

# Exercise as Part of Everyday Life

STAYING WELL



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Tiffany (front cover), diagnosed in 2004.

# Exercise as Part of Everyday Life

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Reviewed by members of the Client Education Committee of the National Multiple Sclerosis Society's Clinical Advisory Board.

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# Introduction

We hear the message everywhere: regular, moderate physical exercise is good for body, mind and spirit. Exercise reduces the possibility of coronary disease, lowers blood pressure, raises the good HDL cholesterol, helps to control weight and cuts the risk of diabetes. It helps protect against stroke, osteoporosis and certain types of cancer. And many people regularly turn to exercise to reduce stress and feel better.

But what does this mean for people like me, who live with MS? Fatigue, weakness and lack of coordination are often everyday facts of life.

It turns out that we have extra incentives to do everything possible to stay fit. A 1996 study of people with mild to moderate disability from MS, conducted under the supervision of Jack Petajan, MD, PhD, an MS specialist formerly at the University of Utah, demonstrated the payoffs. Regular aerobic exercise — exercise vigorous enough to raise the pulse and respiration rate — increased fitness, arm and leg strength, and workout capacity, and improved the participants' bowel and bladder control. People in the study also reported reduced depression, fatigue and anger.

Other studies have shown that exercise can combat the loss of fitness caused by a sedentary lifestyle and be therapeutic for such MS-related problems as spasticity and poor balance.

There's even more: exercise builds muscle strength and cardiovascular function. Then, if an attack or exacerbation of MS calls for a time-out from physical activity, there is a better foundation on which to rebuild once the symptoms subside.

However, all benefits of exercise are short-term; that is, they fade away if exercise is discontinued. On the other hand, *all* exercise provides benefits. If you find you can't do what you used to do, don't give up. You can always modify your activities or turn to another kind of exercise. Physical therapists and exercise physiologists can provide expert help.

## MS isn't a reason to sit on the sidelines

With some modifications, people at all levels of disability can enjoy the benefits of exercise. It's easier than it sounds. Almost everyone can find some form of healthy physical activity that is appealing enough to be challenging and fun.

Some of the options include starting the day by taking a morning swim, or joining friends to walk around a shopping center or indoor track. Attending regular exercise classes, playing an adapted sport, working out with weight machines in a gym, or practicing aerobics and stretching exercises in a chair at home are more good options.

Reluctant exercisers can expect to feel a psychological lift just from taking control of this important component of good health. Exercise can release both the “fight or flight” adrenaline hormones, which rev up body and mind for action, and the endorphins, known for their mood-elevating and painkilling power. This psychological lift promotes a sense of well-being that is so important in our lives.

Whether swimming or sailing, working out in a gym, relaxing in a yoga class, or competing at a round of golf, the revitalizing enjoyment of healthy exercise comes in many forms for people with MS.

### Choose fitness that fits

Exercise need not be a prescription to be swallowed like distasteful medicine. Moderate exercise for 20 minutes or so every day yields the same benefits as rigorous sweat-and-grunt workouts. In fact, the less pain the more gain, because exercisers are more likely to stick with activities that feel good. Sticking with a program is the only way to keep the benefits rolling in.

Start by talking to your physician or physical or occupational therapist about the types of exercise most likely to be good for you. Then, consider your individual temperament.

Some people prefer exercise that is free from the stress of competing with opponents or keeping up with others.

They might choose an activity such as swimming or walking that doesn't require a team or partner.

People who have a competitive streak may find that adaptive sports or group workouts motivate them.

Exercising alone at home may not supply the motivation that a class or a group provides, but this can be an ideal choice for some.

National MS Society-sponsored classes and activities tailored to people who have MS offer a comfortable environment for those who feel self-conscious when the mind says, “Action!” and a limb replies, “Not today!”

Some people find that exercising with a partner or a small group of friends supplies both incentive and flexibility. Informal groups make a commitment to swim, stretch or work out together on a regular basis. Everyone is free from the stress of having to show up at (and pay for) a class no matter what. Recording personal progress and rewarding people who achieve goals can add to the fun.

Try several options that look personally attractive and see what fits best before making a financial commitment. Many health clubs, YMCAs and recreation centers allow guests to sample facilities with a one-day trial pass. Exercise classes may offer a single-class option, and some facilities allow pay-by-the-month trial memberships. Consumers Union



recommends saving money on home exercise equipment by purchasing good secondhand models. There's a lot of barely used equipment for sale!

