



Keeping In Circulation

the official newsletter of the Vascular Disease Foundation

our mission

The Vascular Disease Foundation's mission is "To reduce the widespread prevalence and effects of vascular diseases by increasing public awareness of the benefits of prevention, prompt diagnosis, comprehensive management and rehabilitation."

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Growing Arteries: Science Fiction or Reality?

Atherosclerosis, or hardening of the arteries, is a major health problem and is the number one cause of death and major illness in the Western World. Until recently, the medical field focused most of its attention on blockages in the heart arteries—a disease known as coronary artery disease. However, atherosclerosis does not affect just the heart arteries; it affects all arteries in the body. Collectively, these blockages cause major problems including strokes, kidney problems, and circulation problems in the leg. The latter is commonly known as peripheral arterial disease (PAD).

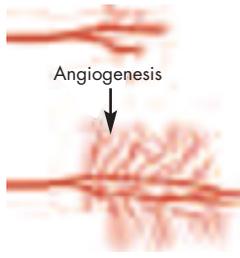
PAD is now recognized to be a very common disease and has been shown to affect up to 27% of the elderly and those in high-risk groups (smokers and diabetics). Unfortunately, the majority of people with PAD do not have symptoms. For those who do experience symptoms, the first and most common is intermittent claudication, a pain or aching in the leg or calf that occurs with walking and goes away with resting. When PAD becomes severe, it is called critical limb ischemia (CLI). Persons with CLI have pain in their leg without any activity, for example, when resting at night. The legs are often discolored, and they can develop ulcers that cannot heal. These patients are at very high risk of amputation and death from heart disease. (See *Keeping in Circulation*, Vol.4, No. 2, for more information on CLI.)

Despite the fact that PAD is almost as common as coronary artery disease, treatment options for patients with PAD are quite limited. Most of our therapies for PAD are designed to limit so-called risk factors for atherosclerosis. Patients are encouraged to stop smoking, have high blood pressure treated, control diabetes, start a diet, and use medications to control cholesterol. Although these therapies have positive effects on atherosclerosis, they do not correct the underlying problem of PAD, which is the inability to improve blood flow to the legs. In contrast, for patients with coronary disease, physicians have a large number of therapies that are able to modify and improve blood flow to the heart.

Angiogenesis is the growth of blood vessels that are already present in the adult body. The concept that scientists could grow blood vessels in such a way as to improve blood flow to a target organ such as the leg is a process known as therapeutic angiogenesis. In most situations, the investigation method known as therapeutic angiogenesis involves the delivery of proteins or genes that are designed to make selected proteins permit the growth of blood vessels. The most widely studied of these proteins are vascular endothelial growth factor (VEGF) and basic fibroblast growth factor (bFGF). Over the past 20 years, a large number of

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Growing Arteries: Science Fiction or Reality? (cont.)



studies have been done in animal models of human disease. These have demonstrated the possibility that these or related agents may be of help in humans. Space permits a short review of only the major studies that have been

conducted in the area of therapeutic angiogenesis for intermittent claudication, which is one of the major symptoms of PAD.

The TRAFFIC study enrolled 190 patients with severe intermittent claudication. These patients, on average, were as sick as patients with advanced heart failure, and many of the patients had undergone unsuccessful attempts at surgical and catheter-based (angioplasty) treatments designed to improve blood flow to their legs. The patients were randomized (which means that each one had an equal chance of being placed in any one of the groups) into three groups with three different types of treatment: two intra-arterial doses of a placebo (a treatment using a “sugar pill” without real medicine), one intra-arterial dose of bFGF followed by a placebo 30 days later, or two intra-arterial doses of bFGF at baseline at days 1 and 30. The major finding of the study was that bFGF was able to improve walking time in these patients. This treatment resulted in a small but significant increase in the blood pressure in the leg, compared to the blood pressure in the arm, which further suggests that therapeutic angiogenesis in humans is a sound concept.

