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REAL STORIES

WINTER 2024

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Access additional MS
content online. Use
your mobile phone
camera to activate
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THE LATEST ON

MULTIPLE SCLEROSIS

AN IMMUNE SYSTEM RESET

New research explains how stem cell transplants treat—and possibly cure—MS. In MS, immune cells mistakenly attack your nerve cells. For a stem cell transplant, you take powerful medicines that wipe out almost all your immune cells. Then the new stem cells generate a brand-new immune system that won't attack you. Some immune cells, called memory T cells, survive the powerful drugs. But they are too damaged to trigger MS attacks. Other immune cells regenerate over time. The thymus gland, which trained your young immune system to fight illness, is typically dormant in adults. But after a stem cell transplant, it comes out of retirement and teaches your new immune system how to protect you.

SOURCE: *Science Translational Medicine*

3.5 in 1,000

A U.S. person's odds of developing MS—that's less than half of a percent.

SOURCE: Multiple Sclerosis Association of America

6 in 7

Number of people with MS who have the relapsing type.

SOURCE: MS Society

A COMMON BOND

In MS, anti-inflammatory T cells don't do their job. Then, unchecked inflammation leads to brain lesions. Know what other illness causes T cells to act up and trigger inflammation? COVID-19. The two conditions might respond to the same new medicine. When researchers tested an experimental antibody treatment in someone with COVID, the nasal spray put lazy T cells to work and brought lung inflammation down. When they tried it in someone with MS, T cells got busy again and, this time, eased brain inflammation. It's early still, but the twin findings could one day lead to a drug that gets approved for both conditions.

SOURCE: *Proceedings of the National Academy of Sciences*

BRAIN BOOSTER

MS is a demyelinating disease. It erodes nerve-cell coverings called myelin, which leads to inflammation, nerve damage, and MS symptoms. Scientists may have just gotten one step closer to regrowing myelin. A protein in the brain called fractalkine produces the type of brain cells that generate myelin. Researchers suspected that boosting fractalkine levels could prompt the body to replace damaged nerve-cell coverings. In lab experiments, when they injected mice with powerful protein, their brains upped the generation of myelin-producing cells. It's a long road from there to a new treatment, but the researchers hope it could one day stop or even reverse MS progress.

SOURCE: *Stem Cell Reports*



WHITEHOUSE/VIA GETTY IMAGES



Q&A

NEUROLOGIST IRIS MARIN COLLAZO DISCUSSES HOW DOCTORS CHOOSE A COURSE OF TREATMENT

By Sonya Collins

Reviewed by Brunilda Nazario, MD,
WebMD Chief Physician Editor, Medical Affairs

You have many options available to treat your MS. Before doctors recommend what might be the best fit for you, they weigh many factors, including your disease severity, your overall health, and your personal preferences. Iris Marin Collazo, MD, a neurologist and director of the Multidisciplinary Clinic for Patients with MS at Mayo Clinic in Jacksonville, FL, explains.

Q. What factors do doctors consider before they recommend a treatment for a patient with MS?

Every patient with MS is different, so you have to take a patient-centered approach. You need to consider the type of MS, whether it's relapsing-remitting, primary progressive, or secondary progressive. You also have to consider other conditions the patient may have. You can treat more than one condition with certain drugs. The patient's prognosis is important, too. For patients who have higher odds of relapse or new lesions, you might want to be more aggressive and go with higher-efficacy drugs.

Q. What patient preferences do you consider before you recommend a medication?

We have to consider whether they can accept the risk of the side effects that come with that medication. Also, whether they are planning to get pregnant influences our recommendation. We need to make sure they are comfortable with the route of administration, too. There are oral medications, drugs you inject yourself, and IV infusions you go to a clinic to receive. They also need to be willing to follow through with all of the monitoring and testing that treatment requires.

Q. How do you know whether the treatment is working?

With relapsing MS, we should know within 6 months whether the medication is working. With progressive, we might have to wait at least a year. Within 3 to 6 months of starting the medication, I do a new neurological exam, order a new MRI, and ask the patient about side effects and generally how they are doing. That's when they might say whether they are still having relapses or whether they feel that they are still progressing. We compare how they are now to how they were before they started the medication.

Q. What are some of the reasons that people with MS might change medications?

If the medication isn't controlling the disease, you would try a different one. If a patient is unable to tolerate the medication, that would be a reason to switch. A patient who can't take it as prescribed—for example, if they can't remember to take the pill every day or twice a day—might need to try something else. We may also switch if their labs come back abnormal or if they are planning to get pregnant.