Ask your chapter of the National MS Society for referrals and recommendations.

A word on exercise books and videotapes: those directed toward the general public are appropriate for people with MS only as a supplement to in-person instruction, preferably by a knowledgeable physical therapist. Even books and tapes geared toward people with MS are best used after first working with a professional instructor who is familiar with MS. Again, borrow or rent materials before making a purchase.

# Starting Out

## Meeting MS challenges

MS presents some definite exercise challenges. It's important to work within individual abilities and to stay attuned to new needs as symptoms or medications change.

Some people with MS will experience numbness, tingling or blurred vision when they exercise. This is usually the result of a rise in core body temperature from the exertion and will typically decline as the body cools down. Managing body temperature during exercise by using a cooling collar or other device will often reduce those symptoms. It is best to initiate an exercise program in an environment where a health care professional knowledgeable in MS can monitor your physiologic response (heart rate and blood pressure) as well as any symptoms that may develop from overheating.

While people with MS can enjoy — and succeed at — many activities, physicians, physical therapists, and fitness instructors who are knowledgeable about MS can give you instruction and guidance on such issues as how to:

- Monitor your pulse and breathing rate and establish an appropriate target range.
- Pace exercise to avoid overdoing.
- Adapt and modify routines as MS symptoms fluctuate.

- Time exercise with MS medications for best results. This may be particularly important for people taking antispasticity medication.
- Handle symptoms including heat sensitivity, poor balance, low fatigue threshold, muscle weakness or spasticity.
- Modify exercises, especially if symptoms cause a difference in strength or ability between one side of the body and the other.
- Progress to more challenging activities safely and effectively.

Your physician or your chapter of the National MS Society may be able to recommend a therapist or instructor who can help you get started safely.

## Realistic goals

Even the most able-bodied person can't expect to dive into exercise and achieve immediate dramatic change. Listen to your body, and only do what you can. Success is accomplished by meeting a series of small goals that fit individual strengths and needs. The less rigid the program, the greater the likelihood of success.

A word of caution: Exercise may be so gratifying that it can lead to overdoing it; but pushing yourself too hard can result in fatigue and increased possibility of injury. Start slowly and exercise a little longer at each session. People with MS can increase their endurance just as anyone else

can, but we should avoid overdoing. Studies show that exercisers with MS who work more slowly at the beginning achieve more in the end.

## Consumer checklist

Along with looking for a fitness routine that fits, check these points as well:

- Choose a location within easy traveling distance; the commute shouldn't be a workout in itself!
- Guard against over-heated environments. Check locker room temperature and humidity. Inquire about pool temperature: the ideal is between 80 and 84 degrees.
- Look for non-slip floors in locker rooms and around pools; grab rails in pools and shower areas; pool lifts if needed. Check rough terrain that may present accessibility problems.

## And safety matters!

- Learn how to monitor your pulse and respiration and stay within your appropriate target range.
- Always wear rubber-soled nylon or plastic water shoes or sandals on the wet floors of locker rooms and pool areas.
- Don't hesitate to lean against a wall or use a chair for support in stretching, yoga or aerobics classes.
- When working to improve balance, have someone standing nearby for protection or stand near a wall or in a corner.

# Warm Up and Cool Down

Warm-ups start blood flowing freely to muscles and set the stage for the greatest benefits from exercise. Stretching helps ligaments, tendons and muscles to lengthen; helps maintain flexibility and range of motion; eases muscle soreness; helps prevent injuries; and shortens the time needed to recover from injuries.

Some people find that exercise actually worsens symptoms of spasticity. This can be relieved or reduced with a gentle warm-up.

Take five to eight minutes to warm up before exercise:

- Drink juice or water before beginning.
- With arms down at sides, rotate each shoulder several times as if freestyle swimming. Repeat in reverse as if swimming backstroke.
- While sitting, lift each foot and rotate ankles several times in each direction.
- Flex and rotate wrists several times in each direction.
- Gently stretch the muscles that will be most used in your activity. Slowly extend the muscle just to the end of your comfortable range and hold the position while taking five or six deep full breaths in and out.
- Deep breathing is important for building lung capacity. Remember to keep breath flowing during both warm-up and exercise periods.



