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Keeping In Circulation

the official newsletter of the Vascular Disease Foundation

our mission

To reduce death and disability from vascular diseases and improve vascular health for all Americans.

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Lymphedema

What is lymphedema? Although many people have never heard of this condition, lymphedema is a common cause of leg or arm swelling due to the collection of too much lymph fluid in a part of the body. Nearly one million Americans are affected by this condition, and the number of people worldwide with it may soon approach 100 million. The swelling produced by lymphedema is usually not painful, but it may limit a person's ability to use his or her arms or legs, increase the risk of certain infections, or cause emotional distress.

What causes lymphedema? Most of the human body is made up of water and other fluids. Sometimes too much fluid will collect within a certain part of the body, such as an arm or leg. When this occurs, the extra fluid normally drains back into the blood through long, thin tubes called *lymph vessels*. If these tubes become plugged or broken, the extra fluid builds up and causes the undrained body part to swell.

Many things can damage the lymph vessels and cause lymphedema, including cancer, infections, surgery, certain injuries, radiation therapy, insect bites, birth defects, and others. In some cases, an injury that seems minor may produce severe swelling.

Can lymphedema be treated? It is rarely possible to "cure" lymphedema, but it can usually be treated with success. Elevating the swollen limb whenever possible will help the excess fluid to drain back into the blood. When necessary, other methods, including tight wraps, pumps that squeeze the swollen body part, and massage, may be used to push fluid out of the swollen areas. After the swelling has been decreased as much as possible, the patient wears a tight-fitting elastic stocking or sleeve to prevent fluid from building up again.

How do I know if I have lymphedema? Your doctor can usually tell if you have lymphedema by asking you questions about your swelling and by examining you. If necessary, there are tests that can detect blockages in the lymph vessels. The usual test requires a small amount of radioactive material to be injected through a small needle into the swollen area. Except for the minor skin injection, this test is not otherwise dangerous or painful.



"Lymphedema. The leg became swollen after an operation to remove a tumor growing near the left groin. The tumor, and the surgery to remove it, damaged the lymph vessels and produced severe swelling."

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Conclusions: Lymphedema is a chronic common cause of swelling that can affect anyone. It can be easily diagnosed and effectively treated with simple measures. It is unusual to completely cure lymphedema, but most people who receive proper treatment for it can lead normal, active lives.

About the Author: *Thom W. Rooke, MD is the Krehbiel Professor of Vascular Medicine and Section Head of Vascular Medicine at the Mayo Clinic, Rochester, MN. He has published many articles and books and is a popular lecturer. Dr. Rooke specializes in peripheral vascular medicine, sclerotherapy for varicose veins, lymphedema, and erythromelalgia.*



Personal Care Measures for Lymphedema

Personal hygiene and avoidance of injury are essential in the prevention of lymphedema-related problems, especially skin infection. Follow these simple personal care measures to help keep skin healthy and reduce the risk of infection or swelling to worsen.

1. Keep skin as clean as possible. Dry skin thoroughly, but gently, especially between toes.
2. Wash hands frequently, applying lotion after each hand-washing to avoid over-drying skin.
3. Wear compression support garments as prescribed during waking hours, removing for sleep. Perform skin care before and after use. Wash gently and hang to dry; have spare garments for alternate use.
4. Avoid blood pressure cuffs, needle sticks, injections, or procedures on the affected limb. Wear a “lymphedema alert” bracelet.
5. Immediately report any new swelling or signs of infection such as redness, pain, warmth, streaks, rash, blisters, fever, or flu-like symptoms.
6. Avoid tight clothing.
7. Avoid excess heat – overly hot showers, sun, hot tubs/saunas. Avoid sunburn and keep as cool as possible in summer weather.
8. Wear cotton-lined household gloves for housework; use garden gloves for gardening.
9. Carefully trim nails; see a podiatrist if necessary. Check feet with a mirror for wounds, fungal infections, or cracked skin. Wear extra-wide, extra-depth shoes.
10. Avoid trauma – pet scratches, insect bites, burns, sports injuries, bruising. Seek appropriate care immediately. Wash all cuts with soap and water and apply antibiotic ointment.
11. Maintain normal body weight. Follow a low-fat, low salt, high-fiber diet plan. Exercise daily as ability allows – walking, swimming, light aerobics, biking, yoga, and stretching are recommended.

*Excerpted from **Lymphedema: A Patient's Guide** by Patricia A. Lewis, MSN, FNP, Bassett Healthcare, 1 Atwell Road, Cooperstown, NY 13326. Used with permission by the author.*

Lymphedema Resources

Some helpful resources about Lymphedema:

Circle of Hope Lymphedema Foundation, Inc.

Tel: 203-758-6138

Web: www.lymphedemacircleofhope.org

Lymphatic Research Foundation

Tel: 516-625-9675

Web: www.lymphaticresearch.org

Lymphovenous Canada

Web: www.lymphovenous-canada.ca

National Lymphedema Network

Tel: 800-541-3259

Web: www.lymphnet.org

Lymphedema: A Patient's Guide, by Patricia A. Lewis,

MSN, FNP, Bassett Healthcare, 1 Atwell Road,

Cooperstown, NY 13326. Cost: \$12.

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Walking and PAD

Regular walking to the point of experiencing moderate pain, then resting briefly, and repeating this process, will improve one's ability to walk more than any other known exercise and most other medical and surgical treatments. Studies have shown that for people with PAD, a structured walking program can make a big difference, enabling people to double or triple the distance they can walk before developing symptoms, as well as their total walking distance before having to stop. Not only is walking one of the best exercises, it is also the simplest and least expensive. It requires no special talent or any special equipment except good walking shoes. Moreover, it can be done at any age. A walking program is the key to successful treatment of PAD.

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. VDF's new brochure, "Focus on Walking" can help you start your own walking program or continue on your own after starting with a supervised program. The following are the key points from this brochure.

Getting Started

Before starting your own walking program, discuss your plans with your health care provider in order to make sure there are no medical conditions or physical limitations that would prevent you from safely walking. Your health care provider may have specific instructions on how hard to exercise, as well as how long and how many times per week.

Proper Equipment – Shoes!

Wear shoes that fit comfortably – neither too tight nor too loose. Don't wear shoes that are too worn. Always wear socks or stockings to prevent blisters, especially if you have diabetes.

Set a Schedule

It's 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. This can be done at any convenient time of the day.

Select a Place

Choose where you want to walk. You may wish to vary the place on a daily or weekly basis.

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. For some individuals, it might take up to six months to see improvements. Set reasonable goals by knowing your limits before starting the program. Then set goals to increase your time and distance by 10% or 20% per month.

Your Walking Program – Step by Step

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 thigh and the calf.

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. 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 probably are not working hard enough. If you cannot walk faster, try walking up a hill.

Continued on page 4



Walking and PAD continued from page 3

Step 3 – Stop and Rest

Stop walking after you reach a pain level of three or four and cannot walk farther. Rest until the pain is gone. It may take several minutes.

Step 4 – Repeat the Walk/Stop Steps

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.

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

Step 5 – Finishing

Finish by doing some gentle leg stretches of the thigh and calf muscles to help reduce soreness of the muscles. Record your session in a walking log.

Success!

If you keep it up, you'll soon be walking farther, with less pain. Now that's something to get excited about!

To request your copy of VDF's new brochure, "Focus on Walking", contact VDF at 1-866-723-4636 or at info@vdf.org, or at 1075 S. Yukon St., Ste. 320, Lakewood, CO 80226.

IN THE NEWS

Sixth Annual "Keeping in Circulation" Program in Denver. It's time again for our annual "Keeping in Circulation at the Gardens" walk and program, held each August in Denver. This is the sixth year for kicking off September Vascular Disease Awareness Month. The activities will be held on August 30, 2006, at Lakewood Heritage Center. The program starts at 9:00 a.m. and, as always, is free. Come hear some talks about vascular disease and sign up for a free ABI screening for PAD. For more information, call 303-989-0500, or visit www.vdf.org.

Free Vascular Screenings in September. The annual Legs For Life® screenings will be conducted across the country during September. Most locations provide free screenings for peripheral arterial disease, abdominal aortic aneurysms, and carotid and venous disease. Screening locations will be posted in August. To find one near you, visit www.vdf.org or www.legsforlife.org.



New Brochure. The VDF has just published a new brochure about walking and PAD, made possible through an unrestricted educational grant from Sigma Tau Research, Inc. The brochure describes the importance of a walking program to improve the symptoms of leg pain and walking distance. Contact us by letter, e-mail, or phone to have an individual copy sent to you. Additional copies are also available for health-care professionals.

AARP Convention. The VDF will have an information booth at the AARP national convention, Life@50+, to be held in Anaheim on October 26-28. We will also deliver a presentation on "What You Should Know to Stay in Circulation." If you are attending, be sure to stop by our booth #401 to say hello.

KIC Survey Results

Thank you to those who replied to our survey in the last issue of *Keeping in Circulation*. We received a tremendously positive response. And if you have not yet sent it in, please do. We welcome your opinion too! From the surveys we have tabulated, you indicated overwhelmingly that what you like most about *Keeping in Circulation* is the in-depth disease information. We also learned that 70% of those who replied have vascular disease or have a family member with vascular disease. And we send our thanks to that 55% of you who share your newsletter with one or more other persons. We appreciate your input and will continue to refine the newsletter so it provides you the information you desire.

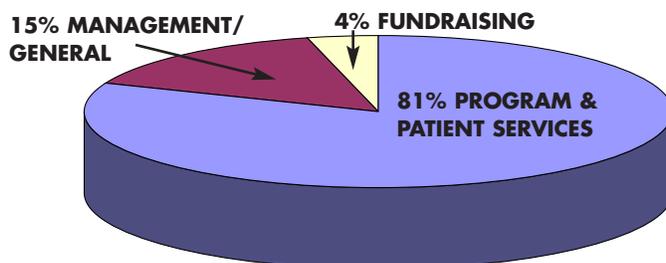
2005 ANNUAL REPORT NOW AVAILABLE

VDF's 2005 Annual Report is now available. To preserve the pages in *Keeping in Circulation* focused on disease information, we are not including the Annual Report, but are making it available to you. To request a copy, contact us at 1-888-VDF-4INFO, or write to our Lakewood address or to info@vdf.org. Those who contributed in 2005 will be automatically mailed a copy in July.

The Vascular Disease Foundation supports its mission to provide vascular disease education and advocacy. Highlights of VDF activities from 2005 included:

- Worked closely with development of the PAD Coalition and its committees and programs to develop a national PAD awareness campaign in partnership with the NHLBI and 43 member organizations.
- Helped with the PAD Coalition first annual meeting.
- Redesigned the VDF Web site. Visitors to the VDF site come from as many as 120 counties. More than 250 other Web sites in the U.S. and abroad link to the Foundation or reference it as an expert resource.
- Published a new brochure on varicose veins.
- Published four issues of *Keeping in Circulation*, the official newsletter of the Vascular Disease Foundation.
- Supported dozens of health fairs and programs across the United States with materials and information.
- Provided information to the public and to medical professionals at thirteen major meetings and conferences.
- Hosted the fifth annual "Keeping in Circulation at the Gardens" information and screening program in Colorado.
- Received 400,000 visits, hundreds of phone calls, e-mails, and letters from patients and others seeking information and assistance.
- Helped pass the SAAAVE Act through the many letters sent by *Keeping in Circulation* readers to U.S. Congressional members.
- Conducted professional training workshops on the Ankle-Brachial Index, which is used to diagnose PAD.

2005 DISBURSEMENTS



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The Vascular Laboratory

Vascular laboratory! The name conjures up an image of experiments, white lab coats, and test tubes. But a vascular lab is far from that image. A vascular lab is a place for conducting examinations to identify vascular disease utilizing safe, non-invasive (no needles or dye) methods such as ultrasound. Vascular lab tests provide your doctor with important information such as whether a section of the artery has become narrowed and is causing reduced blood flow, if the valves in veins are working properly, and the presence and location of clots, inflammation, or abnormalities. There are vascular labs in hospitals, clinics, and private practices all around the world. Many vascular labs are accredited and the staff are certified. This means the lab meets certain standards and the people doing the tests must keep up with new procedures by regularly participating in continuing education programs.

Your health-care provider is the one to specify exactly what tests need to be done. You may or may not have to remove any clothing, depending on the type of test your doctor wants. In any case, wear comfortable clothing. Most of the time there is no special preparation for these tests. The examination may last 20-60 minutes, depending on what tests are being performed.

When it's time for your exam, you'll be asked to lie down and relax. For an ultrasound examination, the room may be dimmed so the technologist can easily see the monitor. Ultrasound examinations are the most common in the vascular lab because they provide reliable information about arteries and veins in a safe and painless way: no electrical currents, shock waves, needles, or dye. Ultrasound is created by tiny crystals in a transducer or handheld controller that vibrate, sending sound waves into the body. The time and quality of the echoes that bounce back to the transducer are processed into waveforms or images. To begin the examination, the technologist will put ultrasound gel on your skin in the area which the doctor wants the technologist to inspect. Ultrasound technology doesn't work well if there is air between the ultrasound transducer and your body. Gel gets rid of any air between the transducer and your skin. These ultrasound signals can also be converted into images that are displayed on a television monitor and into audible sounds that can be heard. The colors on the screen represent the moving things—such as blood. You will notice that every so often you will hear noise and then every so often you won't. That's because the technologist is "Doppler sampling," which measures how fast the blood flow is moving.

In addition to ultrasound examinations, blood-pressure cuffs might be placed around your ankles or legs as a test providing information about how much pressure is in your circulatory system. Tracings, such as EKGs, may also be taken from those same cuffs. Your doctor may request a treadmill test to see if any symptoms of "claudication" can be reproduced and measured. Claudication symptoms often include pain or aching in your legs when you walk, but which go away as soon as you stop moving. To reproduce these symptoms, you will be asked to walk on a treadmill for five minutes (or less if you cannot continue the full time). You will lie back down on the examination table and the technologist will repeat the blood pressure on your ankles and arms.

After your tests, you should not have any pain and can go about your normal activities. Your tests will need to be reviewed and interpreted, so your technologist will not be able to give you the test results that very day. The test results will be sent to your health-care provider, who will then give you the results of the vascular lab tests. Your health-care provider will consider the examination along with your symptoms, history, your physical examination, and any other tests you may have had such as blood tests, in order to determine a diagnosis and treatment plan.

All in all, vascular testing is reliable, safe, and easy. The information from vascular tests can provide key information to your health care provider about your arteries and veins.

Keeping in Circulation is grateful to Kathleen M. Greene, MS, RN, RVT, RDMS, for assistance with this article. Ms. Greene is Technical Director, Tufts-New England Medical Center in Boston, and on the Board of Directors of the Society for Vascular Ultrasound.



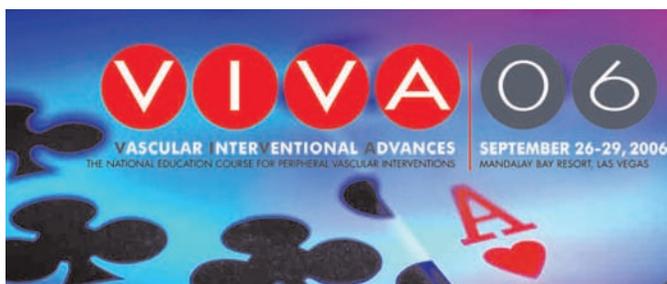
Photo courtesy of Tetrad Corporation, a subsidiary of W. L. Gore & Associates

On Your Mark, Get Set...GO!

What a beginning! We have had a great response to our race and walk events that will take place this fall. You can help by participating in the event, making contributions to a participant, volunteering to help at the events, and by letting your friends and relatives know about these fun events. By helping, you will benefit the thousands who derive help from our newsletters, Web site, and other materials as we strive to fight vascular disease.

Run For Your Legs...and Your Life 5K Run/Walk – Wednesday, September 27

Join us for the First Annual VDF/VIVA Fun Run & Walk to help VDF fight vascular disease and improve vascular health and awareness. The 5K event is scheduled for Wednesday, September 27, 2006. Why not take advantage of a beautiful fall morning in Las Vegas, join the fun, and run or walk for vascular disease? Visit the VDF Web site at www.vdf.org to register, sponsor a participant, or to get more information, or call VDF at 1-866-723-4636.



Virginia Grove Memorial Walk for Vascular Disease – Saturday, October 7

Virginia Grove passed away last year after battling peripheral arterial disease. Virginia's family, moved by her valiant fight, is determined to help raise awareness about vascular disease and do everything they can to help increase awareness in the hopes of helping people who are living with vascular disease.

If you live near Queen Anne's County, Maryland, please consider participating in the walk, raising funds, donating or volunteering to help Virginia's family work on behalf of people with vascular disease. Contact the VDF office for more information at 1-888-VDF-4INFORM or visit the Upcoming Events page on our Web site at www.vdf.org/events.php.