MS AND ME

HOW I CHANGED MY LIFESTYLE TO LIVE BETTER

By Ashley Ratcliff Lundy

Reviewed by Brunilda Nazario, MD,

WebMD Chief Physician Editor, Medical Affairs

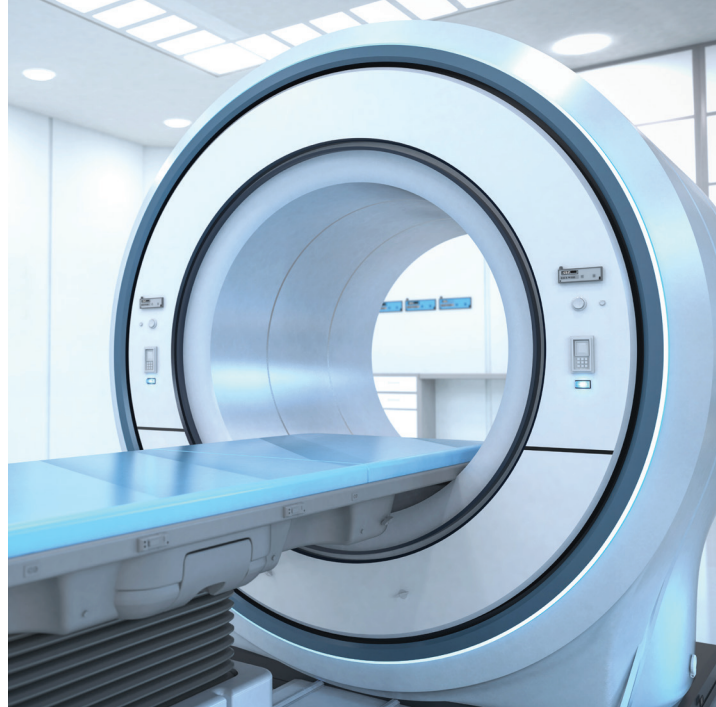
Five years ago, before I was diagnosed with multiple sclerosis (MS), you couldn't have told me that I would be working for an MS organization, speaking to others with MS, and would have published a book about my life with the disease.

WHAT'S GOING ON?

I've been healthy my whole life. I was working a lot and started feeling numbness and tingling in my left foot. I thought it was from being on my feet a lot. Then, my foot started dragging. I also had a lot of fatigue.

I went to my primary care doctor, who sent me to a physical therapist. I would feel great the next day after PT and then I'd be back to square one. I did everything I was supposed to do. I did my stretches and worked out with a trainer. I also saw a chiropractor who said I had some disk degeneration.

Finally, I decided to see a neurosurgeon for a second opinion, and my chiropractor was angry. He implied it was pointless. Fast-forward and my neurologist took one look at how I walked



and ordered an MRI of my upper back and neck. It showed lesions, which he explained often pointed to signs of MS.

I was so upset. I thought my life was over. It broke me. I didn't know anyone with the disease. He tried to calm me down and referred me to a neurologist who performed more tests. By the end of 2018, I was officially diagnosed with MS.

ASHLEY BEFORE AND AFTER

Before I was diagnosed with MS, I was cavalier about my health and well-being. I didn't work out because I was skinny. I didn't exercise on purpose like I do now! I didn't think twice about what [food] I put into my body. I didn't take my health into account. I'd work late hours and was carefree.

Now, I'm intentional about my health. I can't rip and run like I used to. My MS is well managed with my meds, but I still get tired a lot and have some weakness. Rest is so important. Self-care for me doesn't have to be expensive. It often looks like sitting on the couch watching TV with my husband. These days I prioritize health. I keep a food journal, pack vitamins when I travel, and I work out with a trainer once a week. My faith has also been vital to my ability to move forward.

What hasn't changed? I had dreams and ambitions before MS, and I still do today. I want people to know that just because they have an MS diagnosis, it doesn't mean they have to abandon these dreams. Don't stop dreaming. Climb the corporate ladder. Start a business. Since my diagnosis, I've published a book, *Jesus Year: The First Year of the Rest of My Life After I Was Diagnosed With MS*, and I've started a custom enamel pin business with motivating phrases for people with MS. My tagline is "Wearable flair for the chronically chill and the people who love them." My goal is to help others not feel alone like I did when I was diagnosed with MS. My life isn't perfect, but it looks pretty good.



ASHLEY'S TIPS

- + **Process your diagnosis.**
It's a big deal. Feel your feelings.
- + **Stay on top of MS news and research.**
I use Google Alerts.
- + **Find your people.**
I was so blessed to find a support group with people who looked like me.



KEEPING A SYMPTOM DIARY

WHAT TO WATCH FOR AND WRITE DOWN

By Rachel Reiff Ellis

Reviewed by Brunilda Nazario, MD, WebMD Chief Physician Editor, Medical Affairs

When you take note of your MS symptoms, it helps both you and your doctor see changes over time, both in the short and long term. The information you gather also allows you to understand what affects your MS and can help you to identify triggers and patterns.

HALLMARK SYMPTOMS

MS symptoms are different for everyone with the disease. You may have only one or two of the most common symptoms, or you may have almost all of them.

Either way, knowing what's typical for MS progression can help you recognize the symptoms you do have.

It's common to have bouts of new neurological symptoms—symptoms that come from your brain and nerves—especially in the early years of your disease, says Torge Rempe, MD, PhD, director of the UF Health Multiple Sclerosis Program and professor for research in multiple sclerosis at the University of Florida College of Medicine in Gainesville.

“[These include] visual problems like painful vision loss and double vision, weakness, numbness, as well as bowel and bladder problems,” Rempe says.

Also be on the lookout for muscle problems such as stiffness and cramping. Rempe says it helps to pay special attention to how you feel when you're in hot environments like taking a hot shower or outside on a hot day.

Infections are another recurring problem of MS. “[Note] any signs of accompanying infection like respiratory or urinary tract infections,” Rempe says.

Other, less common symptoms include trouble speaking (including your voice getting softer), tremors, loss of taste, problems swallowing, breathing issues, seizures, and hearing loss. You may realize you're struggling to remember things or having trouble concentrating, too.

INFORMATION TO RECORD

To get a full picture of your MS progression, you need more than just a list of the symptoms you have ever had. Other details are just as crucial.

“Important information includes a detailed description of the exact symptom, the duration, the time and course of onset—slow emergence versus acute—as well as potential trigger,” Rempe says. You can note things like what you ate that day, how you slept, the weather, and any mood changes you notice, as well as anything that made your symptom better or worse.

Also key: Write down any questions that come up as you record your symptoms. And look back over your symptom diary to see if you notice any patterns or concerns over time. You may not realize symptoms changing day by day but see a shift when you step back and look at the big picture.

“Some people with MS may also experience slow worsening of symptoms without an associated attack, called ‘progression independent of relapse activity,’” Rempe says. “It is important to let the treating physician know if that is the case.”

WHAT ARE DMDs?

UNDERSTAND YOUR TREATMENT OPTIONS AND HOW TO CHOOSE THE BEST ONE FOR YOU

By Kendall K. Morgan

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

The best way to manage your multiple sclerosis (MS) is to work with your doctor to come up with a treatment plan that's best for you based on your condition, preferences, and goals.

"All MS drugs are categorized as disease modifying," says Eric Seachrist, MD, a neurologist at the West Virginia University School of Medicine in Morgantown. "The whole purpose of them is to change the course of the disease in the short, medium, and long term."

HOW DO THEY WORK?

The first drug approved for MS has been around since 1993. But today, you'll have a long list of options for disease-modifying drugs (DMDs) you can take in different ways. They include pills, injectables, and infusions.

"They all work on the immune system in one way or another," Seachrist says. "[But] there are a lot of mechanisms."

Many of them work on B cells, which make antibodies, he explains. Some of them prevent bone marrow from releasing those cells after they are made, he says, so that they get stuck and can't get into the brain. Others knock the cells out entirely, and still others act more specifically on the brain.

Seachrist says that most MS medicines don't cross the blood-brain barrier to enter the brain. The



therapeutic action takes place instead throughout your whole body and in the bloodstream to slow progression, ease symptoms, and prevent relapses.

WEIGH YOUR OPTIONS

How do you choose? This is the hardest part, Seachrist says.

"It's important for providers to know all the options and the basic risks and benefits of each," he says. "The whole goal of treatment is to make it specific to each patient."

When talking through the options with patients, he breaks DMDs into three categories depending on their strength. The lowest-strength options reduce the yearly chance of a relapse by about 30%.

"They're not very strong, but they are very, very safe," with a

long track record, Seachrist says.

Next up are the intermediate-strength options, which lower the chance of an annual relapse by about 50%. And lastly there is the high-efficacy group, which delivers a reduction of relapses annually by 70% to 80%.

You'll need to decide with your doctor how aggressive you would like to be. Consider the side effects, how you take the medicines, and how often. The stronger medicines work better but may lead to more infections or other risks. Seachrist generally favors a more aggressive, early approach aimed at preventing MS progression and disability before it's too late.

"If you wait to start the strongest therapy until someone has substantial disability, you've missed the boat," Seachrist says.

HOW I FOUND MY BEST TREATMENT PLAN

GETTING A SECOND OPINION WAS ESSENTIAL TO MY MS JOURNEY

By Derrek Booze

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor



Derrek Booze celebrates completing 3 miles at Walk MS in Springfield, Missouri, in April 2023. Pictured here with Jacqueline Helms (left) and Carolyn Fischer (right).

Before my diagnosis in December 2021, I was in my early 30s. In a freak accident, I fell on the ice and broke my left leg and ankle. Afterward, I noticed tingling or a numb feeling in one foot and hand. I tried to wait it out, but it never went away.