- Drink water frequently while exercising to avoid dehydration and help you stay cool.

And take five to eight minutes to cool down at the end:

- Cool down by repeating the activity at a gradually decreasing pace for two or three minutes.
- Stop and gently stretch the muscles you have used, holding each stretch for six to eight breaths.
- Have a drink of water or juice.
- Rest following exercise. Fatigue that lingers after one hour of rest is a sign of having overextended.

# Strategies for Handling Fatigue

- Plan ahead. Get adequate sleep the night before engaging in sports or taking a class. Take a 15-minute nap a few hours before any demanding exercise.
- Coordinate exercise with body rhythms. Schedule physical activity for the time of the day when energy is highest. Alternate more demanding exercise with activity requiring less energy.
- Always talk with exercise instructors about MS before starting a new class. This will avoid embarrassment if you need to stop and rest.
- Apply the “two minute” rule: When feeling too sluggish for working out, commit to moderate exercise for just two minutes. The activity may generate the energy to continue. If fatigue persists, stop and rest.
- Avoid exhaustion. When it looks as if energy might start to fade, a 15-minute time-out may be all that’s required to recharge. A short do-nothing mind-and-body break can be more rejuvenating than a one-hour nap. Lie or sit with eyes closed and breathe slowly and deeply. Do nothing, except possibly listen to soothing music or repeat a comforting word, sound, or phrase such as “home” or “I am calm.”
- Keep cool. This is wise for everyone. But people with MS have an additional issue. For many of us, heat leads to poor nerve conduction, and that means increased fatigue, as well as weakness and other MS symptoms. Vision can blur, and balance can become disturbed. For those who are heat-sensitive, keeping cool is essential.

## Tips for keeping cool

- In warm weather avoid outdoor activities between 10 a.m. and 4 p.m.
- Carry cold drinks in insulated containers that attach comfortably to a belt, waist-pack, backpack or shoulder strap.
- Wear lightweight shoes. When the feet are cool, the rest of the body tends to be cool too.
- Wear vests, hats or kerchiefs that hold “blue ice” gel packs or materials that can be chilled for long-lasting coolness.
- Dress in layers, in order to add or remove clothing as body temperature changes.
- Try running cold water over your wrists for three to five minutes.
- Use air conditioners, electric fans, or even a battery-powered, handheld mini-fan.
- Refresh with “spritzes” of water from a plastic spray bottle — the type used for misting houseplants.
- Limit time spent in hot, steamy locker rooms by taking your shower at home. Go to the gym wearing easy-on, easy-off clothing. After exercising, run cool water over wrists, or apply cold paper towels to neck and forehead. You may even enjoy a quick head-and-neck dunk in a sink of cool water. Then change into street clothes and leave.
- Be very cautious about using a hot tub. Hot tubs may cause excessive overheating, with severe weakness and fatigue. Many people with MS avoid them altogether.

## Starting Again

Even the most dedicated and enthusiastic exercisers have lapses. Attacks or exacerbations of MS, other illnesses, injuries, travel, demands of work or family, and bad weather may put exercise on the back burner.

It may take as long as six weeks for strength and stamina to return to former levels after as little as one week of inactivity. Don't be discouraged. This is normal, even for people who do not have MS. Muscle mass and blood volume decrease noticeably after one or two weeks of inactivity.

When an exacerbation has interrupted an exercise routine, resume only after a doctor's OK. And be patient. It is not unusual for an exacerbation to cause a significant decrease in fitness level and physical capacity. It may take weeks or months to determine if a loss of function is permanent or not. When beginning to exercise again, set reasonable expectations. It is rarely possible to pick up a fitness program at the point where it was when the exacerbation began. Standards that are too high — such as making a commitment to pedal an exercycle for 45 minutes a day — lead to almost certain failure. Decreasing the intensity and/or the duration of an activity is a good way to get back into a routine.

## Those Fluctuating Symptoms

Like rude intruders, MS symptoms show up unannounced, without consideration for personal plans. Instructors, teammates and exercise partners should be forewarned of the possibility of last-minute cancellations. Those unfamiliar with MS may need a short description of how symptoms can come and go.