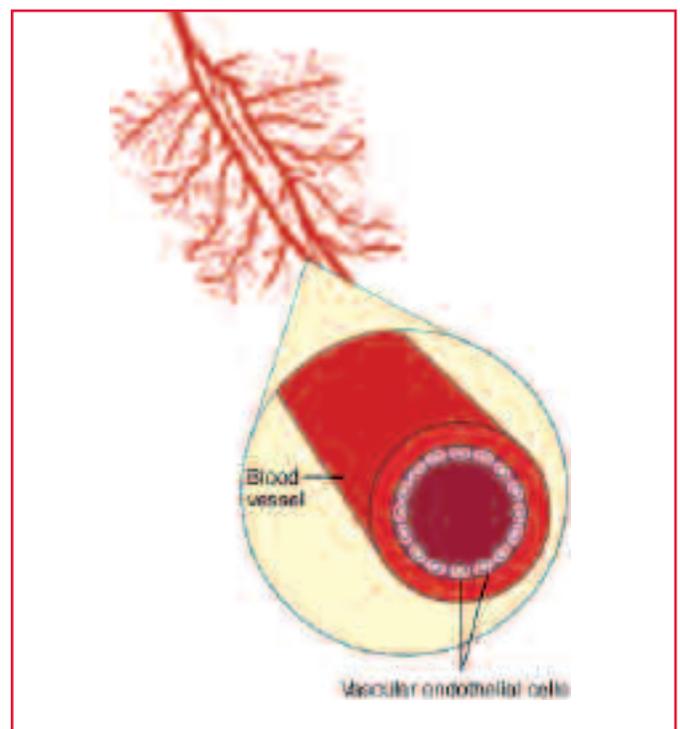
Not all of these studies have been positive. The RAVE trial studied patients with intermittent claudication which was present only in the calves of the legs. This is really present in only 10% of all patients with intermittent claudication. The study showed that, although all patients in the trial got better, there was no difference in the improvement between those who received the active medicine and those who received the placebo. Another study recently presented at a recent American Heart Association meeting was also disappointing since the medicine did not result in a significant increase in exercise time over the placebo. However, all of these studies help us to understand how to test these medicines. Future studies are planned in attempts to see how the medicines work.

Studies are also being conducted in PAD in the area of critical limb ischemia. Patients suffering from CLI are in desperate need for therapies. The earliest studies were conducted in Boston, Massachusetts, by the late Dr. Jeffery Isner. Over several years, a large number of patients with CLI were treated in open label manner (which means that everyone knew that he or she was receiving the real medicine) with very encouraging early results. Another angiogenesis agent, acidic FGF, is being used in clinical trials in the U. S., and some early results have been published. While encouraging, more studies are needed and are under way to evaluate this approach. Currently, in the U.S., there are several ongoing trials using medicines compared with placebos in patients with CLI including one trial that uses acidic FGF (Gencell) and the another that uses Hepatocyte Growth Factor (AnGes Mg). Data from these trials are expected to be available in 2005.

The field of angiogenesis is moving in a number of different directions. While many of the studies like those described above included the use of a single protein at a single time point, newer and more aggressive approaches are being taken. Approaches that have the

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Illustrations courtesy of National Institutes of Health



PERIPHERAL ARTERIAL DISEASE: BENEFITS OF PHYSICAL THERAPY

Peripheral arterial disease (PAD) can be a devastating disease. Many people lose the ability to walk beyond one or two blocks, walk on family vacations, go shopping, or enjoy an evening stroll. PAD is more common than one might think. It is estimated that 10 million people in the U.S. are afflicted with PAD. Of these, only 1.25 million have been diagnosed and are receiving treatment.

PAD can have a large effect on one's lifestyle. Because of decreased walking ability, people with claudication (leg pain from PAD that occurs with walking but goes away quickly with resting) have a lot of difficulty in carrying out routine daily activities. Not only walking, but housecleaning chores, mowing the lawn, grocery shopping, community activities, and family vacations may be affected. Over time, decreased strength and lower-extremity decreased range of motion (the amount a person can move the leg, ankle, and foot joints) can cause simple activities such as climbing stairs or getting up from the floor to become extremely difficult, if not impossible. Many people become housebound or dependent on others. Physical therapy may help many people with PAD to increase their walking ability and, ultimately, to improve their quality of life.

How can physical therapy help people with PAD? First, a physical therapy evaluation needs to be performed. During the evaluation, the physical therapist measures many things that might affect physical ability. Over time, a lot of people with PAD exhibit decreased strength, decreased range of motion in the joints, balance problems, gait disturbances (ways of walking that are incorrect), decreased sensation (especially with diabetes), soft tissue tightness, decreased flexibility of the muscles, and poor posture. Careful consideration is given to the person's present physical condition, current medications, other diseases or medical problems, and past medical history. The physical therapist examines each of these in detail and decides upon a treatment plan which is specific for each person.

