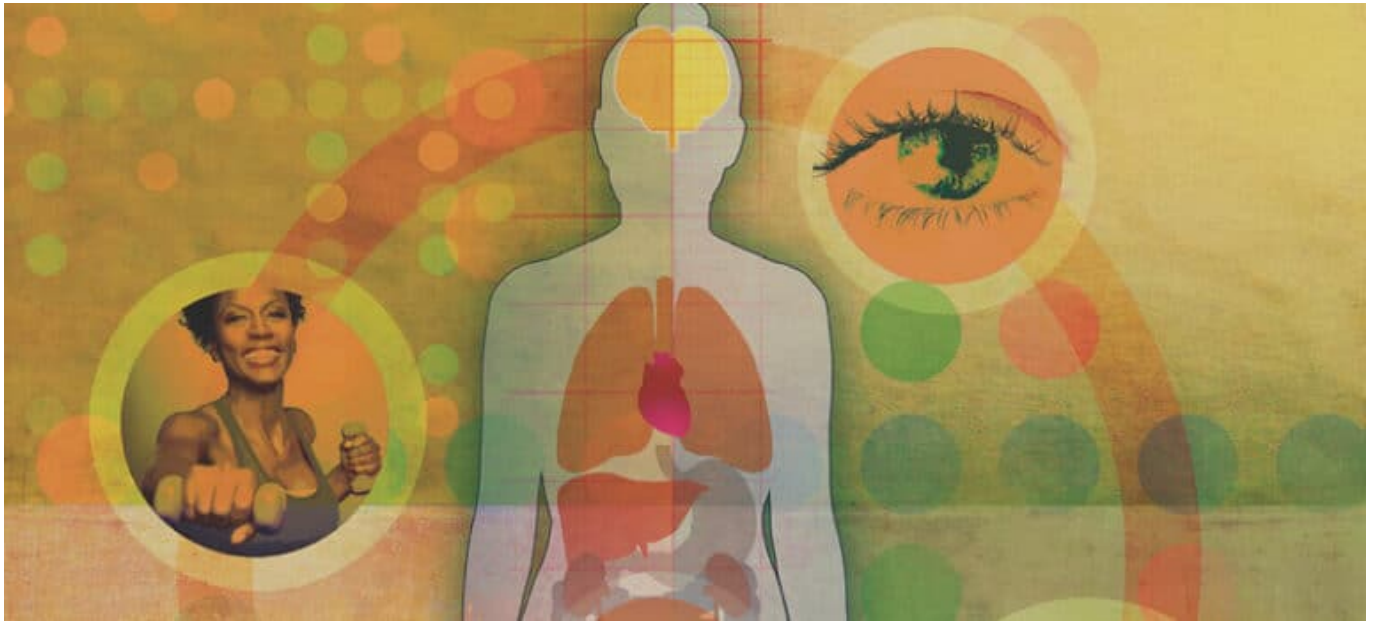


When MS isn't your only disease



Other chronic health conditions may be common — and connected.

by Vicky Uhland

For much of her life, Lorrie Bortner has dealt with an irritable bowel and lactose intolerance. About a decade ago, her cholesterol levels began to spike. And last year, she had surgery for endometrial cancer.

In 2016, at age 62, Bortner was diagnosed with primary progressive multiple sclerosis. She experienced symptoms for at least five years before her diagnosis, and her husband thinks she may have had the disease for many years before that.

Bortner says her doctors have looked at each of her health conditions as separate incidences with different causes. But over the years, she's wondered if her various health issues are somehow related. Could her MS be a factor in her other diseases, and vice versa?

Increasingly, researchers are discovering this may very well be the case. In the past decade, there have been dozens of studies on the association between MS and coexisting health conditions, known as comorbidities. And the results have been eye-opening.

“Our research has found that more than 50% of people with MS have another chronic health condition over their lifetime,” says Ruth Ann Marrie, MD, PhD, professor of medicine and community health sciences at the University of Manitoba, Canada, and director of the Multiple Sclerosis Clinic at the Health Sciences Centre in Winnipeg.

