

September 2022 Newsletter



Lyme Disease – A Ticking Time Bomb

An accurate MS diagnosis can be challenging because the disease “looks” different in everyone and its symptoms often mimic other conditions. Lyme disease is a tick-borne illness that has many symptoms in common with MS. In fact, a [recent study](#) shows individuals with Lyme disease are often misdiagnosed with MS. Distinguishing between the two conditions is very important because Lyme disease, especially when treated early, often responds to antibiotic therapy, whereas MS does not.



According to the Centers for Disease Control (CDC), there are at least [30,000 reported cases](#) of Lyme disease in the United States each year. Given the overlap between Lyme and MS, one may wonder how often do they occur together? Research into this has returned conflicting results. [Investigators](#) in Poland found that Lyme disease is often associated with MS. On the other hand, a [1989 study](#) found that Lyme disease in MS is rare. More recently, a [2020 study](#) supported this conclusion. Investigators looked at a cohort of 90 people with MS, none of which tested positive for Lyme.

Lyme disease is caused by the spirochete (spiral-shaped) bacterium [Borrelia burgdorferi](#). It was first recognized in 1975 when large numbers of children were mistakenly diagnosed

with juvenile rheumatoid arthritis in Lyme, Connecticut, and two neighboring towns. Researchers determined bites from infected deer ticks were responsible for the outbreak. Ticks live in wooded areas, or where there are tall grasses, and typically feed during the summer months. They acquire the bacteria by feeding on an infected host animal. The infection can be transmitted to a human if an infected tick bites and remains attached to their skin for more than 36 hours. Most people are infected by immature ticks called nymphs, which are tiny and difficult to see. For this reason, many people are not aware they've been bitten.



Untreated Lyme disease progresses through three stages as the condition worsens. Symptoms of **early localized Lyme disease** (the first stage) can develop within hours of a tick bite, but they can also take weeks to appear. **Early disseminated Lyme disease** occurs several weeks or months after the infection begins, when bacteria are beginning to spread throughout the body. If Lyme disease isn't promptly or effectively treated in the first two stages, **late disseminated Lyme disease** (also known as neurological Lyme disease) occurs. This can be weeks, months or even years after the tick bite, when the infection has spread throughout the body, affecting multiple organs and body systems.

Lyme Disease symptoms:

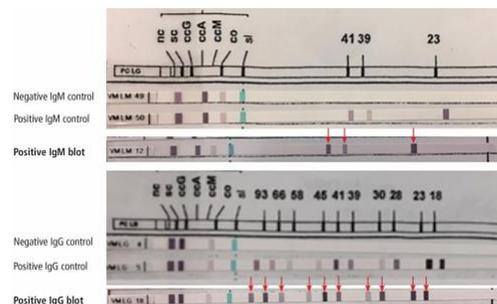
Early Localized Lyme Disease	Early Disseminated Lyme Disease	Late Disseminated Lyme Disease
<ul style="list-style-type: none"> • Skin rash • Fever • Chills • Fatigue • Headache • Stiff neck • Muscle soreness • Joint pain • Swollen lymph nodes • Sore throat 	<ul style="list-style-type: none"> • Symptoms of early localized Lyme disease PLUS: • Blurred vision • Arm/leg pain, weakness or numbness • Heart palpitations • Chest pain • Bell's palsy (facial paralysis) 	<ul style="list-style-type: none"> • Symptoms of early disseminated Lyme disease PLUS: • Arthritis • Vertigo, dizziness • Insomnia • Concentration issues • Difficulty with information processing

The symptoms of Lyme disease and MS are not only alike, they follow a similar pattern (Lyme symptoms come and go, much like relapsing-remitting MS). In addition, Lyme disease occasionally produces abnormalities on [magnetic resonance imaging](#) (MRI) scans of the brain and analysis of [cerebrospinal fluid](#) (CSF) that look like MS. The main difference



is that Lyme disease causes a characteristic rash known as **erythema migrans**. In most cases, this develops soon after the initial tick bite and has a clearly defined bull's-eye or target shape with one central red spot encircled by expanding rings. Some people may develop a rash that does not have clearly defined rings, while others have no rash at all. MS tends to be more common among people who live in colder climates. Lyme disease, on the other hand, tends to be concentrated in the Northeast and Great Lakes regions of the United States (where tick populations are high).