In someone with PAD, it is common to find a decrease in the strength of the lower extremities, especially in the hips and calves, as well as decreased flexibility. Balance is also often affected in the legs. Decreased balance may increase the risk of falls, which

may lead to fractures in patients with osteoporosis. Changes in the gait, or walking pattern, can be present, making it more difficult to walk and increasing the energy used during walking. This causes a person to tire more quickly and shortens the distance that can be walked. Poor posture from a sedentary lifestyle can also make walking more difficult.

People also need a safe walking program that will help increase their walking distance. Patients who once were able to walk only one or two blocks can often double or triple their walking distance. A few have been able to work up to walking one or two miles with proper therapy, although such big improvements have not been supported in controlled scientific studies. A good walking program can dramatically decrease leg pain and increase the distance walked before the pain occurs. Here, a word of caution is needed: An individual should NEVER walk on a treadmill or start a walking program without knowing his or her heart status. Many people with PAD may have heart disease; indeed, the possibility of a heart attack is increased in this group. It is very important to check with one's doctor before beginning any walking or exercise program.

A physical therapist can work to resolve these problems and is highly qualified to help people start a safe, effective home exercise program. Many physical therapists see geriatric patients and are familiar with the symptoms and problems associated with PAD.

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PERIPHERAL ARTERIAL DISEASE

Continued from page 3

Typically, physical therapists use many “hands-on” techniques to correct soft tissue imbalances and to help loosen tight joints. These techniques help the patient reach the goals that were decided upon during the initial evaluation.

A team approach is optimal for the treatment of PAD. The vascular specialist, the physical therapist, and the patient all work together on a treatment plan. Medications and other medical problems may interfere with exercise, so it is essential to have a thorough medical history and physical examination prior to starting physical therapy. Reducing the patient’s risks for cardiovascular disease should also be included in any treatment plan for PAD along with a regular exercise program.

Ask your doctor today if physical therapy can help you begin a walking and exercise program—it’s never too late to start! Unfortunately, insurance and Medicare do not always cover these programs, so check with your insurance plan and doctor before starting the program.

About the Author: *Janis Stradley, DPT, is a physical therapist at Performance Physical Therapy, Inc., in Redlands, California. Dr. Stradley has been treating patients with peripheral arterial disease and working with the vascular surgeons at Loma Linda University Medical Center in Loma Linda, California, for several years. She has evaluated over 200 patients with PAD.*



Thank You

Corporate Grants: The Vascular Disease Foundation has recently received several grants from **Cordis Endovascular, Valentis, and Bard Peripheral Vascular**. These grants will be used to publish this newsletter, for the AAA section and the clinical trial section of the VDF web site, and for physician brochures on PAD. We are grateful for these grants which will enable us to continue providing service to the community.



John McDermott, President of Bard Peripheral Vascular, presenting check to Peter Gloviczki, VDF President

Growing Arteries, Continued from page 2

ability to change the levels of many different proteins at the same time are under way. One example is the hypoxia-inducible factor 1, which is made and used by the body to help tissue respond to the lack of oxygen. Hepatocyte growth factor is also an angiogenesis protein that may have a number of different effects. Finally, studies are underway using cells from a patient’s own body, given back into the leg to try to limit the amount and extent that blood flow to the leg is decreased.

The concepts that the body can build blood vessels around blockages and that the body has the ability to produce therapeutic angiogenesis have been recognized for a long time. Therapeutic angiogenesis tries to reproduce what we know the body is able to do in some cases. Encouraging data from some trials are now available. The approaches to the studies are getting better. Importantly, patients who are enrolled in clinical trials receive excellent medical care and, in many cases, they improve as part of their participation in the study. Finally, it is clear that poor blood flow is the problem in PAD and therapeutic angiogenesis, while still under study, may have the ability to improve blood flow and help patients with PAD.

About the Author: *Brian H. Annex, MD, is an Associate Professor of Medicine at Duke University Medical Center and Director of the Therapeutic Angiogenesis Research Program. He works at Duke University and the Durham VA Medical Center. Dr. Annex has published more than 60 manuscripts, 9 editors, and 9 book chapters. Dr. Annex has research support from the NIH, AHA, and the VA Medical System.*



Photo courtesy of Duke University Medical Center

Excellence in Care

Congratulations to our new honoree!

