



Is It an MS Attack —or Not?

BY DIANE O'CONNELL

During a particularly brutal August in Florida not too long ago, Peter B. Dunne, MD, had a crisis of sorts. Six of his MS patients had gone to the beach at separate times, stretched themselves out in the sun, and then couldn't get up. Every one of them began to experience what they thought was an MS attack.

"Some of them had to be carried to their cars by their friends, others called EMS, and all were scared like hell," said Dr. Dunne, who is chair of Neurology and director of the University of South Florida's MS Clinic. But a funny thing happened. After a couple of hours, when they had had a chance to cool down, their symptoms passed—in every single case. What these people were experiencing was not a typical MS exacerbation, but a **pseudoexacerbation**.

Having an exacerbation is bad enough. But a pseudoexacerbation? That's the whopper of a term used to describe symptoms that feel exactly like an MS attack—but aren't.

Is it real?

Though the term “pseudoexacerbation” may sound as if it means “fake” or “all in your head”, that’s hardly the case. The symptoms are very real and can include muscle weakness, tingling, spasms, and more. People who have optic-nerve damage may experience blurred or dimming of vision. The difference is that a true exacerbation is an actual worsening of the disease and lasts from several days to several weeks—or longer. A pseudoexacerbation is a temporary aggravation of MS symptoms, symptoms that have

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occurred before. The episode comes and goes fairly quickly—usually within 24 hours. It is not related to new inflammation within the central nervous system.

In the overwhelming majority of people with MS, pseudoexacerbations are triggered by heat. “In fact, anything that raises body temperature can bring on one of these pseudo-attacks, whether it be a fever, the environment—such as a hot bath or sun exposure—or exercise,” Dr. Dunne, explained. “The symptoms

are transient and will go away once the body cools off.” This means that if a person has an illness or infection with recurring fevers, the pseudoexacerbation will last until the fever is resolved. Menstrual and hormonal changes can also raise body temperature. So can alcohol or drug use.

“The most important thing to recognize is that if you are having fever, chills, nausea, vomiting, diarrhea, unusual headaches, or feeling sick in ways that



represent an experience **apart** from MS at the same time your MS symptoms are suddenly increased—this should be a clue that this attack is not related to a new inflammation of the nervous system,” said Frederick E. Munschauer, MD, chair of Neurology at the Jacobs Neurological Institute at the State University of New York at Buffalo School of Medicine. “This is a typical pseudoexacerbation.”

One of the more common triggering infections is a urinary tract infection, or UTI. (Sinus infections also can be problematic.) Signs of a UTI include burning sensations on urination, increase in frequency or urgency, increase in incontinence, strong smelling urine, unusual fatigue, or an unexplained increase in spasticity. There may be spikes in fever and chills as well.

The frequency of the pseudo-exacerbation may be another tip-off that it's not a true attack, Dr. Munschauer suggested.

According to the Sonya Slifka Longitudinal Multiple Sclerosis Study, which has been following more than 1,800 people with MS since 1999, the majority of people have one to three exacerbations a year. This is consistent with other estimates in the medical literature on MS. However, Sarah Minden, MD, who is coordinating the study at Abt Associates, in Cambridge, Massachusetts, notes that a small number of respondents reported having many more exacerbations in a year.

"I think this means that what we in the medical profession are calling an exacerbation and what some of the respondents in our study are calling an exacerbation may be two different things," Dr. Minden said. "This suggests that we need to find a new way to define what these people are experiencing. We cannot dismiss what they are telling us." Documenting differences in perception and terminology among people with MS, their family members, and caregivers is one of the benefits of the Sonya Slifka study.

Why does this happen?

Dr. Munschauer explained how heat can cause the body to mimic an MS attack: "At higher temperatures—even as little as half a degree—the nervous system doesn't operate as efficiently. What's actually happening is that the body is unmasking symptoms of an old inflammation."

He likens the experience to the way music sounds on a radio that's tuned slightly off the station. "The music sounds terrible, but there's nothing wrong with the radio or with the station. They're just out of tune. When body temperature goes up, the nerves don't conduct impulses in an organized, efficient fashion. They go out of tune with the rest of the system."

So—to help determine if your symptoms are due to a pseudoexacerbation, ask yourself the following:

1. Am I very tired? (Did I stay up late or have a long trip?)
2. Did I get overheated? (Mowing the lawn, taking a hot bath, taking a long walk?)
3. Do I have an infection due to some other medical problem?

