t comfortable discussing the newer drug options, take charge and reach



Today, with 10 choices, a person with MS can speak up. You no longer have to settle.”

out to someone who specializes in MS.”

Drug administration method also makes a difference. Some people dislike needles and prefer the convenience of

a pill. Others may prefer limiting their MS treatment to a monthly infusion. A full-time parent with young, active children might find an entire afternoon devoted to a monthly infusion impractical. These lifestyle issues count when it comes to follow-through.

Risk management

Despite the overall safety record of approved DMTs, every MS medication has some risk, and every person has a different comfort level with risk. “I’ve had people come in and say, ‘Just tell me what to do!’” says Dr. Barbara Giesser, professor of clinical neurology at the David Geffen UCLA School of Medicine and clinical director of the MS program at UCLA. “Well, I can’t do that because there is no one single solution for every person with MS. What I can do is give them known data on the therapies available, order the right tests and help them process the information to make the most informed choice possible.”

The tests Dr. Giesser refers to help determine certain characteristics associated with specific drug risks. For example, in January 2012, the FDA updated Tysabri’s labeling to indicate that previous exposure to the normally harmless JC virus increases risk for developing a rare but potentially fatal brain disease called progressive multifocal leukoencephalopathy (PML), which has occurred in



10 disease-modifying treatments

Brand name	Chemical name	Frequency	Year approved	For more info or financial help
 BETASERON[®]	interferon beta-1b	Every other day; subcutaneous (injected just under the skin)	1993	800-788-1467 betaseron.com/betaplus/affordability
 AVONEX[®]	interferon beta-1a	Once a week; intramuscular (injected directly into a muscle)	1996	800-456-2255 msactivesource.com
 COPAXONE[®]	glatiramer acetate	Daily; subcutaneous	1996	800-887-8100 copaxone.com/aboutshared/solutions.aspx
 NOVANTRONE[®]	mitoxantrone	Every three months	2000	nationalMSsociety.org/novantrone
 REBIF[®]	interferon beta-1a	Three times weekly; subcutaneous	2002	877-447-3243 mslifelines.com
 TYSABRI[®]	natalizumab	Every four weeks	2006	800-456-2255 msactivesource.com
 EXTAVIA[®]	interferon beta-1b	Every other day; subcutaneous	2009	800-245-5356 patientassistancenow.com
 GILENYA[®]	fingolimod	Once a day	2010	800-245-5356 patientassistancenow.com
 AUBAGIO[®]	teriflunomide	Once a day	2012	855-676-6326 MSOnetoOne.com
 TECFIDERA[®]	dimethyl fumarate	Twice a day	2013	800-456-2255 msactivesource.com



Visit nationalMSsociety.org/treatments for more information on specific DMTs and their safety, risks and side effects.

Read more about potential new therapies at clinicaltrials.gov and MS-coalition.org/emergingtherapies.



Download the Society's "MS Disease-Modifying Medications" brochure at nationalMSsociety.org/DMDs.

people taking Tysabri. A blood test can show whether a person with MS has been exposed to the JC virus and can help people knowledgeably weigh the potential consequences of taking this medication.

Similarly, people with a history of heart problems need to consider cardiac risks associated with Gilenya. “Based on someone’s past cardiac health and current medications, we can assess someone’s risk for heart complications when starting Gilenya,” says Dr. Robert Fox, staff neurologist at the Mellen Center for Multiple Sclerosis Treatment and Research at the Cleveland Clinic. “It doesn’t mean we don’t use the drug in people with elevated risks, but the presence of cardiac risk factors may prompt us to suggest alternative therapies.”

Dr. Kalb stresses that even after reviewing all the medications’ benefits and risks, there is no right or wrong choice. “It’s true that the first MS medications—the interferons and Copaxone—are partially effective and very safe. But safety isn’t always the final deciding factor,” she says. “If your MS is more aggressive, you may be ready to consider a therapy that comes with greater risks; otherwise, taking the ‘safest’ drug may feel like the greatest risk of all.”

Dollars and sense

Financial considerations, too, can influence treatment decisions. All MS medications are expensive, and insurance coverage varies considerably from one plan to another. Typically, the newer medications are pricier, with oral therapies the most expensive.

“As providers, we don’t always have full latitude to prescribe any of the 10 MS drugs as our first line of treatment,” Dr. Fox explains. “Often the insurance company mandates a limited number of drugs in its ‘first tier’ of coverage. You can petition for a different drug to be covered, but it’s time-consuming and isn’t always successful.”

Pharmaceutical companies that distribute DMTs offer help through their patient assistance programs (see “10 disease-modifying treatments” on p. 41 or call an MS Navigator at 1-800-344-4867). **Needy meds.org** can help direct people to these programs, as each has its own eligibility criteria and application forms. Originally established for people without insurance coverage for

prescription drugs, today’s patient assistance programs are often available to help with high copays or co-insurance, depending on the applicant’s income. The patient assistance programs may change as a result of the Affordable Care Act (ACA) but exactly how is still unknown.

The ACA’s key provisions that take effect in January 2014 are expected to positively impact prescription drug coverage for the uninsured and some underinsured people. Under the ACA, all new health plans must cover prescription drugs; and for the first time, there are mandatory caps on out-of-pocket costs, which for some may mean greater coverage. However, navigating your health insurance plan will be an individual experience, says Kim Calder, director of Federal Health Affairs and Insurance Policy for the Society. She suggests visiting **nationalMSsociety.org/ACAKickin** to get familiar with the ACA, and then calling the Society at 1-800-344-4867 for additional help.

Future options

Additional therapies are moving along the research pipeline, including alemtuzumab, ocrelizumab, laquinimod and daclizumab—you can follow their progress at **clinicaltrials.gov**.

While each will bring something new to the table—pending FDA approval—each will still have side effects, risks, benefits and costs.

There is still no universal “best” treatment.

“The best disease-modifying medication is the one that the person with MS will take, and that is best for the person’s situation,” says Dr. Giesser. “If we had a perfect drug that definitively stopped relapses and had no side effects, I would say, ‘Why wouldn’t you take this?’” she says. “But for now, we don’t have one drug like that. So you weigh the benefits and risks and make the choice that fits your disease and your lifestyle. It’s a very individual approach.” ■



Visit **nationalMSsociety.org/NAEP13** to access a free book and videos on “Making Treatment & Lifestyle Decisions.”

Donna Shryer is a Chicago-based freelance writer.