Sometimes symptoms don't call for bowing out of an activity altogether, but do require making temporary alterations. Explaining this to class instructors ahead of time helps avoid embarrassment. Discuss any limitations that your MS is posing and ask about ways the activity might be modified. Some people might also want to request that modifications be given in private after class.

Members of an exercise group will need to tell friends or teammates that MS is imposing some restrictions. Be specific. Explain, for example, that optic neuritis is making it difficult to see a ball, or that balance problems mean you will need some help to climb out of the canoe.

# Specific Exercise Options

## The aqua cool

Exercising in cool water is ideal for people with MS. Water prevents overheating, and its natural buoyancy gives support, making movement easier and enhancing endurance. Float boards and vests can provide additional help for people who need it.

Aqua exercise lets people with MS move in ways that their disability might not otherwise allow. Even those who don't normally have use of their legs can perform water walking exercises, which have psychological as well as physical benefits.

## A weighty idea

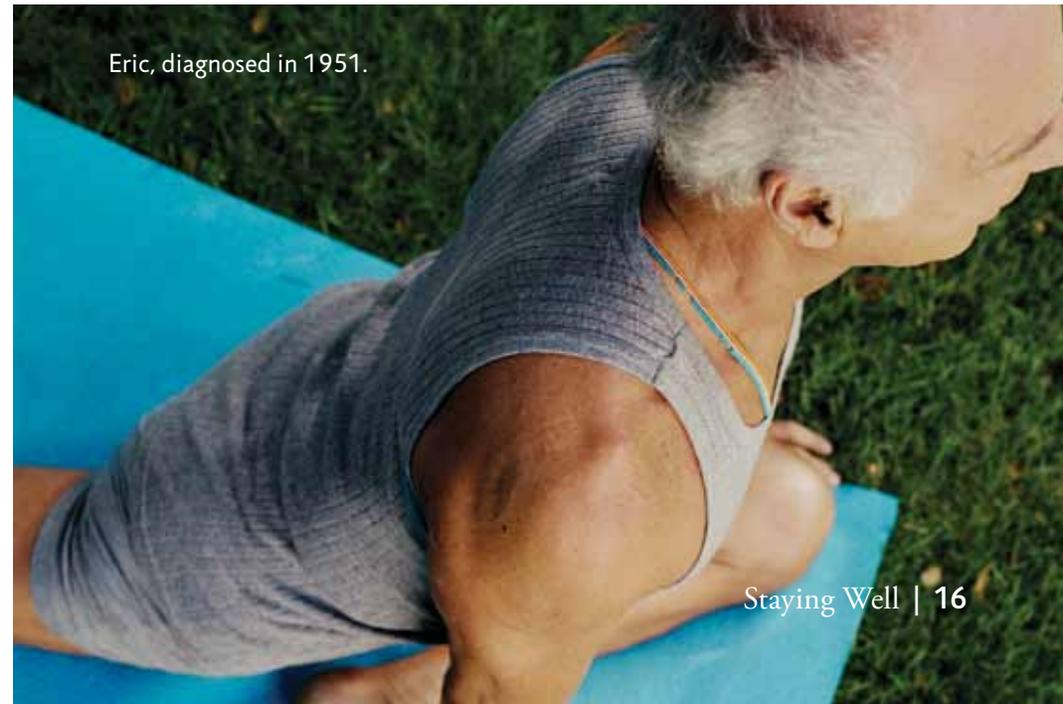
Exercises using free weights, fitness club weight machines, and the resistance of one's own body are options for people with MS. Routines can be adapted to meet each person's level of flexibility and mobility. Modifications include using lighter weights or even going through the exercise motions with no weights at all. New research shows that stretching combined with weight training can actually create strength faster than weight training alone. Moreover, strength training with weights fights osteoporosis and aids weight loss or weight maintenance.

\* Caution: No one should practice weight training two days in a row, as it creates tiny tears in the muscles that require a day to heal. However, if a full workout is too fatiguing to practice in one day, it is safe to do split workouts. On the first day, exercise using only the upper body. The following day, focus only on the lower body.

## The stretch that relaxes

Yoga combines breathing with movements that can alternately stimulate or calm the body. Many people with muscle tightness or decreased range of motion find yoga practice brings noticeable improvement. Because yoga is relaxing and noncompetitive, it is especially recommended for people with MS. Benefits can be felt when poses are held for as little as five seconds, and many poses are designed to allow gravity to help stretch muscles.