Chicago Marathon – Sunday, October 22



Registrations for the 2006 LaSalle Bank Chicago Marathon have been amazing this year. The marathon reached its participant cap of 40,000 runners in record time and registration was closed at the end of May, six weeks earlier than last year. We are pleased to have 24 runners join the inaugural Vascular Disease Foundation team and we look forward to meeting them in Chicago. We now need your help to support these runners with your contributions and encouragement. If you live in the Chicago area, join our cheer team and volunteer to come to the marathon and encourage our runners. A marathon is a challenging race and we are thrilled that these runners want to help raise awareness about vascular disease by running with our team. Won't you consider making a contribution to VDF to show your support for our marathon team and to help raise much needed funds? As you know, VDF works hard to increase awareness about vascular diseases like peripheral arterial disease, abdominal aortic aneurysms, varicose veins, carotid artery disease, and more. Our goal is to raise \$50,000. To do that, we need your help! Call 1-888-VDF-4INFORM (888-833-4463) to make your donation, or send it to our office at VDF, 1075 S. Yukon St., Ste. 320, Lakewood, CO 80226. Credit card donations can be made through our Web site at www.vdf.org or may be taken over the telephone at 1-866-723-4636. To see who's running and to designate your donation on behalf of one of our wonderful team members, go to www.vdf.org and click on the Chicago Marathon link. Just imagine how exciting it will be to let millions watching the Marathon hear about vascular disease! You can help!

Have you seen our web site?

The VDF web site has LOTS of great information for you. Many doctors tell their patients to check us out. You should, too. We have over 20,000 visitors each month. And we update information frequently. Read extensive disease information, patient stories, our list of frequently asked questions, and about our sponsors and partners. Also you can find past issues of *Keeping in Circulation* in our Resources section, plus find out about upcoming events, clinical trials, and more. So check us out today! Go to www.vdf.org

Herbal Medications and the Vascular System



The Natural Solution.
Live longer with vitamins.
Increase your longevity.

These headlines from mailings and ads make it seem like the only way to be healthy is to take herbs, vitamins, or food supplements. Not true. The optimal nutrition is through a balanced, reasonable diet. However,

there are times when it is difficult to maintain a balance diet. If you are one of the 60% of Americans who have tried or are taking herbal remedies, or food supplements, you should know some important facts about them and how they differ from traditional medicines. (For the purpose of this article, all herbal and natural medications as well as food supplements will be referred to as “herbals.”)

In the United States, medical drugs must be tested and approved by the Food and Drug Administration (FDA) for safety and efficacy. They are also tested for purity, consistency (same amount of drug in each pill), and stability, and what they are intended to treat, diagnose, or cure must all be checked. On the other hand, herbal medications and food supplements are not tested by the FDA. Herbal or all natural does not necessarily mean safe. Dirt is all natural and organic, but one wouldn’t want to eat it. Few studies have been conducted on herbals, and those which have been conducted have shown that the amount of the amount of the herbal contained in the bottle you buy is not the same for all brands, or even within the same batch of herbal. This means you don’t know how much or how little you are getting when you take a dose. The herbals also may be contaminated. Some studies have found many bacteria, fungi, and other substances in the herbals.

Most importantly, it is essential to know that herbals can interact with prescription medications. Some of the interactions are known, but not all drugs or doses of herbals have been studied. Therefore, you may be risking bad side effects, or ineffectiveness of your medications, if you take herbals with your medications. This is particularly true for people on medications for vascular disease.

People with vascular disease often are on many medications. It is important to tell your health care provider about each and every herbal, natural or vitamin supplement, or drug that you are taking. If unaware, he or she may prescribe a medication that has an action that is either increased (potentiated) or decreased when combined with the herbal. There are no warning labels or

pharmacy notes that will tell you that you may have an interaction. This applies for both the prescription and the herbal.

One common drug affected by herbals is warfarin (Coumadin®), used to help prevent blood clotting. Some herbals make warfarin work more – increasing the risk of bleeding. Others make warfarin work less – increasing the risk of clotting. Either of these could cause a dangerous result. Look at chart 1, which shows a few of the herbals that interact with warfarin. Make sure you use care and check with your health care provider before adding any herbal when you take warfarin. When taking warfarin, avoid common herbals beginning with the letter G – ginseng, green tea, garlic, ginger, and ginkgo – because all of these affect the action of warfarin.

Other drugs taken for blood thinning such as aspirin or other nonsteroidal anti-inflammatory drugs (NSAIDs), ticlopidine (Ticlid®), or clopidogrel (Plavix®), may be affected by the same herbals as warfarin. Check with your health care provider before adding herbals with these drugs.