My doctor sent me to a neurologist. After my first MRI scan, the neurologist called me right away. He told me he thought it was MS and he wanted to order more tests. It took months to get all the results, but they eventually confirmed it.

TREATING MS AND ITS SYMPTOMS

Because of the amount of scarring on my spinal cord, my initial diagnosis was primary progressive MS (PPMS). When you have this type of MS, the symptoms gradually worsen, and you won't have relapses or remissions. But it's hard to tell the difference between PPMS and relapsing forms until doctors can watch the symptoms over time.

There are many treatments for MS, but only one B-cell therapy is approved for both relapsing and PPMS. I started getting infusions every 6 months. I get steroids as needed to get the inflammation under control. I take other medicines to help with fatigue, headaches, muscle stiffness, and pain, plus vitamins my doctor recommends, including vitamin D.

I also do my best to eat healthy and avoid foods that could make my inflammation worse.

SECOND OPINIONS AND SUPPORT

A second opinion is always a good idea. After my diagnosis, I went to another specialist, who confirmed my diagnosis and treatment plan. But I've since had a few relapses and some inflammation, so the doctors now think I may have progressive relapsing MS. They're still learning about what's impacting me day to day. Each time I

see the doctor, we talk through my treatment plan and whether there are any new options.

Physical therapy has also been a big help. The goal is to keep the mobility I have. I do lots of stretches and exercises, such as squats without weights or standing up and sitting down repeatedly without assistance. But the real key for me has been my support system, including old friends and people I've met since my diagnosis. Without them, I would not be the person I am today.



DERREK'S TIPS

- + Find someone in your life who understands and is willing to listen.
- + Reach out to the National Multiple Sclerosis Society or another organization in your community. You will find patient navigators and others who are there for you.
- + Consider volunteering to create change for the MS community. I've seen the impact advocacy organizations have, and it feels good to give back.

MY MS JOURNEY

HANDLING FLARES TO HONORING MY NEEDS

By Nicole White

Reviewed by Brunilda Nazario, MD, Chief Physician Editor, Medical Affairs



My MS was missed for many years. In 2019, at the age of 42, I was hospitalized for stroke symptoms and treated with 10 days of steroids. Due to my young age, the neurologist pressed for more testing. His persistence led to my multiple sclerosis (MS) diagnosis.

RECOGNIZE A FLARE

Early on, I had three exacerbations or flares, with my first one being the most damaging. For probably a month beforehand, I had tingling in my fingers. I kept saying my fingers felt frostbitten even though I had never had frostbite. I was an elementary school principal, and it was the start of a school year. It was a very stressful time, but I was used to operating at a high level of stress.

On top of the tingling fingers, I was very fatigued and severely depressed.

But I didn't connect what was happening to me with my MS diagnosis. I chalked it up to being tired and overstressed. But within weeks, my mind was cloudy, and I was moving and talking slowly. I called my neurologist, and he told me to go to the ER. By the time I got there, I couldn't move my legs. My entire body went numb. The MRI scan showed I had active lesions.

CONSERVE ENERGY, LOWER STRESS

My MS was aggressive, and it took time to get on an effective treatment plan. I've since made lifestyle changes to lower my stress, understand my body, and get healthier. Now at 46, I still have symptoms and some of my skill sets have decreased. While my MS is still active, I am feeling a lot better and haven't had a flare in a little over a year.

To manage your MS and avoid flares, in addition to honoring your treatment regimen, it's important to understand what causes inflammation, how to conserve your energy, and how to manage your stress. You have to take time to rest. For me, emotions are a big trigger. The more emotional distress I endure, the more symptoms I have. If I need to deal with people or situations that add stress or upset me, I have to also give myself the time and space for self-care and recovery.

TAKE NOTES

Another key is knowing your body. The tingling in my fingers was a flare symptom that had been going on for weeks. Keep a diary of symptoms and listen to what your body is telling you. If you notice small things, like changes in your speech, write that down.



SCAN ME

For more ways to honor your needs, read **Peer-to-Peer: MS and Your Mental Health**. Use your mobile phone camera to activate the QR code.

A diary can help you track time and catalog new symptoms or the return of old symptoms. Of course, not everything you notice in your body will be related to MS. But there's no way to be sure. Pay attention and keep a catalog of it all, so you and your doctors can catch those early signs of a flare.

HONOR YOUR NEEDS AND RESOURCES

Therapies are a big help, too. This includes occupational therapy (OT), physical therapy (PT), speech therapy, and mental health therapy. All these approaches can give you tools to prolong wellness and safety.

Make sure the people around you—your friends and family—know how to support you. Connecting with the MS community also helps. Internalizing their positive inspiration and building your own awareness will help you make sound decisions. Holding off flares is all about understanding how MS manifests in your body and managing your life in the best way that you can.



NICOLE'S TIPS

- + Be your own advocate.
- + MS is invisible and sometimes it's a fight. Find your voice and fight for what your body needs.
- + Empower your family and friends to understand how to support you. Don't tackle this alone.

