



walk to
create a world
free of MS

Training Guide

Training for Long-Distance Walking

Training for a long-distance requires the practice of what is called progressive overload. The idea of progressive overload is to make your body do just a little more work (that is, a little more walking) than it is used to doing, step-by-step, over the period of many weeks, so that your body is able to gradually and steadily gain fitness.

Training should begin as soon as you register for the Challenge Walk MS. Form a habit quickly by walking five times per week. Your body will need to build up endurance to keep it going for 15-20 miles a day. Of course, your initial walks can be very short – this is a fitness program, not Boot Camp! Start a walking journal. Keeping track of your weekly walking efforts will help you to maintain your schedule. Use a calendar format and simply record the duration of each walk, the distance covered, and a few words about how you felt. Feel free to record any cross-training workouts you perform as well.

Sample:

Monday

Mileage: _____

Time: _____

Speed: _____

Notes: _____

Fueling Your Muscles for Walking

Exercising muscles need fluid and energy to perform at their best. With every step you take, a small amount of body fluid is lost through sweating and a little bit of energy fuel is burned inside your muscle cells. The more fluid you lose and the more energy your muscles burn, the more tired you become. So it is important that you consume fluid and energy drinks during all of your walks. By consuming these vital nutrients for muscle performance during all of your training walks and during the Challenge Walk MS itself you will feel better and walk better than you would otherwise.

The primary causes of fatigue are dehydration and depletion of energy stores in the muscles. Sweat is the body's coolant. During an intense workout, the muscles generate heat, which is carried by the blood through capillaries near the surface of the skin. Sweat glands release sweat (made up of water and electrolyte minerals) that evaporates, cooling the skin and the blood just underneath. Cooled blood then flows back to cool the body's core.

Hydration

Sweating is therefore an essential mechanism for regulating body temperature. However, the loss of water that comes with perspiration limits the capacity of the blood to carry vital nutrients, such as glucose, fatty acids, and oxygen, to working muscles.

The capacity of the blood to remove the by-products of metabolism, including carbon dioxide and lactic acid, is compromised as well. The result is an increased demand on the circulatory system, which is approximately 70 percent water. As little as a 2% loss in body fluids will negatively impact cardiovascular performance.

It is essential to drink fluids before, during and after your walk.

Pre-training walk & Pre-event

- Drink an extra 64 ounces of fluid 24 hours before a long training walk.
- Drink 16 ounces of fluid two hours before exercise. This will allow time for the fluid to pass through your body.
- Drink more during hot weather. If you are sweating more than usual, consume more fluids.
- Avoid caffeinated beverages before your walk. They will cause you to lose fluid and make you thirsty.

During your walk

- Drink when you are thirsty.
- Drink a combination of water and sports drinks.
- A sign that your body is well hydrated is diluted urine that is light or clean in color and you should be urinating frequently.
- Try to drink five ounces of fluid per mile.

Post Walk

- Drink a combination of water and sports drink after exercising more than one hour.
- Sports drink can help replace your body's sugar and salt that was lost during exercising.
- The American College of Sports Medicine says there is little basis for anything other than plain water when exercising for an hour or less.

Signs of Dehydration

- Nausea after exercise
- Dark, yellow urine or no urine
- Dry, sticky mouth
- Dry eyes
- Fatigue
- Dizziness or confusion
- Heartburn or stomachache
- Recurring or chronic pain
- Lower back pain
- Headache

- Mental irritation or depression
- Water retention
- Lack of skin elasticity
- Sunken eyes

Nutrition

Consuming carbohydrates and proteins within 45 minutes after your exercise will help you recover faster.

Nutrition is the foundation of post-exercise recovery, because it provides the raw materials with which your body can make physiological adaptations in response to training. If you take in the right nutrients, in the right amounts, at the right time, you will recover far more quickly and thoroughly than you will if you don't practice proper nutritional recovery.

When a walker sweats heavily, he or she loses a lot of water and electrolytes. Drinking a sports drink during walks can slow the rate of fluid loss, but can't stop it completely. So it's important to make up the deficit by continuing to use a sports drink with electrolytes after exercise. If you do not re-hydrate properly Timing is essential with regard to post-exercise nutrition because your body is primed to sponge up needed nutrients at this time. For example, synthesis of muscle glycogen – a form of stored carbohydrate that serves as the body's primary energy source during endurance exercise – proceeds two to three times faster in the two hours immediately following exercise than it does at any other time.

