



## Focus on Walking



### **Walking to improve vascular health and reduce symptoms of peripheral artery disease (PAD)**

#### **How does PAD affect walking ability?**

When you walk, your leg muscles require more oxygen from the blood than when sitting or standing. The arteries of someone with PAD, narrowed by plaque build-up from cholesterol and other substances, prevent the delivery of this additional oxygen. The most common symptom of PAD is pain or discomfort in the legs, which can be cramping, aching, or fatigue while walking. The medical term for this is claudication. Most often, the pain is in the calves but it can also be in the thighs or buttocks. Claudication can be reduced by following a program of regular walking, which allows the leg muscles to use oxygen more efficiently and thereby reduces the symptoms. In spite of what you would think, even though it hurts somewhat, especially at first, if you walk regularly, following the guidelines discussed below, you will eventually be able to walk farther with less pain.

#### **Why is walking important?**

Regular walking to the point of developing moderate pain, then resting briefly, and repeating this process, will improve your ability to walk more than any other known exercise and most other medical and surgical treatments. If you have PAD, a structured walking program can make a big difference, enabling you to double or triple the distance you can walk before developing symptoms or before having to stop. Not only is walking one of the best exercises, it is also the simplest and least expensive. Walking can be done at any age and requires no special talent or equipment except good walking shoes. Walking is social too! You can walk with family or friends. In addition, walking is very self-rewarding because the benefits attained are based on something that you do for yourself to improve your health. Walking, and the other changes you may need to make like quitting smoking or following a healthy diet puts you back in control of your health. A walking program is key to successfully treating PAD.

#### **What type of walking program is best for PAD?**

There are two types of walking programs: a supervised program and a home-based program. Supervised walking programs are often found in a cardiac rehabilitation or clinical exercise center, medical fitness center, hospital, or vascular surgery practice, and are generally available at a modest fee, and in some cases, may be covered by insurance plans. Usually these programs last three to six months and include three or more walking sessions per week on a treadmill or track with supervision by exercise, nursing, and medical specialists. Research findings from these programs show improved walking ability in almost all patients. Supervised programs follow an exercise prescription that establishes the right pace and technique for you, based on your health condition. Plus you can be monitored in a safe setting, which is important if other health problems exist, such as diabetes or heart disease. The program will report your progress on a regular basis to you and your health care provider. A regular walking program not only improves walking ability but also is likely to produce benefits that reduce the risk for heart disease and stroke. Among these benefits are lower blood pressure, lower cholesterol, and weight loss (in conjunction with diet). The Vascular Disease Foundation (VDF) encourages participation in supervised walking programs for people with PAD to reduce symptoms of claudication and the risk for heart attack and stroke. However, many people with PAD do not have access to supervised programs. This informational guide will help you start your own walking program or continue on your own after starting with a supervised program. If you keep it up, you will soon be walking farther, with less pain. Now that's something to get excited about!

## Getting started

Before starting your own walking program, discuss your plans with your health care provider to make sure there are no medical conditions or physical limitations that would prevent you from safely walking. Considerations include heart or other medical conditions, or limitations due to medications, arthritis, balance, posture, and loss of sensation in your feet. In some cases, you may be asked to take an exercise test on a treadmill to evaluate your initial walking ability and to ensure that your heart does not have major blockages. Your health care provider may have specific instructions on how hard to exercise, as well as how long and how many times per week. Alternatively, if you cannot attend a supervised program on a regular basis, consider a few visits for instruction before you start your home program.



## Proper equipment

A good pair of shoes is one key to success. It is very important to wear shoes that fit comfortably – neither too tight or too loose. Do not wear shoes that are too worn. Always wear socks or stockings to prevent blisters, especially if you have diabetes. You should inspect your feet daily, and especially after walking to be sure that a blister or sore has not developed.

## Set a schedule

It is important to walk on a regular basis to see results. Establish a time when you can devote an hour three or more times per week. Walking can be done at any time of the day that is convenient for you. Treat your walking as an appointment with yourself. If a “walk appointment” cannot be kept, reschedule it as soon as possible. Walking is as important as taking your medicine - that is why we call the individualized program that is provided for you an “exercise prescription.”

## Select a place

One advantage of a home walking program is that you can choose where and when you walk. You may want to walk on a treadmill at home or at a community facility. You may want to walk inside at a mall or outside on a track, around the block, or in a park. You may choose to vary your place on a daily or weekly basis. If the weather turns bad choose places that are safe for you to walk.

## Set a goal

A regular walking program increases the speed, distance, and time you can walk before experiencing pain. The benefits from exercise occur gradually, will become noticeable over two to three months, and will continue to increase. For some individuals, it might take up to six months to see improvements. Remember that you must keep walking on a regular basis to maintain these improvements. Hopefully, you will find walking so helpful that it becomes a permanent part of your life. Set reasonable goals by knowing your limits before starting the program. How many blocks or minutes can you now walk before you have pain? How many times do you have to stop and rest before you get to the mailbox or the store? Write down your limits on a progress form, like the one on the last page of this pamphlet. Then set goals to increase your time and distance by 10 percent or 20 percent per month. If you have completed a formal exercise program, discuss your goals with the program staff.