Many people who have vascular disease also have diabetes or hypertension. Blood sugar control can be affected by herbals. Garlic, ginger, ginseng, hawthorn, Ma Huang, and nettle all may cause your blood sugar to become out of control. Hypertensive drugs of many types can be affected by black cohosh, devil’s claw, ginseng, goldenseal, hawthorn, licorice, Ma Huang, and yohimbe. These herbals may be used for many reasons. Their bottle labels will not mention that they interact with drugs you may be taking. This is a *partial* list of interactions and should not be considered as the only or a comprehensive list of herbals that affects drugs.

Just remember, herbal or all natural does not necessarily mean safe. Make sure your health care provider is given a complete list of every medication, herbal, and dietary supplement you are taking. It may make the difference between having a bad reaction and being safe.

Some of the herbals that affect warfarin and may cause:

Bleeding		Clotting
Angelica	Ginger	Alfalfa
Black cohosh	Ginkgo	Dandelion
Chamomile (English)	Kava kava	Ginseng
Clove oil	Milk thistle	Green tea
Devil’s claw	Papaya	Nettle
Don guai	Rosehips	Seaweed
Feverfew	Vitamin E	St. John’s wort
Flax (flaxseed)	Willow bark	Vitamin K
Garlic	Yarrow	
	Zinc	

PAD COALITION Campaign Launch Scheduled for September



The PAD Coalition is moving into high gear in preparation for a September launch of its collaborative campaign with the National Heart, Lung, and Blood Institute to increase public awareness of PAD. Many committees have been formed to help review and edit the many elements and pieces of the campaign that will be used to educate the public and their physicians. The Coalition has a Web site (www.padcoalition.org)

with lots of information about the campaign and about PAD.

This is an exciting program and is VDF's highest priority this year. The Coalition now has over 40 members and its membership continues to grow. The Coalition is conducting a survey to assess the public's current knowledge about PAD. This will later be used to assess the success of the campaign.

The launch will occur during the week of September 18, which we will proclaim as PAD Awareness Week. There will be radio and television news stories and public service announcements. Watch for articles starting in September throughout the fall in major magazines and in newspapers. The theme will be announced shortly and we will encourage all to join in the activities to "stay in circulation." To stay current on the plans and activities, visit the Coalition or VDF Web sites.



Dr. Robert Rutherford Receives Jacobson Award



Robert B. Rutherford, MD, FACS, FRCS, professor emeritus of the University of Colorado Health Sciences Center, received the 2nd annual Julius H. Jacobson II, MD. Award for Physician Excellence given by the Vascular Disease Foundation.

The award is named for Julius H. Jacobson II, MD, considered to be the preeminent pioneer in microsurgery. In early 2004, Dr. Jacobson seeded the award via a gift to the Vascular Disease Foundation.

The award was presented to Dr. Rutherford by Dr. Alain Drooz, President of VDF and Dr. Peter Gloviczki, VDF past-President, on June 2, 2006, at the Annual Vascular Meeting in Philadelphia.

In addition to his work as an educator and editor, Dr. Rutherford is best known for his efforts in developing uniform standards for reporting practices while serving as chairman of the Committee on Reporting Standards of the Society for Vascular Surgery and the American Association for Vascular Surgery (SVS/AAVS). He has published over 400 articles and book chapters and six textbooks, including the

well-known text, *Vascular Surgery, 6th ed.* (W.B. Saunders, 2005), in addition to editing the quarterly review, "Seminars in Vascular Surgery," for almost two decades and co-editing the "Journal of Vascular Surgery" from 1996-2003.

Dr. Rutherford has been president of four professional societies, notably the Western Vascular Society and the American Association for Vascular Surgery (formerly ISCVS). He has served as a director of the American Board of Surgery and was chairman of the Vascular Surgery Committee of that board. He is a former member of the board of directors of the Vascular Disease Foundation. Dr. Rutherford co-chaired the Transatlantic Consensus on Peripheral Arterial Occlusive Disease (TASC) and, in 2005, was the recipient of the first Lifetime Achievement Award given by the Society of Vascular Surgery.



Wanted: Nominations for Jacobson Award for Physician Excellence

Nominations for the 2006 Julius H. Jacobson II, MD, Award for Physician Excellence are being accepted. This prestigious annual award recognizes outstanding contributions to physician education, leadership, or patient care in vascular disease. Thanks to the continued support of Dr. Jacobson, new nominees are being accepted through August 31, 2006. For complete criteria, please contact the Vascular Disease Foundation, 1075 S. Yukon St., Ste. 320, Lakewood, CO 80226, at info@vdf.org, or at 1-888-VDF-4INFO.