There are **three main components** of post-exercise muscle recovery. **First**, it is necessary to restore fluids lost during exercise. Before the next workout, you could experience overheating, muscle cramps, and other problems.

The **second** component of muscle recovery is putting carbohydrate fuel back in the muscles. Again, carbohydrate is the muscles' main fuel source during moderate-intensity exercise. The longer a workout lasts, the lower your muscle fuel supplies become. By using a sports drink containing carbohydrates during walks, you can slow down this process. But it's impossible to take in carbohydrate during intense exercise as fast as it's burned. So you need to continue taking in carbohydrate after exercise, as well. If you don't get your muscle fuel levels back to normal in time for the next walk, you'll be sluggish and sloppy. The most convenient way to get all of the nutrition needed for recovery is to continue drinking the same carbohydrate-protein sports drink that was used during the workout. These drinks contain exactly what is needed and the right proportions without anything extra that might slow down the recovery process.

Finally, the **third** component of muscle recovery is fixing the damage done to muscle tissue during exercise. High-intensity physical activity can cause small tears in muscle tissues. In addition, some muscle proteins are broken down for energy during hard exercise. Also, hard exercise produces damaged molecules known as free radicals, which attack muscle cells. In order to undo all this damage, you need to consume protein after each walk. You should also get antioxidants such as vitamins C and E, which help protect the muscle tissues against damage from free radicals.

Nutrition for Recovery

If you are hungry after your walks, eating is fine. Just make sure you get all the same nutrients you would get in a quality sports recovery drink without a lot of extra stuff (fat, excess protein) that might slow down the delivery of nutrients to your muscles. Some energy bars are good recovery foods. In any case, you will need to drink some form of fluid to meet your body's hydration needs after workouts.

Training

- Eat small amounts of carbohydrate every hour. The average person burns 100 calories per mile.
- If your body begins to run low on energy, you may have symptoms of low blood sugar including disorientation, headaches, weakness or loss of body control. If you notice any of these symptoms, stop walking and start consuming liquids and food immediately.
- Bring a snack to eat along the way if you will be walking more than an hour. Good snack choices are nutrition bars, fruit or crackers. Avoid snacks with high concentration of simple sugar such as cookies or candy.

Post-training

- Consume carbohydrates and protein-rich foods one to four hours after a long walk to prevent next day fatigue.
- Complex carbohydrates provide an excellent source of energy. A few examples are pasta, beans, rice, whole grains, fruits and vegetables. It is best to pair complex carbohydrates with protein as carbohydrates when eaten alone give you a boost of energy in the beginning but can cause you to have an energy crash later.
- Proteins provide sustained energy. Good examples are nuts, cheese, lean meats and peanut butter.

Injury Prevention

Walking the right way can give you better health, fitness and attitude for training. Avoiding these common mistakes will help you walk faster and more smoothly. Walking the wrong way can lead to wasted effort or even injury.

Mistake #1: Over Striding

When you try to walk faster, the natural inclination is to lengthen your stride in front, reaching out further with your forward foot. This leads to a clumsy, ungainly gait, striking hard with the feet. Your shins hurt and you really don't get any faster.

Remedy

All of the power of your walk comes from pushing with the back leg and foot. If you are trying to walk fast, concentrate on taking shorter, quicker steps. Then

think of really rolling through your step with your back foot and leg, getting a good push-off. The result will be faster feet and lengthening your stride where it does you some good - in back.

Mistake #2: The Wrong Shoes

- Heavy
- Stiff - soles won't bend, can't twist them.
- Over a year old.
- Too small when foot swells while walking.

If this describes your shoes, you are setting yourself up for plantar fasciitis, muscle pulls and knee problems. Plantar fasciitis is a pain in the bottom of your foot that especially hurts first thing in the morning when you try to get out of bed and stand, or if you stand after sitting for a while.

Remedy

Get fitted for the right shoes at a technical running shoe store in your area. These shoe experts will make sure you get the right shoe for overpronation, flexible enough for walking and sized right for foot expansion.

Mistake #3: Flapping, Slapping, "Flat" Feet

- Your feet hit the ground with a slap.
- You land flat-footed with each step and get no roll.
- You may develop shin pain.

This means that instead of rolling through the step with your forward foot, it is flattening out prematurely. Either you are fighting stiff, heavy shoes or your shins are too weak to let you roll through the step.