Is stress a factor?

Tonia Marshall, a 34-year-old Florida resident, has had a number of pseudoexacerbations in the past year. As an account executive for a company that does credit-card processing for banks and credit unions, Marshall is held accountable for every mistake made by every department in her company—about as stressful a job as one could imagine. She's been feeling that if she has a particularly stressful day

she will start having symptoms. "The more stress I experience at work, the more I seem to have symptoms," she reported.

There is much debate among investigators about whether stress contributes to full MS attacks or to pseudoexacerbations. "This is a very controversial area. The stress effect is difficult to demonstrate in a scientific study," said Dr. Dunne, "but many people with MS feel stress is a factor in their exacerbations." (See page 50 for a report on a new study that looked at data from a number of studies.)

Clinical physicians like Dr. Dunne

have a more pressing question. What should be done when a person is having a sudden increase in MS symptoms?

When is treatment called for?

If you experience sudden symptoms, the first thing to do is to make yourself as safe and comfortable as possible. If you've been in the heat, get to a cool place. If you've been rushing around, stop and take things easy. If your emotions are out of control, try some slow deep breathing and a cool glass of water.

"Pseudoexacerbations are nothing to be worried about, just something to be aware of," Dr. Dunne said. "They are not

Real symptoms, pseudo name

Everyone knows that pseudo means phony—except the ancient Greeks.

Greek forms the basis of much medical terminology, and in classical Greek, "pseudo" means "resemblance"; something "looks like" something else. Even so, many of our medical advisors hate the term pseudoexacerbation. There is nothing fake or phony about a sudden attack of MS symptoms. It looks like a regular attack. And—well, this is MS, isn't it—all the answers about these short-term attacks are not yet in.

When pseudo-attacks last longer than 24 hours, even experienced MS doctors have a harder time being sure what is happening. The rate of MS attacks as measured by MRI is 10 times higher than attacks of symptoms, and some MS clinicians think

that longer short-term episodes may, in fact, be MS attacks.

The Society's medical advisors say:

- Most pseudo-attacks resolve within 24 hours of cooling off and/or the end of a fever.
- There are "intermediate" exacerbations that persist longer and may or may not be heat-related.
- Except for heat exposure or fever, there aren't any clinical markers your doctor can rely on to indicate that an attack of symptoms will quickly go away on its own. But you and your doctor do know **you**. Your history helps your doctor make a judgment call.
- Attacks improve on their own in time. The question is how much time. Treatment is proven to shorten lengthy attacks.

life-threatening and they will not make your MS worse." He recommends waiting 24 hours to see if the symptoms go away. "If symptoms last more than 24 hours, then I'd say call your doctor," he advised. "But if you are uncertain, especially if you've never had this type of symptom before, you should feel comfortable about calling right away."

What will your physician do?



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Whether to treat or not is each physician's decision—one that depends on your overall health, the nature of the symptoms, how long they have persisted, and how much they are disrupting your life. Corticosteroids (the effective treatment) can contribute to osteoporosis,

upper GI tract bleeding, and possibly emotional changes, Dr. Dunne noted. Your physician may take a cautious approach.

Avoiding future pseudo-attacks

While no one can predict what will bring on a pseudoexacerbation, people can do some commonsense things to lessen the chances. Dr. Dunne believes that people who push themselves hard are more prone to these short-term pseudo-attacks. "It's one thing to vow 'I'm not going to let this MS get me down,'" he explained, "and another to march out on a hot day and mow two acres of grass!"

MS specialists recommend avoiding overexertion, mixing exercise with rest, and limiting exposure to sun and hot environments. A few people with MS are as sensitive to cold as most are to heat. For them, avoiding cold environments is important.

As for Tonia Marshall, she's considering taking a yoga class to help her deal with stress from work. She also feels that her symptoms are under better control because she now avoids hot tubs, takes showers instead of baths, and stays away from Florida beaches in the middle of the day. She has learned that while pseudoexacerbations can be disruptive, they are fleeting, do no permanent harm, and can often be avoided. ■

Diane O'Connell, a regular contributor to **InsideMS**, received a National Health Information Award for the Society booklet *When a Parent Has MS: A Teenager's Guide*.