SUMMERTIME



Ahhh! Summertime. That wonderful season when we enjoy walks in the park, iced tea, ice cream cones, barbecues, and picnics. Unfortunately, many with vascular disease cannot easily enjoy walks in the park. In fact, often they can walk only a block or two, or even just to the mailbox.

For others, the swelling in their legs is intensified with the heat and humidity and is painful and uncomfortable. And wearing support stockings can be hot in the summer. Unfortunately, chronic diseases don't take a break during the summer. Following doctors' orders and taking medications are as important as ever. Other helpful tips are to keep cool with the use of air conditioning and fans and to drink lots of water. For those with peripheral arterial disease, walking is an important part of

the solution. Walking three or more times per week can help improve walking distance. In this issue of *Keeping in Circulation*, read about a home-based walking program and some ideas for those with the swelling due to lymphedema. Elevating legs several times during the day for several minutes may help to reduce swelling. Last, but not least, relax, and be patient. With today's hectic pace, that's a prescription we all need. Relax, and enjoy the flowers, the sunsets, and the picnics, and you will have a better summer.

Sheryl Benjamin
Executive Director

Farewell and Thanks

The Vascular Disease Foundation has been extremely fortunate to have had the expertise, contributions, and dedication of three individuals since its inception in 1998. These include Byron Chrisman, JD, Pamela McKinnie, and Judith Regensteiner, PhD. All three founding members of the Board of Directors are dedicated to helping increase awareness about vascular disease and have spent countless hours on our behalf. The director terms for all three are now expiring, but all will continue to help and support the Foundation. We are extremely grateful to all three for their significant contribution to the success of VDF. (Picture left to right: Byron Chrisman, JD, Pamela McKinnie, Judith Regensteiner, PhD)



Information You Can Trust

The Vascular Disease Foundation is the only organization not belonging to a medical or surgical specialty that is focused on public education about vascular disease. Our information is reviewed by a committee of people each representing different specialties to ensure it is accurate and non-biased. We strive to be your first source for information you can trust about vascular disease.

These organizations believe in our mission to increase public awareness about vascular disease. Each organization has a representative that serves on the Vascular Disease Foundation's Board of Directors: American Heart Association, The American Association of Cardiovascular and Pulmonary Rehabilitation, The American College of Cardiology, The American Venous Forum, The Society for Clinical Vascular Surgery, The Society for Vascular Medicine and Biology, The Society for Vascular Nursing, The Society for Vascular Surgery, The Society for Vascular Ultrasound, The Society of Interventional Radiology.

"In Memory of" and "In Honor of" Envelopes Available

VDF has created a preprinted envelope in response to requests from supporters who have contributed "In Memory of" and "In Honor of" a loved one. This can simplify and expedite your desire to memorialize or honor a special person through a donation to VDF. If you would like to receive these special envelopes, call us at 1-888-VDF-4INFO, e-mail us at info@vdf.org, or complete this coupon and return it to: VDF, 1075 S. Yukon Street, Suite 320, Lakewood, CO 80226.

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Anatomy of . . . an Artery

We all know that our bodies contain a vast number of arteries and veins – but how much do we know about arteries themselves? Arteries are the blood vessels that travel away from the heart. Blood flows through them carrying oxygen and nutrition to the body with one exception. The pulmonary (lung) arteries carry blood that has returned to the heart out to the lungs for a refill of oxygen.

Arteries start out large at the heart and decrease in size as they branch and travel away from the heart until they become tiny capillaries. The large arteries, such as the aorta, are like highways with few branches, and these large vessels carry a large volume of blood out to the body. The small arteries have increasing numbers of branches as they get smaller, allowing blood with oxygen to reach all the cells of the body.

There are three layers in an artery. The innermost layer is called the *intima*. This layer consists of single cells that are in direct contact with the blood. It also has substances in it that prevent clotting under normal circumstances. The middle layer is the *media*. It is separated from the intima by a layer of elastic material. It is made up of smooth muscle cells as well as elastin and collagen. The latter two substances help make up the actual structure of the artery. The media provides most of the strength of the artery wall, and it expands and contracts as needed. On top of the media is another elastic layer. The outermost layer of an artery is the *adventia*. This provides most of the strength of the artery, and is made mostly of collagen. It blends with the connective tissue around the artery, helping to hold the artery in its correct position. The intima and inner elastic layer receive nutrition provided from blood which seeps from (diffusion) within the artery. The adventia and the outer part of the media get their supply from the *vaso vasorum*, which are tiny arteries that penetrate the artery wall.