Remedy

Get flexible shoes that bend at the ball of the foot. A pair of running shoes with a low heel is best. To strengthen your shins, ankles and lower legs:

- Toe raises: Stand on a stair facing upstairs with your heels hanging over the edge. Dip the heels down, and then raise them high. Repeat 10-20 times.
- Foot fun: While sitting around, several times a day, tap your toes quickly for several seconds. Then write the alphabet in the air with your foot. Repeat with the other foot.
- Heel walking: As part of your warm-up, walk on your heels for 30 seconds.

Mistake #4: Look, Ma, No Arms

You keep your arms still at your sides while walking, or swing them without bending them. You notice that your hands swell after walking for a while. Normal walking motion uses the arms to counterbalance the leg motion. A walker can add power and speed by using the arms efficiently. Long, straight arms act like a long pendulum, slowing you down.

Remedy

Bend your arms 90 degrees and swing them naturally back and forth opposite the leg motion.

Mistake #5: Chicken Winging and Flinging

You swing your arms from side to side, crossing the center of your body and extending out to endanger passersby. Or you bring your fists up on each swing, past your breast, up even to your chin or threatening your nose.

Remedy

Keep your elbows close to your body and swing your arms mostly back and forward, as if reaching for your wallet from a back pocket on the backstroke. As they come forward, your hands should not cross the centerline and should come up no further than your breasts. This arm motion will give power to your walk. Your feet generally move only as fast as your arms.

Mistake #6: Head Down

You are always looking down, hanging your head and staring at your feet. Remedy Look up! Good posture for walking allows you to breathe well and provides a long bodyline to prevent problems with your back, neck, and shoulders.

- Chin up when walking - it should be parallel to the ground.
- Your eyes should focus on the street or track 10 - 20 feet ahead.

Mistake #7: Leaning and Swaying

- You lean forward more than five degrees.
- You lean back.
- You have a sway back with or without a forward lean.

Somewhere you read to lean forward when walking. Or, you may be leaning back on your hips. Leaning forward or backwards or holding your back swayed can all result in back pain and does not increase your speed.

Remedy

Stand up straight but with relaxed shoulders, chin up and parallel to the ground. Think about walking tall. Think "suck in your gut, tuck in your butt." Your back should have a natural curve, but do not force it into an unnatural sway with behind out back, stomach out or forward.

Mistake #8 The Wrong Clothes

- You walk at night wearing dark colored clothing with no reflective stripes or a safety vest.
- You are always wearing too much or not enough; you end up sweaty and clammy in any weather.
- No hat.

Remedy

When training, especially at night, wear a mesh reflective safety vest that can be purchased at a local biking or running shop. Or put reflective strips on your nighttime walking outfit. It is best to have several reflective elements so you can be seen from all directions.

- For walking comfort, dress in layers. The inner layer should be of a fabric such as
- CoolMax or polypropylene that will wick sweat away from your body to evaporate – not cotton, which holds it in next to the skin. The next layer should be insulating - a shirt or sweater that can be easily removed if you warm up. The outer layer should be a jacket that is windproof, and waterproof or water-resistant in wet climates.
- Hats are essential equipment. They shield the top of your head from the sun - an area where it is hard to apply sunscreen. Hats with visors also shield your face from sun exposure.

Mistake #9 Not Drinking Enough Water

You are not drinking enough water before, during and after walking.

Remedy

A good rule of thumb is to drink every 15 minutes, consuming at least one 28 oz. bottle of fluid per hour. It is recommended to consume one bottle of electrolyte drink for every two bottles of water. Ten minutes before your walk, drink a glass of water. After you finish, drink a glass or two of water.

Mistake #10 Overtraining

You walk and walk and walk. But you have lost your enthusiasm. You feel tired, irritable. You always have aches and pains. You may be overdoing it.

Remedy

Take a day off now and then to let your body repair, build muscle, and store energy to get you back on the road again.

Hydration Systems

When choosing a hydration system, comfort and easy accessibility are the two main considerations. There are several hydration systems that you can carry on your back or hips that are available for purchase online and at local sporting goods retailers. Select a system that allows you to carry enough water to between rest stops.

Hydration packs (i.e. Platypus/ Camelbak)

- There are several styles of hydration packs available. These are systems you can carry on your hips or back.
- Each hydration pack contains a large plastic reservoir that you fill with water, and an attached drinking tube allows for easy fluid access. The water reservoir is flat when empty and balloons when filled.