When diagnosing Lyme disease, healthcare providers consider a person's symptoms and the likelihood that they were exposed to an infected deer tick. Blood tests are also key in determining if *Borrelia burgdorferi* bacteria are present. The CDC currently recommends a two-step testing process for Lyme, both of which can be done from the same blood sample. The [enzyme-linked immunosorbent assay](#) (ELISA) is a screening test that measures the levels of antibodies against Lyme bacteria. If the ELISA test is negative, no further testing is recommended. If the ELISA is positive or unclear, a [Western blot](#) is recommended to confirm the disease. It not only tests for antibodies, but also reports reactivity against a panel of 10 different proteins found on the Lyme bacteria. CDC guidelines state that 5 of the protein bands must be reactive for an overall positive test result. [Polymerase chain reaction](#) (PCR) is sometimes used to confirm a Lyme infection. This assay detects the [DNA](#) of Lyme bacteria.



According to the [International Lyme and Associated Diseases Society](#) (ILADS), the ELISA and Western blot assays aren't always reliable. Both are indirect tests, measuring the antibody response to a Lyme infection, not the infection itself. It takes time for the body to generate enough antibodies to be detected by these tests. As a result, false negatives are common early in the course of the disease and retesting is often necessary. It's also

important to note that Lyme blood tests cannot be used to determine if the infection has resolved because antibodies persist in the blood for months or even years after the infection is gone.



The antibiotics used to treat Lyme disease are [doxycycline](#) and [amoxicillin](#). They are usually taken orally in the early stages of Lyme. If treatment is later in the disease course, intravenous administration may be necessary. Antibiotic therapy is completely effective at resolving a *Borrelia burgdorferi* infection in the majority of cases. However, some people may go on to develop chronic symptoms after treatment. This is known as **post-treatment Lyme disease syndrome** (PTLDS) or chronic Lyme disease. [Research](#) shows that prolonged antibiotic therapy is not helpful and even carries significant risk for individuals with PTLDS.

Tick prevention is the best way to prevent Lyme disease. It's important to avoid tick-infested areas while outside (high grass, brush or wooded areas). Using insect repellents and treating clothing and gear with [permethrin](#) is also helpful. When hiking, it's a good idea to wear closed shoes or boots, long-sleeved shirts and long pants. Tucking pant legs into socks or shoes helps to prevent ticks from crawling up the legs. Wearing light-colored clothing makes ticks more visible. It's important to do a full body check and shower upon returning indoors. If any attached ticks are found, carefully remove them right away and keep an eye on the site of attachment for any rash that may develop. Tick prevention for pets is equally important, not just for their sake, but also for their owner's (they can serve as tick "carriers").

MS and Lyme disease are conditions that have overlapping symptoms. They may also look similar on brain scans and other diagnostic tests. Nevertheless, making the distinction is very important. They stem from very different causes, and their prognosis and treatment are nothing alike. Anyone experiencing Lyme symptoms should seek medical advice right away. Early diagnosis and treatment are key to achieving the best outcomes.

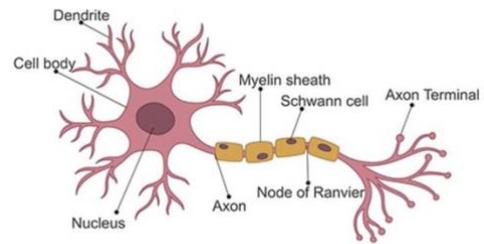


P.S. To learn more about the complexities of distinguishing between Lyme disease and MS, visit [Sit Down Before Reading: An Epic Medical Memoir](#), by Dave Bexfield.

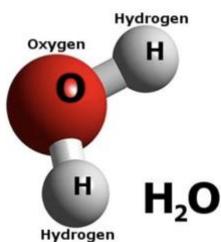
MRI Basics

Magnetic resonance imaging (MRI) is a noninvasive scan that uses strong magnetic fields, radio waves and computers to create detailed images of the brain, spinal cord or other parts of the body. It is the preferred imaging method to help diagnose MS, and to monitor disease activity and the effectiveness of treatment.