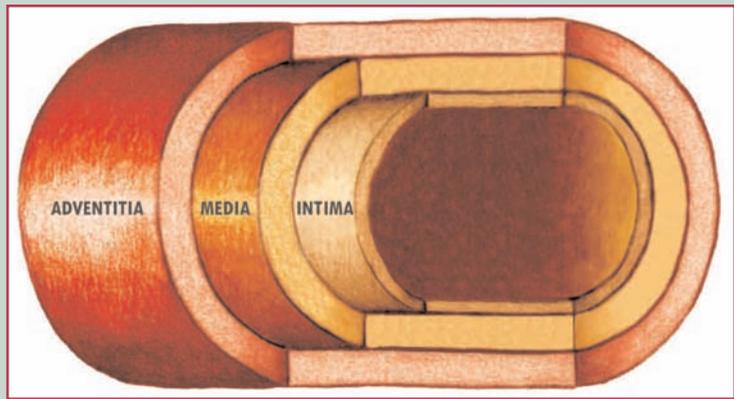


Image courtesy of Inside Ultrasound, Inc.

Atherosclerosis in arteries occurs mostly at the places where arteries branch. Fatty deposits develop in the media, thickening it and causing the artery *lumen* (the inside opening) to narrow. These fatty deposits can rupture through the intima and cause complete blockage of an artery. There are many arteries and they are all important. You may never be asked how an artery works or how it is put together, but sometimes just reading about it offers greater understanding and appreciation of its complex nature.

Frequently Asked Questions

- Q.** I have PAD. My friends say I should wear compression stockings when traveling by air to prevent clots. Is this true?
- A.** Compression stockings are often used after surgery or trauma to prevent deep vein thrombosis (DVT) as they prevent the pooling of blood in the legs when someone is not active. The stockings are also used to reduce swelling and help the blood return to the heart and lungs after a DVT, and prevent swelling in varicose veins and venous insufficiency. Compression stockings are not used for PAD. In fact, they may make your arterial circulation worse. For travel tips to prevent clots, read the following answer.
- Q.** Is air travel safe for people with PAD?
- A.** There is no known connection between PAD and air travel. PAD is decreased blood flow through the arteries. Although this is relatively uncommon, air travel has been associated with clots occurring in veins. To reduce the risk of clots during lengthy flights, flex your feet and calves several times every hour, or get up and walk up and down the aisle. Also, drink plenty of non-alcoholic fluids. If you have had blood clotting problems, you may want to discuss your risk with your health care provider before you take a long flight. For more information, visit our Web site at www.vdf.org.



Vascular Disease
 Foundation
 1075 South Yukon St.
 Ste. 320
 Lakewood, CO 80226

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September is National Vascular Disease Awareness Month

Millions of Americans are affected by vascular disease. About 8-12 million have peripheral arterial disease (PAD) including about 1 of every 4 persons over the age of 70! And each year about 750,000 suffer a stroke and two million are affected by a DVT, of which 200,000 die from a related pulmonary embolism. And 15,000 people die from a ruptured abdominal aortic aneurysm. Sadly many do not know the impact of vascular disease. We want to change that.

Help the VDF raise awareness about vascular disease. The focus this September will be on PAD as we launch our national PAD awareness campaign. The PAD Coalition's 43 member organizations, in partnership with the National Heart, Lung and Blood Institute, will launch its national awareness campaign. There will be radio and television news stories, screenings, a Town Hall meeting, and a Web cast. Participate in the many activities during the month, including education programs and screenings. Watch the PAD Coalition (www.padcoalition.org) and VDF (www.vdf.org) Web sites for a listing of activities around the country.

Keeping in Circulation is the largest lay publication in America focused on vascular diseases. The Vascular Disease Foundation is a 501(c)(3) independent nonprofit organization. It is not sponsored or affiliated with any company or organization. All material is protected by copyright, all rights reserved. **Vascular Disease Foundation**, 1075 S. Yukon St., Ste. 320, Lakewood, CO 80226. For general information or sponsorship information, call 303-989-0500 or fax 303-989-0200, or write info@vdf.org. Information contained herein is not intended as a substitute for professional medical advice. If you have medical concerns, seek the guidance of a health care professional.

Thanks to our Advisory Board



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