VITHUN KHAMSONG VIA GETTY IMAGES; INSET PHOTOGRAPHY BY WAGU STUDIOS

COST CONSIDERATIONS, INSURANCE, AND MORE

WHAT TO EXPECT FINANCIALLY

By Rachel Reiff Ellis

Reviewed by Brunilda Nazario, MD,

WebMD Chief Physician Editor, Medical Affairs

There's no way around it—MS can be an expensive disease to manage. The best way to handle the financial aspect of MS is to prepare financially for the unexpected and make informed choices throughout the journey.

WHAT YOU'RE PAYING

The actual amount people spend on MS care per year varies depending on the treatments you take, daily life needs, and the type of insurance you have, says Bari Talente, executive vice president for advocacy and healthcare access at the National MS Society (NMSS). But based on NMSS research, the average family should plan for it to cost around \$88,000 a year.

“Direct medical costs such as doctor’s appointments and medications are the biggest contributor to the high cost,” she says. And the most expensive of the medications are disease-modifying therapies (DMTs).

INSURANCE INTEL

Do a deep dive into your coverage, and be sure you understand what’s in your plan and what isn’t.

“It’s essential that someone who is newly diagnosed with MS check with their insurance company regarding what out-of-pocket costs such as copays and cost-sharing can be expected with MS treatments,” Talente says.

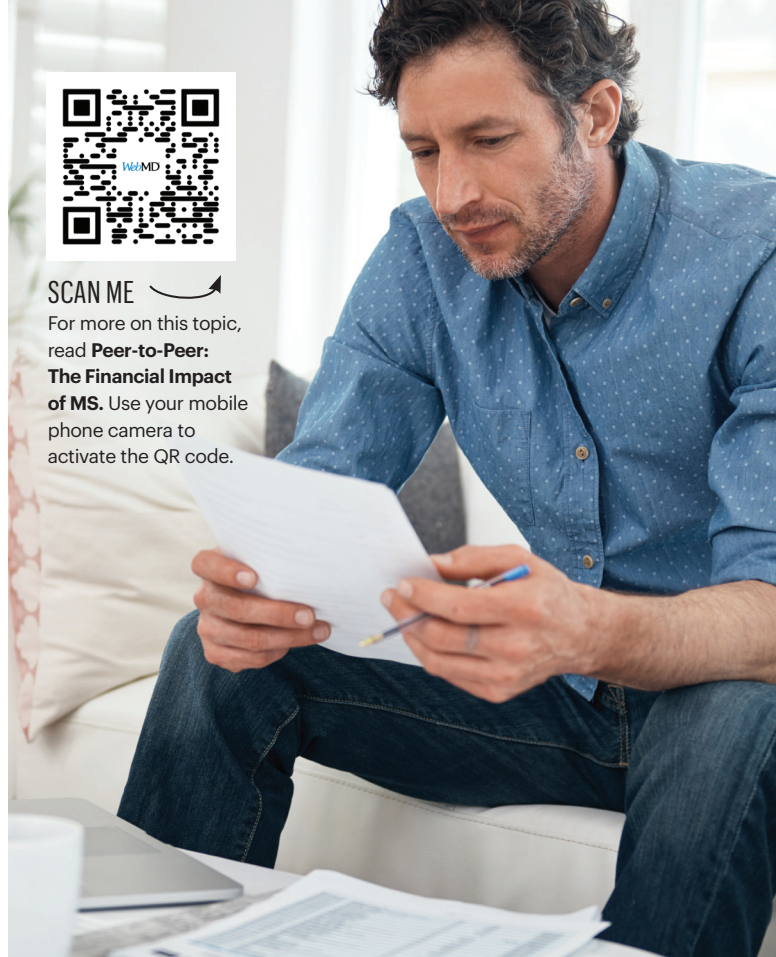
Find out if your insurance company requires prior authorization before insurance will pick up the cost, for example.

“Additionally, some insurance companies require ‘step



SCAN ME 

For more on this topic, read **Peer-to-Peer: The Financial Impact of MS**. Use your mobile phone camera to activate the QR code.



therapy,’ or having a patient try other drugs and prove that these drugs do not work before covering the drug the provider prescribed,” she says. “[These strategies] often delay access to treatment, which may lead to a worse prognosis, disease relapse, or further disability, so it’s important to clarify if an insurer uses these practices as soon as possible.”

Talente says when comparing plans, the main categories to look at include:

- **Benefits:** What are the covered benefits and associated costs? Are there restrictions or limits on any benefits or services?
- **Access to providers:** Are your preferred providers considered in-network, including hospitals and pharmacies? What will the cost be if a provider is not in the network?
- **Access to medications:** Are your medications covered by the plan? What tiers are your medications on? What is the cost-sharing amount? If you use financial assistance from a third party, will that count toward your deductible?

