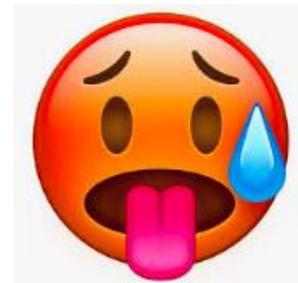


May 2022 Newsletter



Beat the Heat with MS

The vast majority ([60 - 80%](#)) of people with MS find that even a small rise in body temperature can cause their symptoms to worsen. Warming the skin often has the same effect. This can be due to many factors, including the weather, hot showers, fever, exercise, or even a heavy meal. As a matter of fact, in the 19th and 20th centuries (before modern diagnostic procedures), this experience was used to determine whether or not a person had MS. Doctors would put individuals suspected of having MS in a hot bath for a period of time and observe how they acted when they got out. If they exhibited worse neurological symptoms as a result, they were diagnosed with MS.



The correlation between heat and the worsening of MS symptoms is also known as [Uhthoff's Phenomenon](#), named after German ophthalmologist Wilhelm Uhthoff. In 1890, he first noticed that people suffering with optic neuritis would get worse when they exercised. It was later determined that exercise was not the cause, rather that it was the resulting heat and rise in body temperature. Uhthoff's Phenomenon occurs due to demyelination of nerve cells in the brain and spinal cord, which slows down the conduction of nerve signals. Heat slows this process even further. As a result, the body

doesn't respond the way it should to changes in temperature. Lesions in the [hypothalamus](#) (the part of the brain that regulates the body's temperature) also inhibit sweating or shivering responses which keep an individual comfortable when the mercury rises or falls.

While Uhthoff's Phenomenon originally focused on visual symptoms, [research](#) has since shown that heat exacerbates other MS symptoms, too. Sometimes, new and unfamiliar symptoms can appear. Exacerbations of this kind are usually temporary. Heat does not cause more damage to the nerves, and symptoms improve once the person has cooled down. Just as everyone's MS experience is unique, heat tolerance can differ from person to person. The type and severity of symptoms varies, as does the length of time it takes to recover after cooling down. Some feel worsening symptoms at much lower temperatures and with much less activity.



Heat intolerance can be very limiting for people with MS and have a profound effect on their quality of life. There is currently no drug treatment available, however there are a number of simple ways to cool down.

Tips to keep the body cool:



Plan Your Day. Schedule activities at times when the sun is not at its peak.



Block the Sun. Keep an umbrella handy for shade, if needed.



Dress For the Heat. Wear lightweight, loose, breathable clothing.



Stay Hydrated. [Research](#) shows drinking cold water helps people with MS exercise more.



Keep Cool Drinks Available. Store pre-filled water bottles or pitchers in the fridge.



Explore Frozen Alternatives. Eating ice chips and popsicles can help.



Try Meal Prep. The kitchen can heat up quickly, so plan ahead as much as possible.



Eat Light. Instead of heavy meals, opt for salads, no-bake dishes and fresh fruit.



Use a Spray Bottle. Try spritzing with water when the temperature rises.

A wet washcloth or bandana held to the face or draped along the back of the neck is another way to beat the heat. To keep one handy, they can be stored in individual resealable bags in the refrigerator or freezer. A number of [cooling products](#) are available that provide relief in a similar fashion. For those that get hot at night, a [cooling pillow](#) may help. Cooling vests are another popular option. These vests vary from simple designs that use ice packs to more complex ones that require batteries. Depending on the product, the cooling effect can last from a few hours to several days. As the name implies, [ice pack vests](#) use re-freezable ice packs that are put into internal compartments. [Evaporative](#) or [chemical](#) vests use water or chemical reactions to wick away the heat. Evaporative vests work best when humidity levels are low. [Active cooling vests](#) use motorized devices to stay cool for a longer period of time. Some require both water and ice. These are the most effective at cooling the body but can be bulky. A number of non-profit organizations provide cooling vests at no cost to people with MS that qualify, including the Multiple Sclerosis Association of America's [Cooling Distribution Program](#) and the Multiple Sclerosis Foundation's [Cooling Program](#).



Tips to keep the environment cool:



Adjust the thermostat to maximize comfort.



Stay in air conditioning during periods of extreme heat and humidity.



Find a fan. Traditional fans work by evaporating sweat. [Misting fans](#) add moisture for extra cooling.



Close curtains or blinds to help keep rooms cool.



Light with LEDs. They put out a fraction of the heat, last longer and use less energy.



Pull the plug. Gadgets and devices create heat, even when not in use. Unplug them before going to bed.

Exercise helps to improve balance, strength, mood, and overall health for everyone. However, as mentioned above, it can also raise core temperature and briefly worsen symptoms for people with MS.

Ways to exercise safely:



Pick a Good Location.
Exercise in an unheated pool or a cool environment.



Select Your Timing. If exercising outside, pick cooler times of the day, usually early morning or evening.



Choose the Right Clothing.
Don't wear too many layers, even if it's cold.



Be Sure to Cool down. Take a cool bath or shower after exercising or exposure to a hot environment.

There are plenty of ways to keep cool, which may help people with MS manage some of their symptoms. When using any strategy to cool down, however, moderation is key. Although heat sensitivity is most common, about [20%](#) of people with MS experience worsening symptoms due to cold temperatures (especially spasticity). It is essential that individuals sensitive to changes in temperature work with their healthcare team to develop best practices to control their body temperature and try to avoid either extreme.