Refillable Water Bottles & Carriers

- Refillable water bottles are available at sporting good stores. Wash the bottles and dry thoroughly after each use to kill any germs.
- Once you have selected a water bottle style, choose a carrying system as holding the bottle in your hand can strain your wrist and elbow. There are many styles of water bottle hip packs available. Try on several styles with filled water bottles to test if it's comfortable.

Clothing

Wear comfortable walking attire. Sometimes loose fitting clothes can cause chaffing. Use your training regimen to try various clothing choices and layering systems.

- Dressing in layers allows you to remove clothing as you warm up or put it back on if you are cold.
- A shirt made from CoolMax or polypropylene is a better material choice than cotton as it will wick sweat away from the body.
- Socks should be comfortable. Socks made from CoolMax are preferred over cotton as they keep the feet drier.

Shoes

Purchase shoes that fit you correctly – both for training and for the Challenge Walk. Many specialty running shoe retailers have trained experts that will help you find the perfect shoe.

- **Fit:** Walking shoes should be at least one-half size larger than your dress shoe. A shoe should leave room for your foot to expand while walking.
- **Flex:** You should be able to easily bend the forefoot of your walking shoe. A flexible shoe allows your foot to roll through each step.
- **Flat:** Walking shoes should be flat, with not much difference in height between the heel and ball of the foot.
- Replace your shoes every 500 miles.

Socks

Even with the perfect shoe, a cheap pair of socks can cause blisters. Look for thin socks made of a wicking material, and make sure they fit.

Inserts

If you have shin, knee or lower back pain when you walk, you might want to consider a shoe insert. Inserts are designed to keep your feet in the proper position when you walk, and give them better support and cushioning than you'll get from the flimsy "sock liners" that come with most shoes. A pair of arch supports that you can purchase in most stores are better than the ones that come with most shoes, but if you really want to treat your feet right, spring for a pair of high-quality inserts available at specialty running and walking stores.

Workout Clothes

Your walking attire should be comfortable. Some loose-fitting clothes may cause chafing. When training, test several types of exercise clothing.

- Dress in layers so you can remove clothing as you warm up, or put it back on if you are cold.
- The bottom layer should be made from a lightweight, wicking fabric to pull moisture away from your skin.
- A long-sleeve T-shirt, a lightweight wind/rain jacket on top, and comfortable running shorts and possibly tights on the bottom will prepare you for any type of weather.
- Don't forget sun protection! Be sure to pack a hat with a visor, sunglasses and suntan lotion.
- If your clothes/shoes don't have reflective materials built in, look for adhesive or clip-on reflectors for safety at night.
- Finally, most walkers like to wear a "fanny pack" to carry lip balm, cell phone, keys, food, etc.

A Note About Chafing

Cause: Chafing is caused by sweating and rubbing. While some of us wonder if chafing is a signal that it is time to lose weight, in fact even the skinniest walkers, runners, and cyclists experience the same problem. Chafing can occur anywhere, but the groin, underarms and nipples are prime areas.

Prevention: Prevention of chafing falls into four categories: staying hydrated, staying dry, using a lubricant, and wearing appropriate clothing.

Hydration: Drink lots of water before, during, and after your walk. This will allow you to perspire freely so the perspiration doesn't dry into salt crystals which will enhance the chafing.

Staying dry: Go light on the deodorant stick as that can make you stickier. Use talcum powder, cornstarch or potato starch to stay dry. If this method doesn't work, it is time to progress to using a lubricant.

Lubrication: Walkers used all kinds of lubricants to keep the skin areas sliding past each other instead of rubbing raw. Petroleum jelly, bag balm and udder cream are the longtime favorites. Products such as Body Glide, Runners Lube and Sports Slick go on like a deodorant stick and are petroleum-free and non-staining. They can also be used on your feet and toes where you are prone to blister to prevent blisters.

Clothing: Loose clothes may feel good on the trail, but to prevent chafing you need a snug fit. Bike shorts are designed to give a skin tight fit that will prevent chafing and are excellent if your trouble is in the lower body or thigh area. For the upper body, polypropylene or lycra tops that fit skin tight will do the trick.

Treatment: Once you are chafed, treat the area like an open wound. Wash and clean with antiseptic to prevent infection and cover with a sterile gauze pad that allows the area to breathe until it is healed.