RESOURCES THAT CAN HELP

NMSS’s Get Covered web page has comprehensive content on things to consider when seeking health insurance coverage as well as resources for finding care without insurance. They also provide places to go for assistance with medication costs.

“[The RX Help] web page has a focus on disease-modifying therapies as well as a small section of other commonly used medications for people with MS,” Talente says.

Find these self-service guides at: NationalMSSociety.org/GetCovered and NationalMSSociety.org/RXHelp.

“**Speak up about what you need.**”



Advocating for myself has helped me find an RMS treatment that fits into my life.”

– **JAMIE-LYNN SIGLER**
MOM, ACTOR, MS ADVOCATE, TAKING KESIMPTA®



Here's why my doctor and I decided on KESIMPTA:

- **Powerful results*** for reducing rate of relapses and active lesions, and slowing disability progression
- **Proven safety profile***
- **Convenient once-monthly† dosing** with an auto-injector pen you can use at home or on the go

SCAN TO LEARN MORE ABOUT MY KESIMPTA STORY

or visit [Kesimpta.com/ReframingMS](https://www.Kesimpta.com/ReframingMS)



RMS, relapsing multiple sclerosis; MS, multiple sclerosis.

*In 2 studies vs teriflunomide.

†Once monthly after 3 weekly starter doses.

Jamie-Lynn S. has taken KESIMPTA and has been compensated for her time.

Important Safety Information (cont)

way to feed your baby if you take KESIMPTA.

Tell your HCP about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

How should I use KESIMPTA?

See the detailed Instructions for Use that comes with KESIMPTA for information about how to prepare and inject a dose of KESIMPTA and how to properly throw away (dispose of) used KESIMPTA Sensoready pens or prefilled syringes.

- Use KESIMPTA exactly as your HCP tells you to use it.
- Your HCP will show you how to prepare and inject KESIMPTA the right way before you use it for the first time.

- **Do not** inject into areas where the skin is tender, bruised, red, scaly or hard. Avoid areas with moles, scars, or stretch marks.

KESIMPTA may cause serious side effects including:

- **Injection-related reactions.** Injection-related reactions are a common side effect of KESIMPTA. Injecting KESIMPTA can cause injection-related reactions that can happen within 24 hours (1 day) following the first injections and with later injections. Talk with your HCP if you have any of these signs and symptoms:
 - **at or near the injection site:** redness of the skin, swelling, itching, and pain or
 - **that may happen when certain substances are released in your**

body: fever, headache, pain in the muscles, chills, and tiredness.

- **Low immunoglobulins.** KESIMPTA may cause a decrease in some types of antibodies. Your HCP will do blood tests to check your blood immunoglobulin levels.

The most common side effects of KESIMPTA include:

- Upper respiratory tract infection, with symptoms such as sore throat and runny nose, and headache.
- Headache.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Please see additional Important Safety Information and the accompanying Consumer Brief Summary inside.

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East Hanover, New Jersey 07936-1080

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Printed in USA

8/23

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The risk information provided here is not comprehensive. This information does not take the place of talking with your doctor about your medical condition or treatment.

To learn more about KESIMPTA (ofatumumab) injections, talk to your doctor or pharmacist. For more information and to obtain the FDA-approved product labeling, call 1-888-669-6682 or visit www.kesimpta.com.

What is the most important information I should know about KESIMPTA?

KESIMPTA can cause serious side effects, including:

Infections. Serious infections can happen during treatment with KESIMPTA. If you have an active infection, your healthcare provider should delay your treatment with KESIMPTA until your infection is gone. KESIMPTA taken before or after other medicines that weaken the immune system may increase your risk of getting infections.

Tell your healthcare provider right away if you have any infections or get any symptoms including painful and frequent urination, nasal congestion, runny nose, sore throat, fever, chills, cough, or body aches.

- **Hepatitis B virus (HBV) reactivation.** Before starting treatment with KESIMPTA, your healthcare provider will do blood tests to check for HBV. If you have ever had HBV infection, the HBV may become active again during or after treatment with KESIMPTA. Hepatitis B virus becoming active again (called reactivation) may cause serious liver problems including liver failure or death. You should not receive KESIMPTA if you have active hepatitis B liver disease. Your healthcare provider will monitor you for HBV infection during and after you stop using KESIMPTA. Tell your healthcare provider right away if you get worsening tiredness or yellowing of your skin or white part of your eyes during treatment with KESIMPTA.

- **Progressive Multifocal Leukoencephalopathy (PML).** PML may happen with KESIMPTA. PML is a rare, serious brain infection caused by a virus that may get worse over days or weeks. PML can result in death or severe disability. Tell your healthcare provider right away if you have any new or worsening neurologic signs or symptoms. These may include weakness on one side of your body, loss of coordination in arms and legs, vision problems, changes in thinking and memory which may lead to confusion and personality changes.