The central nervous system mainly consists of [neurons](#), which are specialized cells that send and receive signals from the brain via electrical and chemical signals. All neurons have three essential parts – the [cell body](#), [axon](#) and [dendrite](#). Most axons are insulated with a sleeve of fatty tissue called [myelin](#), which helps with the conduction of signals. The myelinated axons are bundled into tracts deep in the [white matter](#) of the brain (named for its relatively light appearance resulting from the lipid content of myelin). In MS, the immune system attacks the myelin coating surrounding nerves and the resulting damage is seen on MRI as lesions in the white matter.



Information processing occurs in the [gray matter](#), which is the darker tissue on the surface of the brain that consists mainly of nerve cell bodies, dendrites and bare (unmyelinated) axons. According to a [recent study](#), brain atrophy (the gradual loss in brain volume over time) occurs faster in people with MS than healthy adults. Brain volume is typically measured using MRI images of the gray matter.



Unlike an X-ray or a computed tomography (CT) scan, MRI does not rely on radiation. It is based on the fact that the body is made up of about 60% water and this water is magnetic. The MRI scanner is essentially a large, strong magnet. Water is made up of hydrogen and oxygen, and the hydrogen atoms are sensitive to magnetic fields. When a person lies inside of an MRI scanner, all of their water atoms align with its magnetic field (like a compass needle aligning to the magnetic field of the Earth). Once aligned, a radio wave is used to disturb the atoms. When the radio wave is turned off, the atoms return to the alignment. While going back they emit a signal which is transmitted to a computer, analyzed and converted into an image. Because the myelin sheath surrounding nerves is fatty, it repels water. In the areas where the myelin has been damaged by MS, the fat is stripped away. With the fat gone,

the area holds more water, and shows up on an MRI scan as either a bright white spot or a darkened area depending on the type of scan that is used.

There are several different types of MRI scans. Sometimes [gadolinium](#), a contrast agent, is given intravenously prior to the scan. Because gadolinium is a large molecule, it normally cannot pass through the [blood-brain barrier](#). However, when there is active inflammation, the blood brain barrier is disrupted and gadolinium can enter and highlight inflamed areas.

Common MRI scans used in MS:

T-1 weighted without gadolinium

- Shows dark areas (hypointensities) that are thought to indicate areas of permanent brain damage.

T-1 weighted with gadolinium

- Shows bright areas (enhancing lesions) that indicate areas of active inflammation.

T-2 weighted

- Shows the total number of lesions, both old and new.

FLAIR (Fluid Attenuated Inversion Recovery)

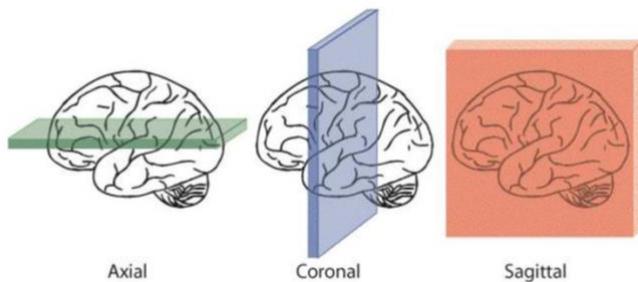
- Shows MS activity by reducing interference from the spinal fluid.

Most MRI scans take 30 to 60 minutes, depending on the area being scanned and the number of images taken. MRI requires a person to lie flat on a bed (which is moved inside the scanner) and keep as still as possible for the duration of the scan. Although the procedure is painless, the machine itself can be very noisy. Most imaging centers provide foam ear plugs as hearing protection. An intravenous line (IV) may be inserted if contrast dye is being used.



* The terms T-1 and T-2 refer to the time between the magnetic pulses and when the image is taken.

MRI can show the brain and spinal cord in many different orientations. Typically, the brain is “sliced” into sections in one of three possible ways. **Axial slices** are horizontal slices taken from top to bottom or from bottom to top. **Coronal slices** are face-forward slices taken from front to back or from back to front. **Sagittal slices** are side-view slices taken from left to right or from right to left. Using these different orientations allows MS lesions to be seen from different points of view, giving a better sense of where the lesions are related to other brain or spinal cord structures. Sequential images allow one to literally scroll through the brain. For the best visualization, it’s important to minimize the



gap between images. MRI “slices” can also have a certain thickness. Minimizing this thickness is optimal as less tissue in each slice results in less blur of tissues when they are lying over each other.