In Bortner’s case, high cholesterol and irritable bowel are common MS comorbidities — and may have even delayed her MS diagnosis. As with many factors associated with MS, researchers aren’t sure why Bortner and others living with MS can also have seemingly unrelated health conditions. But studies have revealed some causes and consequences of these dual diagnoses.



If someone has fatigue, MS, diabetes and depression, that can affect physical and cognitive impairment.

Key characteristics of comorbidities

Age is an important factor in MS comorbidities. Your likelihood of developing another disease increases with age, Marrie says. This is particularly true if the comorbidity is vascular, such as heart disease, diabetes, high blood pressure or high cholesterol.

Like MS, vascular diseases are related to inflammation, says Tingting Zhang, MD, PhD, assistant professor at Brown University School of Public Health’s Center for Gerontology and Health Care Research. These diseases also share common risk factors with MS, such as smoking and obesity.

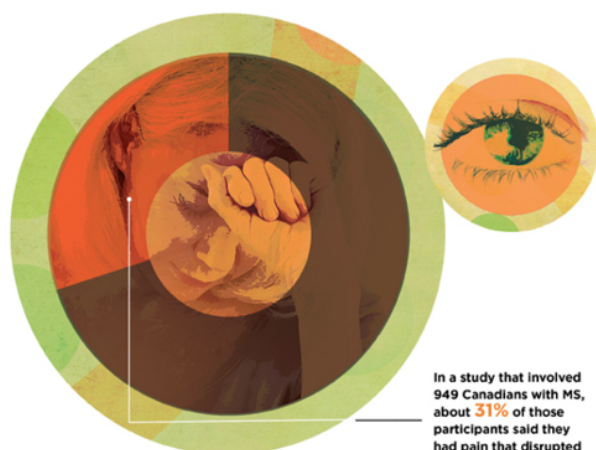
In addition, vascular diseases may have symptoms similar to MS, particularly fatigue. Healthcare providers can focus on treating those conditions and might not do tests to see if their patient also has another disease like MS. Consequently, people with cardiovascular disease are more likely to have a MS diagnosis delay, Zhang says. “And that delay can be up to 10 years.”

Other health conditions that share symptoms with MS — particularly depression and anxiety — can delay MS diagnosis as well, Zhang says. And, in a Catch-22, having a higher number of comorbidities can also increase MS symptoms.

“For instance, if someone has fatigue and MS and diabetes and depression, that can affect physical and cognitive impairment,” Marrie says. “And the more comorbidities you have, often the more fatigue and pain issues.”

One of her studies on this subject, published in 2015 in *Multiple Sclerosis and Related Disorders*, involved 949 Canadians with MS. About 31% of the study participants said they had pain that disrupted their lives.

In particular, the comorbidities of fibromyalgia, rheumatoid arthritis, irritable bowel syndrome, migraine, chronic lung disease, depression, anxiety, high blood pressure and high cholesterol were associated with disruptive pain. And people with chronic obstructive pulmonary disease, anxiety and thyroid disease reported worsening pain during the course of the two-year study.



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How comorbidities affect MS progression

Several studies show that vascular comorbidities may be associated with a quicker progression of MS-related disability. But Marrie points out that cardiovascular disease and diabetes are often age-related and can also occur at the age when someone's MS transitions from relapsing-remitting to progressive. Therefore, the disease progression/comorbidity link may very well be a complex scenario.