GARY W. LEMMON, MD, FACS

Dr. Lemmon has been nominated by his colleagues in Dayton, Ohio, for his efforts in "championing the advancement of care for the vascular patient." His vision for vascular care was realized when the Samaritan Vascular Institute opened in 2001. His efforts on behalf of patients contributed to his recent recognition by Good Samaritan Hospital with the "Physicians Making a Difference" distinction. Dr. Lemmon is a vascular surgeon and Associate Professor of Surgery at Wright State University School of Medicine. He is the author of multiple grants, publications, and textbook chapters; he is active in many medical organizations and is the founding president of Dayton Vascular Surgical Society.



To nominate a health care professional, simply send us a note or email with your tax-deductible donation stating who you are honoring and why they deserve the recognition. Checks or credit card charges of any amount are accepted. Be sure to identify the honoree's name, address and phone number so we can let them know of this honor. Also, send us your name and address so we can thank you as well! Find out more by contacting the Vascular Disease Foundation toll-free at 1-888-VDF 4INFO.

National Corporate Advisory Board Has Inaugural Meeting

The Vascular Disease Foundation's National Corporate Advisory Board held its inaugural meeting in Chicago on October 29. The goal of this new board is to reduce the devastating effects and the rate of mortality from vascular disease by providing support. Members participated in an annual roundtable discussion on vascular health initiatives and strategies to keep vascular health concerns high on the national agenda and discussed future plans and ideas to help the Vascular Disease Foundation increase public awareness of vascular diseases in 2005.



The inaugural members of the new National Corporate Advisory Board include James Wylie from Diomed Holdings; Faye Morin and Debbie Ryan from AstraZeneca, LP; Michael Madden from Cordis Endovascular; Don Lass from W.L. Gore & Associates; Michael Beller from Bard Peripheral Vascular; Craig Flanagan, Janet Ritter, and Paul Sovcik from Bristol-Myers Squibb/Sanofi-Synthelabo Partnership. The National Advisory Board meeting participants are pictured to the left with VDF president Peter Glociczki.

Back Row Left to Right: Michael Beller, Don Lass, Paul Sovcik, Peter Glociczki, James Wylie
Front Row Left to Right: Craig Flanagan, Sheryl Benjamin, Janet Ritter, Faye Morin, Debbie Ryan, Michael Madden

Contact the Vascular Disease Foundation at 1-866-PADINFO or www.vdf.org

A Checklist Beyond Glucose Control

You've probably heard a lot about diabetes and how devastating it can be. You probably know a friend or relative who has diabetes and have witnessed the effects which diabetes has on each person. But did you know that more people with Type 2 diabetes die from cardiovascular disease and stroke than from any other illness? Furthermore, were you aware that much of the suffering is from peripheral arterial disease (PAD)? Diabetes greatly increases the risks for a heart attack and stroke. There are ways to help reduce that risk. There is more to diabetes management than glucose control.

The factors that increase the risk for heart attack and stroke can be divided into two categories—those that you can change and those you cannot change. Risk factors that cannot be changed are age, gender, ethnic group, and family history of arterial disease. Because there is nothing that can be done about these factors, it is more important to focus on what can be changed and try to improve the things that make arterial disease worse. The major factors that can be changed are listed in Table 1 (below) and include blood pressure, smoking, cholesterol, and weight.

Diabetes increases the risk of cardiovascular disease or PAD when compared to someone without diabetes at any given cholesterol or triglyceride level. So, if you have diabetes, what can you do to reduce your cardiovascular risk? First, consult your physician regarding exercise. Once he/she has cleared you, begin walking, gradually increasing the distance. This helps improve glucose and cholesterol control and will help you to lose weight. It is very important to walk even if you have intermittent claudication (pain in the buttocks, thighs, or calves after walking a certain distance that quickly goes away when you stop and rest, and does not improve by changing the leg's position.) You should walk until it hurts, stop and rest, then continue on until your distance increases. Make sure you wear comfortable shoes and check the insides for tears or objects before putting them on. If they hurt your feet, do not wear them. See a dietitian to determine a plan to decrease cholesterol in your diet, and learn how to read labels to ensure good nutrition. Talk to your health care provider about medication to control cholesterol.

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FACTORS TO IMPROVE YOUR CARDIOVASCULAR HEALTH

Risk factors that can be identified and changed include:	With your health care provider's help, you CAN do the following:
Smoking	Stop smoking (patches, gum, programs)
Poor glucose control	Control glucose (keep at 100)
High blood pressure	Keep your blood pressure below 120/80
Poor cholesterol control <ul style="list-style-type: none"> • High LDL cholesterol (bad cholesterol) • Low HDL cholesterol (good cholesterol) 	Keep total cholesterol below 200 <ul style="list-style-type: none"> • Keep your HDL above 45 (males) or 55 (females) • Keep your LDL cholesterol under 100
Raised triglycerides	Keep triglycerides below 150
Obesity	Lose weight—every lost pound helps Eat healthy foods
Body fat distribution (apple-shaped body is worse than a pear-shaped body)	Exercise to improve health, including walking
Blood clotting	Take a baby aspirin daily if not allergic to it or other anti-platelet medication



NEW YEAR, NEW LOOK!

In addition to our new logo, we will kick off the new year with an exciting new look for *Keeping in Circulation!* With an increased number of subscribers offering economies of scale, and the generous contributions of individual donors and sponsors, we are pleased to publish the newsletter in full color. But don't worry: Our format and content will remain unchanged! We will continue to provide articles and information that you find helpful, interesting, and educational. The first issue of *Keeping in Circulation* was published in fall 2000. We are grateful to be able to continue to provide this free newsletter and further improve it as we begin 2004. We hope our readers will like the new colorful look to our newsletter!

GLUCOSE CONTROL CONTINUED

Persons with diabetes often have hardening of the arteries, starting from the tiny vessels in the foot and progressing up the body. Such arteries are difficult to connect with bypass grafts. Keeping the arteries as healthy as possible is an important reason to be under the care of a vascular specialist. Amputation is a real problem when you have diabetes. Remember, it took years to clog your arteries and it will take walking more than a few days or weeks to begin to restore good blood flow.

High blood pressure must be carefully controlled because of the higher risk of stroke and other cerebrovascular and cardiac problems. African-Americans have a much higher risk of high blood pressure than Caucasians. Blood pressure tends to rise in developed societies, so you cannot blame higher blood pressure solely on age. Still, it is even more important to keep blood pressure low as we become older. Additional things you can do are to decrease salt or sodium in your diet and to keep close tabs on your blood pressure readings. Take your pressure regularly and, if it tends to run above 120/80, discuss it with your health care provider.

Microalbuminuria and full albumin excretion in the urine are tests performed by your doctor. They are indicators of increased arterial risk factors. This may also indicate a need for better control of one's blood sugar levels.

Clotting in the blood can be worse in persons with metabolic syndrome (high cholesterol and triglycerides, high blood pressure, an apple-shaped body or belly fat, and insulin resistance). Clotting can cause the strokes or heart attacks we worry about. This is why it is important to get your weight and blood pressure down. All of the actions mentioned above can also help make this syndrome less of a risk. This is also why aspirin is prescribed for diabetes patients and those who are overweight or have high blood pressure.

Diabetes increases your chances of heart attack, stroke, and PAD without any other factors. If you stop smoking and keep your other risk factors under control, you can reduce your risk. Follow closely your health care provider's advice specific to you. It is a lot to manage along with your daily glucose control, but your improved health will be worth it.

Annual Fundraising Drive

The Foundation thanks everyone who contributed to its recent annual fundraising drive. "Once again, the generosity of our many friends and contributors has been tremendous," stated executive director, Sheryl Benjamin. She added, "The donations we received will enable us to continue to provide our vital messages to the public about vascular diseases."

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Dr. Frank Veith Receives Jacobson Award



The Vascular Disease Foundation announced that Frank J. Veith, MD, is the winner of the first Julius H. Jacobson II, MD Award for Physician Excellence. The award is named for Dr. Jacobson, who

was in attendance at the presentation. In early 2004, Dr. Jacobson seeded the award via a gift to the Vascular Disease Foundation. He is considered to be the pre-eminent pioneer in microsurgery. Dr. Jacobson was the first surgeon to bring a microscope into the operating room for the entire range of surgery beyond the eye and ear. His early work led to such advances as coronary artery surgery and limb re-implantation. It is estimated that today, half of all neurosurgical operations utilize microsurgical techniques.