Just like with any picture, resolution is an important aspect of MRI. The strength of the magnet used in the MRI machine is important in this regard. Generally, the more powerful the magnet, the better the resolution of the image produced by the MRI scan. The strength of MRI magnets is measured by a unit called Tesla (T). One Tesla is equal to approximately 20,000 times the strength of the Earth’s magnetic field at its surface. Most MRI scanners used in clinics have magnets of 1.5 or 3T. MRI machines used for research purposes have a much higher magnet strength.



In 2021, experts from [Magnetic Resonance Imaging in MS](#), the [Consortium of MS Centers](#) and [North American Imaging in MS Cooperative](#) met to update [guidelines](#) on how and when to use MRI for MS diagnosis and treatment monitoring. These recommendations contain standardized MRI protocols that define the optimal magnet strength, slice thickness, image resolution and coverage. According to these guidelines, MRI scanning is recommended when starting or changing treatment and, again, 3 to 6 months after treatment has begun. MRI should be done annually after the first few years of treatment, with longer intervals for clinically stable individuals. Where possible, follow-up scans should be obtained on the same scanner, so that it’s easier to make comparisons from one scan to the next. Gadolinium is recommended for a person’s first MRI, when starting or

changing treatments, and for monitoring disease activity if the presence of an enhancing lesion would change management. The administration of contrast agents should be done at least 5 minutes, and ideally 10 minutes, before the scan. Spinal cord imaging is recommended in some cases (for example, people with few brain lesions or worsening symptoms that aren't explained by brain MRI) to detect active spinal cord lesions and to exclude other health conditions involving the spine. The guidelines also state that MRI should also be used for drug safety monitoring (for example, before using medications that have a high risk for [progressive multifocal leukoencephalopathy](#), or PML).

MRI is generally considered a very safe procedure.

Scanning may be more difficult for obese individuals, or those that cannot lie on their back for extended periods of time. Some people may feel claustrophobic during their scan. [Anti-anxiety medications](#) are often helpful, if this is a



problem. There are no known risks associated with exposure to strong magnetic fields, however they can affect metal that is in or on the body. Therefore, it's important to remove any worn metal (jewelry, eyeglasses, etc.) before a scan. Secured lockers are available at most facilities to store personal possessions. People with certain [metal implants](#) should not undergo an MRI scan. Although the use of gadolinium-based contrast agents (GBCAs) is generally considered safe, they do involve some risk. In rare cases, specifically in those with impaired kidney or liver function, GBCAs can increase the risk of [nephrogenic systemic fibrosis](#), a serious condition marked by fibrosis (scarring) throughout the body. [Recent research](#) shows that GBCAs can be retained in deposits in the brain and other body tissues. These deposits have not been linked to any overt health problems, but more research is needed to better understand their clinical relevance. In 2017, the Food and Drug Administration issued a [communication](#) on the use of GBCAs and made recommendations for the types of gadolinium that are less likely to be retained in the body.



It's important to note that while MRI is gold standard for identifying and monitoring neurodegenerative changes in the brain and spinal cord, it isn't foolproof in the diagnosis and management of MS. A small percentage of people with the disease don't have abnormalities on MRI. Therefore, a normal scan doesn't completely rule out MS. In addition,

these scans don't always explain a person's symptoms. Lesions may be in locations that don't produce symptoms. Some areas of damage that are causing symptoms may be too small to see on the scan. It's also possible for the brain to develop a [work around](#) to compensate for nerve damage, which makes the task of correlating what is seen on an MRI scan and clinical signs even more difficult. It's important to note that not all people with brain lesions have MS. Small areas that resemble MS are often seen on MRI in healthy people over the age of 50, but are actually related to the aging process. Also, people with other health conditions, such as stroke and migraine, may have abnormal areas on the MRI that resemble MS lesions.

MRI is an important clinical tool for [diagnosing](#) and monitoring MS. It is also invaluable to MS researchers. Are you interested in learning more? Listen to [Episode 6](#) of our Chat with Chat webinar, entitled "Brain Scans in MS: relevance and patient experiences," now with closed captioning! Stay tuned as our series on diagnostic tools in MS continues next month with an article on lumbar puncture!