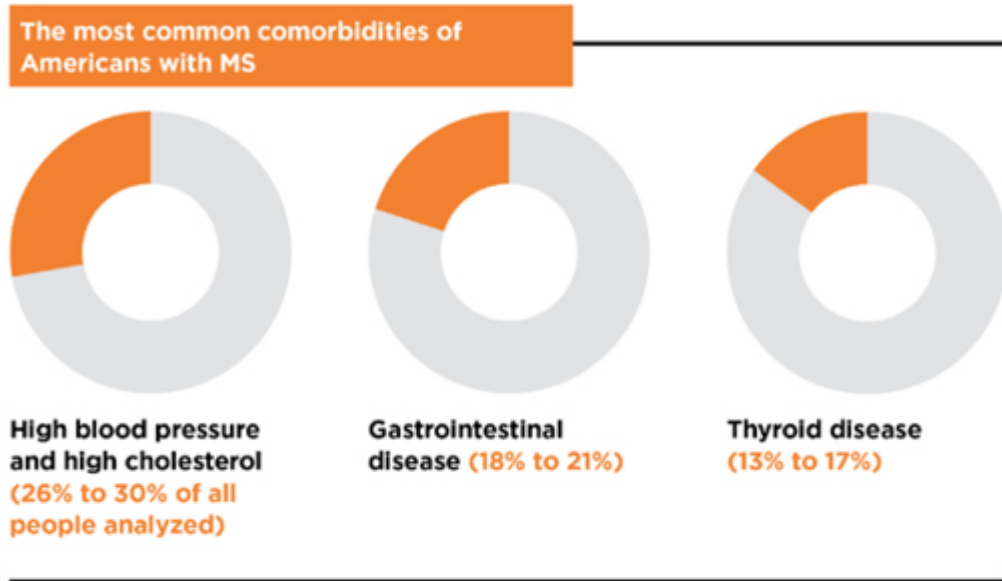
Marrie says researchers don't know yet whether other types of comorbidities contribute to MS progression, or whether controlling these health conditions can slow progression. However, one of her studies, published in 2017 in *Neurology*, showed that people with MS who were also diagnosed with migraines or high cholesterol, or who had three or more comorbidities, had more relapses over a two-year period than people with MS who did not have those comorbidities.

The type of comorbidity may also determine whether someone is initially diagnosed with the relapsing-remitting or progressive forms of MS.

In a study published in 2011 in *Acta Neurologica Scandinavica*, Marrie and her fellow researchers found that in women, gastrointestinal comorbidities and obesity were more associated with a diagnosis of relapsing-remitting MS. And the same was true for both women and men with mental comorbidities like depression and anxiety.

"The questions about why MS and comorbidities travel together are important questions we need to pursue," she says. "I don't think we can give one explanation for all comorbidities."

Research reveals some comorbidities have shared genetic factors, Marrie says. For instance, inflammatory bowel disease and MS have some shared genes.



Common comorbidities

A variety of studies have found that along with vascular diseases, depression and anxiety are the most common MS comorbidities.

“Some studies say up to half of people with MS may experience depression in their lifetimes, and a third of people may experience anxiety,” Marrie says. “Structural and functional changes in the brain due to MS may play a role in depression and anxiety, along with inflammation.” And, as with the general population, genetic risk and stressful events are also relevant risk factors for anxiety and depression.

Other comorbidities associated with MS include:

- Autoimmune diseases like psoriasis
- Gastrointestinal issues like inflammatory bowel disease and irritable bowel syndrome
- Chronic lung diseases like asthma
- Vision issues like cataracts, glaucoma and uveitis (eye inflammation)
- Some cancers, like bladder cancer and meningiomas (brain tumors)

Research also reveals the following about comorbidity prevalence:

- In a 2008 questionnaire involving nearly 9,000 people with MS, Marrie and her team found that men were more likely to have a comorbidity than women.
- A 2018 retrospective analysis of 5 million Americans found that the most common comorbidities were high blood pressure and high cholesterol (26% to 30% of all people analyzed), gastrointestinal disease (18% to 21%) and thyroid disease (13% to 17%).

- In a 2015 review of 118 studies, Marrie and her team found that along with depression and anxiety, other psychiatric comorbidities are common in people with MS. Nearly 15% abuse alcohol, 6% have bipolar disorder, 4% have psychosis and 3% abuse substances.
- A 2019 study of nearly 57 million Americans with and without MS found that asthma was a whopping three times more common in people with MS.
- The greatest prevalence of asthma in people with MS was in those younger than age 30 and those older than age 80.



Research shows that even a little bit of movement each day can be beneficial for both MS symptoms and vascular disease risk.