Eric, diagnosed in 1951.



The rhythmic, abdominal breathing done in yoga is also important for people with MS who may not be able to achieve deep breathing through vigorous exercise. Deep breathing aids circulation and helps maintain respiratory health, diminishing the possibility of lung infections such as pneumonia.

Yoga can be adapted for people with MS and other disabilities, sometimes by using props such as a folded towel, cushion or chair. Many yoga classes end with a meditation exercise that helps the mind relax, and may support physical, mental and spiritual awareness. Note: Bikram yoga is a form of yoga that should be avoided, as it is practiced in a room heated to 105 degrees Fahrenheit.

An exercise system called Pilates offers many of the same physical and mental health benefits as yoga and is becoming popular among people with MS. The exercise program is designed to increase flexibility and strength through controlled movements (done as mat exercises or with equipment) to tone and strengthen the body. Emphasis is placed on concentration, precision, control, breathing and flowing movements.

## Balance and the Swiss ball

The cerebellum is a brain center associated with balance. When MS affects that part of the brain, balance is upset. Demyelination affecting nerves to other body systems — such as the eyes, ears or major muscle groups — can impair

balance as well. However, consistent practice at simple exercises can help the body's stronger systems to compensate for the weaker ones.

Balance programs should be taught by a qualified physical therapist (PT). The PT will start with an individual assessment to determine which systems are healthy and which are weak. The PT will then design an exercise program, which may be as simple as standing still with eyes closed for one minute or standing and reaching within the range of safe movement for balance.

Balance exercises using a Swiss ball (a 22" to 25" high inflatable ball) integrate strength, balance, and coordination. Swiss ball exercises also promote cardiovascular fitness without placing too much demand on the joints. Some Society chapters offer Swiss ball exercise programs.

## Gentle martial arts

T'ai chi is an ancient Chinese discipline. Although it is called a martial art, it is comprised of a series of movements that resemble ballet in slow motion. It can help improve or maintain strength, flexibility and balance, and may boost aerobic capacity as well. T'ai chi is favored by many people with MS as a gentle exercise that works all the limbs and muscles without wear and tear on joints. Like yoga, it is noncompetitive and encourages a meditative mental state.

In addition to t'ai chi, other martial arts such as karate, aikido, qigong and kung fu can be modified by professional instructors so that people with MS can enjoy their benefits.

## Aerobics

Technically, any exercise vigorous enough to raise the pulse and respiration rate is aerobic. However, we tend to think of aerobic exercise as running, dancing, a workout on a bike or a sequence of fast-paced exercises. Fifteen minutes of aerobic exercise is considered ideal. The good news is that people who tire easily can do aerobic exercise in three separate five-minute periods, with rests in between, and still attain all the benefits.

Adjustable-speed treadmills offer the benefits of walking in a comfortable environment. Striding in an air-conditioned room while grasping handrails overcomes the challenges of outdoor heat and humidity, uneven paths, and uphill climbs.

Other types of equipment used to exercise the lower body include stair steppers, stationary bicycles and cross-country ski machines. Recumbent bikes and exercycles work both arms and legs. If equipment for exercising the lower body only is uncomfortable or impossible, ask about equipment for the upper body only — and always learn how to adjust any equipment you use to fit your specific needs and abilities.

## Play Around at Fitness

When exercise happens naturally, as the byproduct of an enjoyable sport, relaxing game or hobby, the physical and psychological benefits come as easily as the fun.

### Adaptive sports

Adaptive sports with modified equipment and/or rules allow people with disabilities to participate in basketball, handball, tennis and golf. The modified rules for tennis, for example, allow the ball to bounce two times instead of once before the player takes a swing. The United States Golf Association has approved modified rules for golfers with disabilities, and customized golf clubs are available for people who play from wheelchairs or carts.

Boating sports such as sailing, paddling, rowing and rafting are exercise as well as recreation. Advantages include periodic rests while other crew members continue the work, readily available water for a refreshing splash, and cooling breezes as the vessel moves across the water.

Therapeutic horseback riding promotes balance, coordination and strength. It stretches spastic muscles and improves posture. Participants report having such a good time they forget that it's therapeutic.