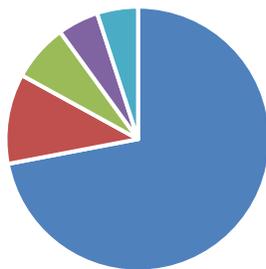
September 2022 iConquerMS Spotlight

Caregiver Survey

MS caregivers are currently eligible to join iConquerMS. In an effort to better support their unique research needs and interests, we launched two surveys in April 2022, one for caregivers, and a second for researchers and healthcare providers. The viewpoint and experience of 116 respondents are summarized below.

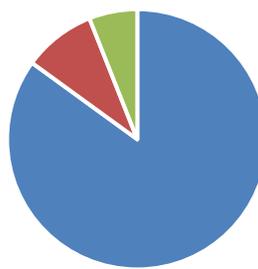
Characteristics of Caregiver Respondents

Caregiver relationships



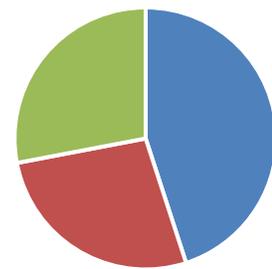
- Partner or spouse
- Parent or guardian
- Child
- Sibling
- Other

Caregiver Distance



- Lived with loved one
- Local
- Long distance

Caregiving Duration



- More than 10 years
- 5 to 10 years
- 5 years or less

1. The Caregiver Experience

When asked to describe their experiences as an MS caregiver in their own words, respondents presented a wide range of experiences and expressed emotions ranging from frustration and exhaustion to love and gratitude.

When asked to describe the physical, emotional, and/or cognitive MS symptoms that interfered with daily life for their loved one:

- 12% reported mild symptoms.
- 51% reported moderate symptoms
- 32% reported severe symptoms

2. iConquerMS

Nearly 70% of **caregivers** indicated an interest in signing up for iConquerMS. Respondents liked the idea of participating by answering surveys twice a year, engaging with other caregivers, taking part in research, and following the results of MS research.

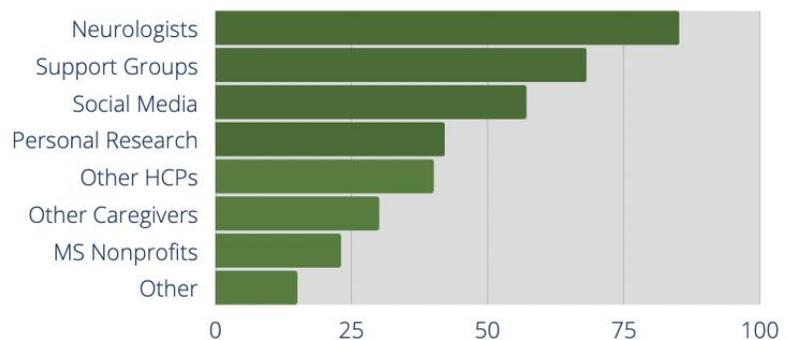


Three-quarters of **caregivers** believe their loved ones would support their participation in iConquerMS to assist with research focused on caregiver health & well-being and to contribute to observer-focused research of MS patients.

In order to successfully engage MS caregivers in the initiative, iConquerMS will need to consider **caregiver** concerns about time constraints and the desire to be fairly compensated while performing a service of value.

3. Information Sources

The most common sources of information about MS for **caregivers** were:



4. Most Common Questions About MS

For loved ones, **caregivers** wanted to know:

- What does MS progression look like?
- Which wellness approaches are helpful?
- What is the right treatment for my loved one?
- How can we manage symptoms and cognitive changes?
- How can I improve my loved one's quality of life?



For themselves, **caregivers** wanted to know:

- How will caregiving impact my physical and mental health?
- Will caregiving affect my employment or cause financial concerns?
- How can my loved one and I manage our relationship?
- How do I parent a child with MS?
- How and where can I access caregiver resources?

5. Participation in Research

Nearly 75% of **caregivers** had not participated in past research focused on their health and well-being or insights as an observer of a person living with MS.

Of the 25% respondents who had taken part, half aided in caregiver-focused research and the rest assisted with observer-focused research.