Diagnosing a

comorbidity

Before being diagnosed with endometrial cancer, Bortner knew something was wrong with her body and that it wasn't MS-related.

"I had some weird symptoms like bleeding, so I knew it was gynecological," she says. "But with other symptoms, sometimes I can't tell if they're due to MS or something else."

Bortner has heard about MS comorbidities, but not from her doctors. Part of that, she believes, is because she lives in Taos, New Mexico, a small town with no neurologists. Her primary care doctor helps her manage her high cholesterol, but she worries he's not educated enough about MS to also know things like what types of vaccines she should get. "After my first shot for shingles, I was paralyzed from the waist down for eight hours," she says. "I don't know if that had to do with my MS, so I didn't get the second shot."

Zhang says there's plenty of research on MS comorbidities; it is expected that the majority of neurologists should be familiar with them, even if they don't specialize in MS. But other healthcare professionals might not be as knowledgeable about these complex issues. Here's what Zhang and Marrie say you can do to help with this problem.

Coordinating your care

Zhang recommends asking your primary care doctor for cholesterol, blood glucose and other tests to detect common vascular comorbidities. And Marrie suggests giving every healthcare professional you visit a list of your health conditions and medications. Keep the list on your smartphone as well, so you always have it available.

If you have a new symptom or health concern, make sure to consult with your neurologist. “A non-MS provider may mistakenly say, ‘It’s your MS,’ while a neurologist comfortable with MS may consider other possibilities,” Marrie says.

It’s also important to note that medications for other health conditions could interfere with your MS medications, and vice versa. For instance, Marrie says, fingolimod (Gilenya) can slow your heart rate, so it isn’t advisable to take if you have certain vascular issues or are taking some medications to manage high blood pressure or heart disease.

But whatever you do, don’t take your medications into your own hands. “People with comorbidities may take many medications, so they can feel overwhelmed and choose which medications to take,” Zhang says. “Patients may need to work with their primary physicians and MS specialists together to decide the most appropriate medications they should take,” she says.

Consider asking one healthcare professional — maybe your primary care provider if you see him or her most frequently — to be a coordinator for your various health treatments and medications. And look into using a single pharmacy for all of your medications, as its prescription software will likely flag any drug interactions.

DIY comorbidity prevention

While your MS diagnosis might make you more susceptible to some other health conditions, that doesn’t mean you’re helpless. Many of the steps you can take to reduce the severity of MS symptoms can also lower your risk of developing comorbidities.

In particular, research shows the following strategies are effective:

- **Watch your weight.** A survey of nearly 2,400 people with MS, published in 2016 in PLoS One, found that 23% of the participants were overweight and 19% were obese. More than 67% reported at least one comorbidity, including back pain (36%), depression (32%), anxiety (29%) and arthritis (14%). “Being overweight, obese, or a former or current smoker was associated with an increase in the number of comorbidities; while healthy diet, physical activity ... and moderate alcohol consumption were associated with decreased number of comorbidities,” the researchers concluded.
- **Exercise.** A 2018 review of 34 studies, published in Multiple Sclerosis and Related Disorders, found that physical activity reduced the risk factors for vascular comorbidities. Unfortunately, the review didn’t note what type of physical activity and for how long. But plenty of research shows that even a little bit of movement each day

can be beneficial for both MS symptoms and vascular disease risk.

- **Incorporate wellness strategies.** A 2017 paper published in Neurotherapeutics notes that there's a "growing appreciation of the role of certain comorbidities and lifestyle factors on [MS] disease activity, disability, mortality and overall quality of life."

The authors say there's evidence that exercise; a plant-based, anti-inflammatory diet; vitamin D supplementation; smoking cessation; and cognitive behavioral therapy can improve physical and mental health in people living with MS and comorbidities.

Finally, if you're feeling overwhelmed about dealing with your MS and other health conditions, National MS Society MS Navigators can help. Call 1-800-344-4867, email ContactUSNMSS@nmss.org or go online at nationalMSSociety.org/navigator for help and support.

Vicky Uhland is a writer and editor in Lafayette, Colorado.

Learn more about [managing multiple diagnoses](#).