## Other moves, too

Even activities not normally classified as sports can render the physical and psychological benefits of exercise. Dancing, gardening, housework, even playing with pets can lead to fitness.

Some people incorporate stretching exercises into everyday life. During meetings, they practice unobtrusive routines such as pressing feet firmly against shoe insoles with a rhythmic beat or firmly pressing hands on a table or desk and then releasing without lifting.

Stretching can and should be incorporated into many everyday routines. Desk workers — or anyone who spends most of the day sitting — should stretch up and reach for the ceiling every hour or so.

When reading a book or talking on the telephone, rotate wrists and ankles and stretch out arms and legs. Many stretching exercises can be performed while watching the evening news.

## Information about adaptive sports

The National MS Society can provide local referrals to private and group instruction in a wide variety of sports activities modified for people with MS. Additional resources include:

- Can Do Multiple Sclerosis, 27 Main Street, Suite 303, Edwards, CO 81632; 800-367-3101. Web site: [www.mscondo.org](http://www.mscondo.org). Can Do MS is a nonprofit organization that provides innovative lifestyle empowerment programs for people living with MS and their support partners.
- Access Anything, a resource for travelers with disabilities. Web site: [www.accessanything.net](http://www.accessanything.net). Email: [ask@accessanything.net](mailto:ask@accessanything.net). The mission of Access Anything is to improve the quality of life for millions of people living with disabilities in the United States and around the world by encouraging them to enjoy life to its fullest through the sense of freedom provided by travel, adventure, and a “never give up” attitude.
- Adaptive Sports Foundation, PO Box 266, 100 Silverman Way, Windham, NY 12496; 518-734-5070. Web site: [www.adaptivesportsfoundation.org](http://www.adaptivesportsfoundation.org). Email: [asfwindham@mhcable.com](mailto:asfwindham@mhcable.com). Provides profound and life changing experiences for individuals with physical and cognitive disabilities and chronic illnesses through outdoor physical activity, education, support and community.
- *Modification to the Rules of Golf for Golfers with Disabilities*, a publication of the United States Golf Association, available at [www.usga.org/rules/disabilities/Rules-for-Golfers-with-Disabilities](http://www.usga.org/rules/disabilities/Rules-for-Golfers-with-Disabilities)
- The National Sports Center for the Disabled (NSCD), P.O. Box 1290, Winter Park, CO 80482; 970-726-1540. Web site: [www.nscd.org](http://www.nscd.org). E-mail: [info@nscd.org](mailto:info@nscd.org). The NSCD is a nonprofit corporation that offers winter and summer recreation. Winter sports include snow skiing, snowshoeing and cross-country skiing. Summer recreation activities include fishing, hiking, rock climbing, whitewater rafting, camping, mountain biking, sailing, therapeutic horseback riding and a baseball camp.

- Breckenridge Outdoor Education Center; 800-383-2632. Web site: [www.boec.org](http://www.boec.org). E-mail: [boec@boec.org](mailto:boec@boec.org). This organization helps people living with disabilities develop their potential through outdoor adventure experiences.

## The Bottom Line: Enjoy the Process

Just as the effects of MS vary from person to person, the benefits of exercise show up in different ways and at different rates for each individual. Take it slowly. Exercise is not a battle with the body to overcome spasticity, weakness or any other MS symptom. Instead, it's an opportunity to do everything possible for good health. And to have fun!

The National Multiple Sclerosis Society is proud to be a source of information about multiple sclerosis. Our comments are based on professional advice, published experience and expert opinion, but do not represent individual therapeutic recommendations or prescriptions. For specific information and advice, consult your physician.

Early and ongoing treatment with an FDA-approved therapy can make a difference for people with multiple sclerosis. Learn about your options by talking to your health care professional and contacting the National MS Society at [nationalMSSociety.org](http://nationalMSSociety.org) or 1-800-344-4867 (1-800-FIGHT-MS).

The Society publishes many other pamphlets and articles about various aspects of MS. Visit [nationalMSSociety.org/brochures](http://nationalMSSociety.org/brochures) to download them, or call your chapter at 1-800-344-4867 to have copies mailed to you.

### Some of our popular pamphlets include:

- Food for Thought: MS and Nutrition
- Managing MS Through Rehabilitation
- Multiple Sclerosis and Your Emotions
- Taming Stress in Multiple Sclerosis

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