68% of respondents indicated an interest to participate in caregiver-related research. 56% were interested in observer-focused research.

6. The Positives of Participating in Research for Caregivers

- Helping other families impacted by MS
- Having access to different medications, treatments, or interventions



7. Motivation

Respondents were motivated by the following:

- The idea of helping others
- Gaining access to information that may benefit themselves or their loved ones
- Sharing their experiences.



8. Healthcare Providers & Researchers

Healthcare Providers and Researchers felt the following caregiver topics were important for their work:

- Managing distress, sense of purpose, and life satisfaction
- Access to mental health treatment
- Care coordination to support caregiver respite
- Preparedness for researching MS medications and interventions to alleviate MS symptoms.

In their experience, **Healthcare Providers and Researchers** felt caregivers needed the following resources:

- Ways to address caregiver burnout
- Effective strategies and interventions for supporting partner and communication
- Solutions for handling the needs of the MS patient
- Guidelines related to appointments with loved ones and finding balance in knowing when to speak up and when to step away
- Local community support
- Resources for caregivers with low socioeconomic status or low health literacy.



September 2022 Research Spotlight

RESEARCH OPPORTUNITIES

Research opportunity information may be provided on behalf of an external organization. Please refer to the contact information within each listing to identify the contact for questions or comments.



Help us understand the benefits of a home-based exercise program for African Americans with MS!

Research opportunity, University of Illinois – Chicago. This study involves the remote delivery of a 16-week exercise training program for rural-residing African-Americans with Multiple Sclerosis (MS).

Benefits of participating

- Learn about methods of improving your health and wellness
- Contribute to ongoing research on African Americans with MS

Eligibility

- MS diagnosis
- Self-identify as African American or Black
- Living in the Southeastern United States
- 18 to 64 years of age
- Internet and email access

For more information:

Contact Edson Flores

(833) 727-1887 enrl@uic.edu



Help Us Make Strides in MS Research!

Who Are We?

MedRhythms is a digital therapeutics company that uses music to improve walking.

How Can You Help?

We are developing a device for individuals with multiple sclerosis to improve mobility. **We are seeking volunteers with MS** to walk with the product and provide feedback.

Interested?

Please email AppliedResearch@medrhythms.com or call (207) 370-2812 to learn more!

Not interested in participating in research right now but want to learn more about **MedRhythms**? Keep grooving with **MedRhythms** by signing up to receive

our [newsletter](#) to stay up-to-date on new developments and opportunities to get involved!



**The University of North Texas Department of Kinesiology,
Health Promotion, and Recreation is conducting a Research
Study on Physical Activity Among Hispanic Persons with
Multiple Sclerosis**

The research will take place online.

You may be eligible if:

- You are over the age of 18
- You have been diagnosed with multiple sclerosis
- You identify as Hispanic/Latino
- You speak English or Spanish as a primary language

You may qualify to participate in a research study examining physical activity thoughts and behavior in Hispanic adults with multiple sclerosis.

Participation in the study includes one online survey that will be completed in 20-30 minutes. Participation is voluntary. You will receive compensation after completing the survey if you provide an e-mail address.

**Please use the link below to complete the survey and contact the Principal Investigator with any questions using the study title “Theoretical Correlates of Exercise Behavior Among Hispanics with MS”
Stephanie L. Silveira Stephanie.silveira@unt.edu**

Survey Link: https://unt.az1.qualtrics.com/jfe/form/SV_1SogD4QwBBuvEc6



You are invited to participate in a research study comparing the effects of three diets!

You are invited to participate in a [research study](#) comparing the effects of three diets – the modified Paleolithic diet (elimination of gluten, dairy, and eggs), a Time Restricted Olive Oil-based Ketogenic diet or your usual diet with information about the USDA Dietary Guidelines for Americans. Participants in the usual diet group will be encouraged but not required to follow the Dietary Guidelines for Americans diet. Quality of life, fatigue, mood, and disease activity will be assessed by online surveys, study participant tasks, & brain imaging. The study will be held at the University of Iowa Hospitals & Clinics over two years. It will consist of three visits to Iowa City, month 0, month 3, & month 24. Each visit can last approximately three and up to six hours.