The award was presented to Dr. Veith in November in New York City by Dr. Peter Gloviczki, president of the Vascular Disease Foundation. Upon presenting the award, Dr. Gloviczki stated that Dr. Veith had been selected for his exceptional contributions to physician education, his leadership in the investigation and management of vascular diseases, his commitment to excellence in patient care, and his untiring efforts to promote the art and science of vascular and endovascular surgery.

Frank Veith, MD, is the William J. von Liebig Chairman for Vascular Surgery and Professor of

Surgery and Vice Chairman of the Department of Surgery at Montefiore Medical Center and the University Hospital for the Albert Einstein College of Medicine in New York City. Dr. Veith is a well-respected clinician, educator, researcher, and pioneer in the field of vascular disease. He is an expert in many areas of vascular disease, including critical limb ischemia, aortic and carotid artery reconstructions, and endovascular interventions. He is among the most prolific authors and co-authors in the field of vascular surgery with more than 1,000 original articles and chapters written in prestigious medical journals and books.

Dr. Veith hosts an annual vascular educational meeting, which is widely recognized as providing one of the most significant contributions to physician education on vascular disease during the past three decades. Dr. Veith is highly respected for his personal and professional integrity; he is a role model for generations of vascular surgeons and endovascular specialists.



CONGRATULATIONS, DR. VEITH!

Contact the Vascular Disease Foundation offices for more information about the Julius H. Jacobson II, MD Physician Award for Excellence.

IN THE NEWS—AARP CONVENTION



Marge!

The Vascular Disease Foundation staff attended the AARP national meeting in Las Vegas in October. Over twenty thousand participants attended this entertaining and educational meeting. VDF board member Marge Lovell gave a stage presentation on circulation and peripheral arterial disease, "Facts about Circulation: What You Should Know" to a packed audience. Many attendees stopped by afterwards to thank Marge. We do, too.... Thanks,

Many attendees also stopped by our booth to enter a drawing for a gift certificate for Barnes and Noble bookstores. Our winner was Sharon Marshall of Danville, Virginia. Congratulations, Sharon!



VOLUNTEERS

The Vascular Disease Foundation could not possibly achieve its goals without the incredible support of its many volunteers. We at the Foundation are honored and privileged to receive hundreds of hours of donated time to assist us with everything from writing articles to helping at events. We recognize and appreciate these wonderful volunteers who donate their time to serve those with vascular disease. Thank you!

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We have tried to recognize all those who volunteered in 2004. However, if we omitted a name, we apologize. Please let us know so we can correct this oversight. For information on how you can volunteer, please contact Sheryl Benjamin, Executive Director, Vascular Disease Foundation, 3333 S. Wadsworth, # B104-37, Lakewood, CO 80227.



Frequently Asked Questions

- Q.** My legs often ache or throb if I am on them too long. Is this related to my varicose veins?
- A.** Since there may be other conditions related to your leg discomfort, it is recommended that anyone experiencing leg pain have an evaluation by a medical provider. However, with varicose veins, leg aching is a common complaint. The longer you stand still, the more blood will pool in the veins near your ankles and cause the usual symptoms of ache, swelling, and, over time, even ulcers. People who work in standing positions, such as hairdressers, bank tellers, assembly line workers, or cashiers, may be particularly bothered by these symptoms. If possible, taking breaks to raise the legs or walking can help relieve the discomfort from blood pooling, as can the use of prescription support stockings.
- Q.** My doctor recommended that I have a carotid endarterectomy. What is involved and how safe is it?
- A.** Carotid endarterectomy is a surgical procedure to remove plaque that has built up in the arteries along each side of your throat, the carotid arteries. The procedure takes about an hour, but the speed of the operation is less important than the skill of the surgeon. It is important to ask the vascular surgeon what his or her mortality rate is for this operation and, if it is more than one or two percent for someone without symptoms, then check with another surgeon. This procedure performed by an experienced surgeon is relatively safe and successful. Many patients enter the hospital the morning of the operation and stay only a day. Once home, you should stay quiet for a few days and then return to normal activities gradually over the next week or so, without any severe straining for four to six weeks.



This new section will be activated whenever *Keeping in Circulation* receives a suggestion that might be helpful to other readers. Please send your ideas and comments to Editor, *Keeping in Circulation*, 3333 S. Wadsworth, #B-104-37, Lakewood, CO 80227.