Weakened immune system. KESIMPTA taken before or after other medicines that weaken the immune system could increase your risk of getting infections.

What is KESIMPTA?

KESIMPTA is a prescription medicine used to treat adults with relapsing forms of multiple sclerosis (MS) including:

- clinically isolated syndrome
- relapsing-remitting disease
- active secondary progressive disease

It is not known if KESIMPTA is safe or effective in children.

Do not use KESIMPTA if you:

- have active hepatitis B virus infection.

Before using KESIMPTA, tell your healthcare provider about all of your medical conditions, including if you:

- have or think you have an infection, including HBV or PML. See **“What is the most important information I should know about KESIMPTA?”**
- have ever taken, currently take, or plan to take medicines that affect your immune system. These medicines could increase your risk of getting an infection.
- have had a recent vaccination or are scheduled to receive any vaccinations.
 - **You should receive any required ‘live’ or ‘live-attenuated’ vaccines at least 4 weeks before you start treatment with KESIMPTA.** You should not receive ‘live’ or ‘live-attenuated’ vaccines while you are being treated with KESIMPTA and until your healthcare provider tells you that your immune system is no longer weakened.
 - **Whenever possible, you should receive any ‘non-live’ vaccines at least 2 weeks before you start treatment with KESIMPTA.**
 - Talk to your healthcare provider about vaccinations for your baby if you used KESIMPTA during your pregnancy.
- are pregnant, think that you might be pregnant, or plan to become pregnant. It is not known if KESIMPTA will harm your unborn baby. Females who can become pregnant should use birth control (contraception) during treatment with KESIMPTA and for 6 months after your last treatment. Talk with your healthcare provider about what birth control method is right for you during this time.
- are breastfeeding or plan to breastfeed. It is not known if KESIMPTA passes into your breast milk. Talk to your healthcare provider about the best way to feed your baby if you take KESIMPTA.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist when you get a new medicine.

How should I use KESIMPTA?

See the detailed Instructions for Use that comes with KESIMPTA for information about how to prepare and inject a dose of KESIMPTA and how to properly throw away (dispose of) used KESIMPTA Sensoready® pens or prefilled syringes.

- Use KESIMPTA exactly as your healthcare provider tells you to use it.
- KESIMPTA is given as an injection under your skin (subcutaneous injection), in your thigh or stomach-area (abdomen) by you or a caregiver. A caregiver may also give you an injection of KESIMPTA in your upper outer arm.
- Your healthcare provider will show you how to prepare and inject KESIMPTA the right way before you use it for the first time.
- **Do not** inject into areas where the skin is tender, bruised, red, scaly or hard. Avoid areas with moles, scars or stretch marks.
- The initial dosing is 20 mg of KESIMPTA given by subcutaneous injection at Weeks 0, 1, and 2. There is no injection at Week 3. Starting at Week 4 and then every month, the recommended dose is 20 mg of KESIMPTA administered by subcutaneous injection.

If you miss an injection of KESIMPTA at Week 0, 1, or 2, talk to your healthcare provider. If you miss a monthly injection, give it as soon as possible without waiting until the next scheduled dose. After that, give your KESIMPTA injections a month apart.

What are the possible side effects of KESIMPTA?

KESIMPTA may cause serious side effects, including:

See **“What is the most important information I should know about KESIMPTA?”**

- **Injection-related reactions.** Injection-related reactions is a common side effect of KESIMPTA. Injecting KESIMPTA can cause injection-related reactions that can happen within 24 hours (1 day) following the first injections and with later injections. Talk with your healthcare provider if you have any of these signs and symptoms:
 - **at or near the injection site:** redness of the skin, swelling, itching and pain or
 - **that may happen when certain substances are released in your body:** fever, headache, pain in the muscles, chills, and tiredness.
- **Low immunoglobulins.** KESIMPTA may cause a decrease in some types of antibodies. Your healthcare provider will do blood tests to check your blood immunoglobulin levels.

The most common side effects of KESIMPTA include:

- upper respiratory tract infection, with symptoms such as sore throat and runny nose, and headache. (See **“What is the most important information I should know about KESIMPTA?”**)

- headache

These are not all the possible side effects of KESIMPTA. Call your doctor for medical advice about side effects.

You may report side effects to FDA at 1-800-FDA-1088.

How should I store KESIMPTA?

- Store KESIMPTA in a refrigerator between 36°F to 46°F (2°C to 8°C).
- Keep KESIMPTA in the original carton until ready for use to protect from light.
- If needed, KESIMPTA may be stored for up to 7 days at room temperature, up to 86°F (30°C).
- Write the date taken out of the refrigerator in the space provided on the carton.
- If stored below 86°F (30°C), unused KESIMPTA may be returned to the refrigerator and must be used within the next 7 days. If this KESIMPTA is not used within those 7 days, then discard the medicine.

- Do not freeze KESIMPTA.
- Do not shake KESIMPTA.

Keep KESIMPTA and all medicines out of the reach of children.

General information about the safe and effective use of KESIMPTA.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use KESIMPTA for a condition for which it was not prescribed. Do not give KESIMPTA to other people, even if they have the same symptoms that you have. It may harm them.

You can ask your pharmacist or healthcare provider for information about KESIMPTA that is written for health professionals.

What are the ingredients in KESIMPTA?

Active ingredient: ofatumumab

Inactive ingredients: Sensoready pen and prefilled syringe: arginine, disodium edetate, polysorbate 80, sodium acetate trihydrate, sodium chloride, and Water for Injection. Hydrochloric acid may be added.

“With your health,
your voice needs
to be the loudest
in the room.”

 **Kesimpta**[®]
(ofatumumab) 20 mg
injection

Living with relapsing MS has taught me that **you have to speak up about what you need.** That's why I've helped create a guide based on my experiences that can help you do just that.

MS, multiple sclerosis.

Jamie-Lynn S. has taken KESIMPTA and has been compensated for her time.

— **JAMIE-LYNN SIGLER**
MOM, ACTOR, MS ADVOCATE, TAKING KESIMPTA[®]

SCAN TO GET THE 3-STEP GUIDE TO VOICING YOUR NEEDS.

or visit [Kesimpta.com/ReframingMS](https://www.Kesimpta.com/ReframingMS)



Indication

What is KESIMPTA (ofatumumab) injection?

KESIMPTA is a prescription medicine used to treat adults with relapsing forms of multiple sclerosis (MS) including clinically isolated syndrome (CIS), relapsing-remitting disease, and active secondary progressive disease.

It is not known if KESIMPTA is safe or effective in children.

Important Safety Information

Who should not take KESIMPTA?

Do NOT take KESIMPTA if you have active hepatitis B virus (HBV) infection.

What is the most important information I should know about KESIMPTA?

KESIMPTA can cause serious side effects such as:

- **Infections.** Serious infections can happen during treatment with KESIMPTA. If you have an active infection, your healthcare provider (HCP) should delay your treatment with KESIMPTA until your infection is gone. KESIMPTA taken before or after other medicines that weaken the immune system may increase your risk of getting infections. Tell your HCP right away if you have any infections or get any symptoms including painful and frequent urination, nasal congestion, runny nose, sore throat, fever, chills, cough, or body aches.
- **HBV reactivation.** If you have ever had HBV infection, it may become active again during or after treatment

with KESIMPTA (reactivation). If this happens, it may cause serious liver problems including liver failure or death. Before starting KESIMPTA, your HCP will do a blood test to check for HBV. They will also continue to monitor you during and after treatment with KESIMPTA for HBV. Tell your HCP right away if you get worsening tiredness or yellowing of your skin or the white part of your eyes.

- **Progressive Multifocal Leukoencephalopathy (PML).** PML may happen with KESIMPTA. PML is a rare, serious brain infection caused by a virus that may get worse over days or weeks. PML can result in death or severe disability. Tell your HCP right away if you have any new or worsening neurologic signs or symptoms. These may include weakness on one side of your body, loss of coordination in arms and legs, vision problems, changes in thinking and memory, which may lead to confusion and personality changes.
- **Weakened immune system.** KESIMPTA taken before or after other medicines that weaken the immune system could increase your risk of getting infections.

Before you take KESIMPTA, tell your HCP about all your medical conditions, including if you:

- Have or think you have an infection including HBV or PML.
- Have ever taken, currently take, or plan to take medicines that affect your immune system. These medicines

could increase your risk of getting an infection.

- Have had a recent vaccination or are scheduled to receive any vaccinations.
 - You should receive any required 'live' or 'live-attenuated' vaccines at least 4 weeks before you start treatment with KESIMPTA. You should not receive 'live' or 'live-attenuated' vaccines while you are being treated with KESIMPTA and until your HCP tells you that your immune system is no longer weakened.
 - Whenever possible, you should receive any 'non-live' vaccines at least 2 weeks before you start treatment with KESIMPTA.
 - Talk to your HCP about vaccinations for your baby if you used KESIMPTA during your pregnancy.
- Are pregnant, think that you might be pregnant, or plan to become pregnant. It is not known if KESIMPTA will harm your unborn baby. Females who can become pregnant should use birth control (contraception) during treatment with KESIMPTA and for 6 months after your last treatment. Talk with your HCP about what birth control method is right for you during this time.
- Are breastfeeding or plan to breastfeed. It is not known if KESIMPTA passes into your breast milk. Talk to your HCP about the best

Please see additional Important Safety Information on back cover and accompanying Consumer Brief Summary on the following page.