What you will be asked to do at home while on your assigned study diet

- Follow one of the three study diets randomly assigned to you for 24 months
- Report changes in health and medications
- Eat more non-starchy vegetables
- Eat more home-cooked meals
- Take recommended dietary supplements
- Complete daily food logs (three questions) on a smart phone
- If you are assigned to the ketogenic diet, you must take a blood ketone measurement daily for the first month and then twice a week for the rest of the study
- Complete online surveys

- Watch videos, review study diet guides and meet via Zoom to learn your assigned study diet
- Attend optional online support groups

What you will be asked to do at each of three visits to UIHC

- Complete fasting blood draws
- Complete physical motor skills, cognitive assessment and visual function tasks
- Receive a non-contrast MRI brain scan at first and final end of study UIHC visit (Month 0 and 24)

Requirements to participate

- Diagnosis of relapsing remitting multiple sclerosis (RRMS)
- 18-70 years old
- Able to walk 25 feet without support or unilateral support
- Willingness to adopt any of the three study diets, including the control diet
- Willingness to share medical records for the two years of the study
- Do not have heart disease, liver disease, kidney disease, or type 1 diabetes
- Do not have serious psychiatric disease that would make adopting a study diet more difficult
- Are not taking insulin or coumadin
- Have a smart phone, tablet or iPad to download a free app
- Have access to high-speed internet and a computer or smart phone to participate in video conferences via Zoom and complete online patient surveys
- Commitment to completing surveys for two years and attending the end of study visit

COMMON QUESTIONS

Do I need to live within a specific mile radius of Iowa City?

No, however, if travel funds are needed, we may be able to help. We can offer a travel stipend to support some travel expenses to and from Iowa City. Please speak

with us about your needs. We also offer stipends to participants for attending the site visits and for completing the required online surveys.

Can I pick the diet I want to follow?

We ask that you follow the diet assigned to you. If following your assigned diet becomes difficult contact the study team for assistance.

Can I be in the study if I am in another MS-related study?

If you are in an interventional study investigating drugs, exercise, or other wellness behaviors you cannot be in this study. If you are in an observation-only study, you can still be in this study if you are willing to follow any of the three diets.

If you're interested in taking our screening survey, please visit the link below or scan the QR code with your phone:

⇒ <https://redcap.icts.uiowa.edu/redcap/surveys/?s=JX73EYRJNPF9MHRR>



If you have questions, please contact us at

⇒ MSDietStudy@healthcare.uiowa.edu



Multiple Sclerosis Online Course study **We're Open Again!**

JOIN TODAY to receive a **FREE** 6-week online course in October:
<https://www.msonlinecourse.com.au>

Module 1 – Introduction to MS

Module 2 – Diet & MS

Module 3 – Sunlight & vitamin D

Module 4 – Exercise & MS

Module 5 – Stress management

Module 6 – Medication & family prevention

Module 7 – Change your life, for life

The course is open to people with MS worldwide, providing you the opportunity to connect with other MSers and play an important role in research to improve how we understand and manage this disease.

Contact Associate Professor Sandra Neate for questions or concerns:
neu-research@unimelb.edu.au



**Your health data
has power!**

A new topic for the Our Questions Have Power program!

When it comes to MS symptoms and how to manage them, what questions are most important to you? What symptom-related topics do you wish researchers were studying? **Your questions are valuable** and we invite you to share them through the **Our Questions Have Power** program on the [iConquerMS](#) website.

[The Our Questions Have Power program](#) was launched in March 2021 with an initial focus on COVID-19. Questions submitted by iConquerMS members have helped shape the [COVER-MS vaccination study](#) and are being shared with the research community to guide other efforts.

We're now extending Our Questions Have Power to include a second topic: **MS symptoms and their management and treatment**. As before, you're invited to share questions on this topic that you think should be studied and to vote on questions submitted by other iConquerMS members. We'll share these questions with people affected by MS, researchers, healthcare professionals, advocates, and funders – and, together, we'll work to launch research studies to answer those questions.

It's easy to share your ideas and input in Our Questions Have Power!

Log in to iConquerMS to start (create an account first if you don't already have one).

Click **PROPOSE an MS Research Question** to submit a question you'd like to see studied.

Click **VOTE and COMMENT on MS Research Questions** to review, comment, and vote on questions submitted by other iConquerMS members.