Walking Warm Up Tip

Dennis K. Flood, MS, is a director of a cardiac rehabilitation center in Sarasota, Florida. He has a suggestion that may help improve walking distance. He suggests that you stretch your legs before walking. His technique? Hold onto a wall or the frame of a doorway. Then, stand on a phone book or other large book with your shoes on, letting your heels hang over the edge. Raise and lower your heel to stretch your calf muscles. Then go for your walk. If this tip works for you, or doesn't, please feel free to let us know. We look forward to receiving tips and feedback from our readers!



LETTERS

"Thanks for Dr. Westfall's article. I don't want an amputation and I found his information very helpful."—T. Gordon

"I just received my first newsletter. My wife and I read it and we would like to keep receiving it. I have vascular disease and had a stroke and a bypass graft. If you have other medical newsletters, we would enjoy them also."—D. Hall

"Thank you kindly for your assistance. Your publication, *Keeping in Circulation* and your web site open up pathways to guide me reasonably well. Little gems appear everywhere."—N. Waltman



**More Online
Information About
Vascular Disease
at www.vdf.org**

Research Reviews...

Current clinical research studies may one day help in the diagnosis, prevention and treatment of vascular diseases. Studies listed in this section must answer an important scientific question about vascular disease and must be approved by an Institutional Review Board. (By listing these studies, the Vascular Disease Foundation is not endorsing the studies, the study center, the study sponsor, or the treatment.)

1. In a study entitled "Evaluation of Large Vessel and Microvascular Disease with Contrast Enhanced Ultrasound of Leg Skeletal Muscle," the University of Virginia School of Medicine will study whether an ultrasound of the calf can be used to detect impaired blood flow due to PAD. Ultrasound results will be compared to other noninvasive tests such as ABI and pulse volume recordings, as well as angiograms.
Contact: Lisa Womack at 434-982-4008 or email: lms5a@virginia.edu
2. The Division of Cardiovascular Medicine at Stanford University is investigating the "NO PAIN Study: A Double Blind, Placebo-Controlled Study of L-Arginine in the Treatment of PAD." The NO PAIN study will determine if administration of L-arginine

can improve blood flow in people with PAD and thereby improve walking distance and quality of life. L-arginine is a semi-essential amino acid found in our diet. The body converts L-arginine into nitric oxide (NO), which is a powerful vasodilator, i.e., it increases blood flow. To date, the study has found that people with vascular disease, or with risk factors for vascular disease, produce less NO. Study investigators have also found that they can increase NO synthesis in these individuals by administering L-arginine. Now they are trying to determine if, by improving vessel relaxation, they can improve blood flow in the legs and improve walking distance in people with PAD.
Contact: Kathi Kari or Gina Droll (para Español) at 650-723-4064.

For more information on these and other clinical studies, visit the new Clinical Trials Resource Center on the Foundation's web site at www.vdf.org.

The Vascular Disease Foundation and any sponsors disclaim, either explicitly or implicitly, that the drug, biologic or device listed here is safe or effective for the purposes under investigation, or that the test article is known to be equivalent or superior to any other drug, biologic or device. Additionally, no claims are made regarding the scientific utility and conduct of clinical trials or research studies listed.

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Thank you to our recent contributors

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Keeping
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Start Planning Summer Events Now!

We need your help to keep our circulation growing! These cold winter days are the perfect time to plan summer events that could help the Vascular Disease Foundation. We would like to have an event in every state this summer. Can you help? Organize your club or friends to do something fun while raising money for the Foundation. For example, host a bingo, bunco, or bridge tournament where everyone pays an entry fee. Part of the fee can pay for prizes, and you can donate the rest to the Vascular Disease Foundation. A brochure with more ideas is available. Please contact us for a copy. Here are a few more ways you can help:

- ✓ Bingo or bridge games or tournaments
- ✓ Mulligans for VDF
- ✓ Bake sale
- ✓ Golf games or tournaments
- ✓ Walkathon
- ✓ Potluck dinner

Don't forget that we'll help, too. We can supply newsletters and information, and we will post your event on our web site! Contact us to find out how to obtain VDF logo pins and shirts to use for door prizes. We also have thank-you gifts for those who organize these fundraisers. And we'll be pleased to recognize all such events in a future newsletter with pictures that you send in. So, have fun in your own way and help the Vascular Disease Foundation at the same time. We're counting on you!

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