# Your Walking Program - Step by Step

## 1 STEP 1 - Warm-up

As with any exercise, it is a good idea to warm-up before you start. Begin with very slow and easy walking, or easy stretching of the muscles of the thighs and the calves.

## 2 STEP 2 - Walk

Begin walking and increase the pace until you reach a moderate level of pain. Use the walking pain scale as a guide to determine moderate pain—it should be equal to a three or four on the scale, which may feel like a “Charlie horse,” cramp or tightness. Unlike most advice to stop when you feel pain in other parts of the body, walking until you experience moderate pain in the legs stimulates improvement in people

with leg symptoms due to PAD. Try to walk at a pace that causes some pain in three to five minutes. If you can walk longer than that without reaching pain in your legs during your exercise workout, you are probably not working hard enough. If you cannot walk faster, try walking up a hill or increase the incline on a treadmill. If these are not possible, try to walk a little longer.

### Walking Pain Scale

Use this five-point scale to help you figure out your level of pain.

- 1 = no pain
- 2 = onset of pain
- 3 = mild pain
- 4 = moderate pain
- 5 = severe pain

## 3 STEP 3 - Stop and rest

Stop walking after you reach a pain level of three or four and cannot walk farther. (See Walking Pain Scale.) Rest until the pain is gone. It may take several minutes. Please note that chest pain and/or shortness of breath with exercise or walking should be discussed with a health care provider.

## 4 STEP 4 - Repeat the walk/stop steps

After the pain is gone, repeat the walk/stop sequence several times. The goal is to walk for a total of 50 minutes during each session, not counting the rest breaks. At first, you might be able to achieve only 10 to 20 minutes. Try to build up to 50 minutes over several weeks. Soon you will find that you can walk faster or up a steeper incline at the same level of pain. This is a good sign of improvement. If you find that you can walk for eight to ten minutes without reaching a pain level of three or four, it is time to increase your speed or distance. If you are walking outdoors, wear the right clothing for the temperature and protect yourself from the sun with a hat, long sleeves, and sunscreen. Also, drink plenty of water, especially if it is hot.

## 5 STEP 5 - Finishing

Finish by doing some gentle leg stretches of the thigh and calf muscles. Stretching after exercise helps to reduce soreness of the muscles. Record your session in a log.

## Walking with a treadmill

If using a treadmill, walk at a speed and grade that will produce your usual leg symptoms within three to five minutes. If you have not used a treadmill before, ask someone who knows how it works to be at your side until you get used to it. If you do not know what your starting level is, set the treadmill at a flat grade (no incline) and begin with a slow speed (1.0 – 1.5 mph). If you are still comfortable after five minutes, increase the speed slightly. If you cannot walk faster, try increasing the grade on the treadmill. It will take some trial and error to find the right treadmill settings that produce pain of moderate severity (See Walking Pain Scale). Write down these treadmill settings and use them for your next walking session. When the walking becomes easy and the pain is less than moderate, increase the speed or grade on the treadmill. Use the directions in Step 4 above to build up your exercise session time and intensity.

## Tracking your progress

It helps to record your progress every week or two. Use the same walking route each time you do a “progress check” so you can compare results. Time or mark the distance at which your pain causes you to stop and rest. Carry the “Walking Progress Log” or a small piece of paper and a pencil and write it down while you rest. Walk again to where you must stop and rest. Again, write down the time or location. Continue this throughout the exercise session. Be sure to update the “Walking Progress Log” at the end of the walking session.

## Practical Tips

1. Ask a friend or family member to walk with you. It will pass the time more quickly and motivate you to continue. It will also be good for their health!
2. Don't be discouraged, even if you cannot walk far at first. Reaching your goals takes time. Try different routes to make your walks more interesting. Take a music/media player so you can enjoy music or books while you walk if you are walking alone.
3. If you miss a walking appointment, don't despair. Simply get back to your usual schedule as soon as possible.
4. Use the "Walking Progress Log," or make one of your own. Logs may also be found on the VDF website.
5. Carry a cane with a seat so you can always have a place to sit and rest.
6. Consider running shoes for walking! Running shoes typically are light-weight, with flexible materials and extra padding.
7. Carry a stopwatch to track your minutes walked.
8. Remember, you deserve to enjoy the best health possible. Take the time to walk for your health.

## WALKING PROGRESS LOG

**My Starting Point:** I currently walk \_\_\_\_\_ blocks or for \_\_\_\_\_ minutes before I have leg pain or cramps. I currently have to make \_\_\_\_\_ stops to rest to get to \_\_\_\_\_ (place).

**Goal:** \_\_\_\_\_

*Examples: I want to walk \_\_\_\_\_ (distance) in \_\_\_\_\_ (minutes) or before I stop. I want to walk \_\_\_\_\_ blocks with no more than \_\_\_\_\_ stops.*

Week _____	Walk #1	Walk #2	Walk #3	Walk #4
Date				
Start Time				
End Time				
Total Time				
Number of stops to rest				
Route/ Distance Walked				

Comments, thoughts, or problems:

Walk 1:

Walk 2:

Walk 3:

Walk 4: