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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.

inside this issue

21st Century High-Tech Treatments for Varicose Veins

One More Reason to Give Up Smoking

J. D. Coffman Receives VDF's Jacobson Award for Physician Excellence

VDF HealthCasts Continue

Chronic Venous Insufficiency

About Platelets

REACH Registry Verifies Adverse Outcomes for Patients with PAD

7th Annual KIC Program, CO

Annual VIVA Fun Run/Walk to Benefit VDF

Frequently Asked Questions

Former Surgeon General Richard Carmona Joins VDF Board

Thank You to Our Recent Donors

Support Team VDF

In the News

Spirit of Women Shoe Auction

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Making the Most of Life with One Leg

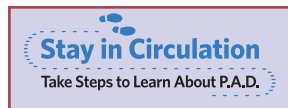
In April 2004, Dr. Charles Webb's right leg had to be amputated below the knee due to peripheral arterial disease (PAD). While some individuals facing these circumstances may become depressed and seek to limit their activities, Dr. Webb decided to keep a positive outlook and not let the loss of his leg get him down. He likes to keep things light by smiling, laughing, and joking with his patients.

Sixty-six-year-old Dr. Webb is a family practice physician and chief of staff for South Point Hospital in Warrensville Heights, Ohio, where he has a busy practice and sees an average of 40 patients a day. Despite the loss of his leg, he keeps active and stays fit by playing golf and working with a personal trainer regularly. He uses his prosthesis as a teaching tool, deliberately taking it off in front of his patients to educate them about vascular disease and helping them learn how to take better care of themselves.

Dr. Webb's circulation challenges started in 1985 with claudication (symptoms that occur when the leg muscles do not receive the oxygen-rich blood required during exercise, causing cramping in the hips, thighs, or calves). He noticed pain and cramping in the leg when he played tennis, but paid little or no attention to his symptoms. "As a doctor, I knew better, yet I ignored it," said Dr. Webb. "Had I gone to the doctor when I noticed the pain right away, I might have been able to save my leg."



Continued on page 2



September Is National PAD Awareness Month!



In September of 2006, the National Heart, Lung and Blood Institute (NHLBI) in conjunction with the P.A.D. Coalition and VDF launched the national "Stay in Circulation: Take Steps to Learn about P.A.D." campaign. So far the campaign has been very successful!

Help us celebrate the second year! Get your FREE static cling window sticker to help us educate even more people about peripheral arterial disease or "PAD" and help them stay in circulation! See page six for more information about how you can get your free sticker.

For more information about the *Stay in Circulation Campaign* or about PAD, please visit www.aboutpad.org. If you would like to join the over 50 member organizations that have committed to helping raise public and provider education about PAD, please visit www.padcoalition.org.

Continued on page 6

Making the Most of Life cont. from page 1

This is the loudest message Dr. Webb can send to anyone experiencing claudication or any type of leg pain or cramping: Get to the doctor, preferably a vascular specialist, right away. In Dr. Webb's opinion, there are many things that can be done to prevent worsening of the disease through the use of medications or a stent to improve circulation or delay amputation.

Dr. Webb's journey began when he moved to Ohio from California. He was having trouble with his right leg and foot, including numbness and pain that kept him up at night. It was that pain that drove him to the doctor, who did not recommend anything other than circulation medicine. The only effect Dr. Webb noticed from the drug was terrible headaches, so he stopped taking the medication.

Finally, in 1999, Dr. Webb was diagnosed with PAD. If he had been diagnosed with diabetes, *which he was not*, the progression of PAD could have been much faster. Eventually his doctors performed a full knee-replacement surgery in 2001 to help alleviate his arthritis pain.

In 2003, Dr. Webb found himself in the emergency room with severe chest pains, discomfort, and burning. Fortunately, he did not have a full-blown heart attack, but he did have *ischemia* (a condition indicating that an organ is not getting adequate blood flow and lacks vital oxygen and nutrients). As a result of this episode, a coronary stent was placed in his right coronary artery, followed by a prescription of anti-platelet medication. After his ischemia attack, he

began an exercise regimen of playing golf on a regular basis.

When Dr. Webb noticed that the pain in his leg was getting worse in 2003, his doctor performed a *femoral-popliteal bypass* (a procedure to help improve circulation and blood supply by routing the blood from the groin around the blockages to arteries). Unfortunately, in Dr. Webb's case, his PAD had progressed to a more severe form called critical limb ischemia. The bypass procedure was not successful and the pain in his leg continued. The doctors then recommended "step procedures," which start by removing the patient's toes, and then several months later half of the foot and so on. Being a physician, Dr. Webb was familiar with the procedure and felt that, in his case, it was better to have an amputation below the knee.

After his knee amputation, he started working with a personal trainer three times a week for 35-40 minutes a session. "This has made a world of difference for me," said Dr. Webb. "It took about a year and a half to two years before I noticed improvement, but now I feel great!"

Even his doctor agreed that exercise is making a difference in Dr. Webb's health. He started to notice pain in his left leg, and the regular exercise has improved his circulation and pain in that limb. When his doctor examined him just a few months ago, he was surprised and pleased at the reduction of pain in Dr. Webb's left leg just from exercising.

"I tolerate the prosthesis very well and keep a positive outlook about the loss of my leg," said Dr. Webb.

2007 Partner Organizations

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 Association of Cardiovascular and Pulmonary Rehabilitation
American College of Cardiology
American Heart Association
American Society of Hematology
American Venous Forum
Society for Clinical Vascular Surgery

Society for Vascular Medicine and Biology
Society for Vascular Nursing
Society for Vascular Surgery
Society for Vascular Ultrasound
Society of Interventional Radiology

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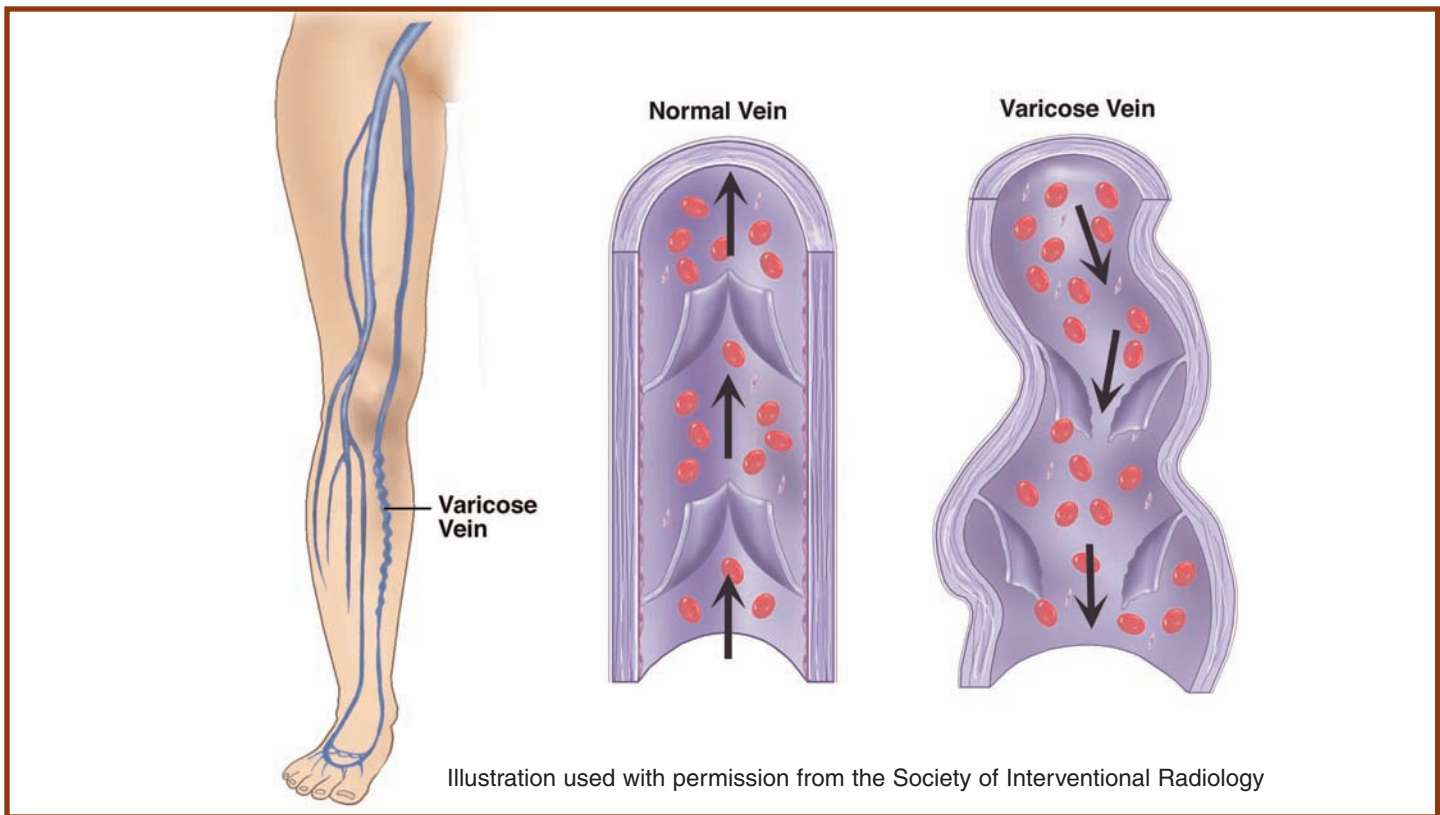
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21st Century High-Tech Treatments for Varicose Veins



Over the last several years, many exciting high-tech treatments for managing venous diseases have emerged. These treatments can be performed on an outpatient basis, so patients can return to normal activity almost immediately. One of the conditions which these new treatments can be used for is varicose veins.

Varicose veins are dilated veins in the legs that bulge under the skin surface when the valves in the main superficial leg veins (the great and small saphenous veins) do not function normally. Veins are responsible for carrying the blood back to the heart. In a functioning vein system, this happens when three mechanisms work together: breathing, the calf muscle pump, and the valves. When the valves stop functioning, blood does not flow through veins efficiently; the blood pools in the veins and causes them to enlarge. The medical term for this problem is “saphenous venous insufficiency.”

Although varicose veins may cause no symptoms, many people with varicose veins experience leg pain and heaviness, especially at the end of the workday when they have been walking or standing for a long time. Symptoms can become more serious and include chronic leg swelling, skin infection (cellulitis), clotting in the veins (phlebitis), brown skin discoloration, and skin ulcers.

Mild symptoms from varicose veins can be controlled by limiting prolonged standing, elevating the legs when possible, and wearing support stockings. Special support hose prescribed by a physician are available if over-the-counter stockings do not improve symptoms. Until recently, more severe symptoms could be helped only by major surgical procedures. The most well-known surgery for varicose veins is “vein stripping” where the saphenous vein, the major branches, and varicose veins are surgically removed through multiple leg incisions. This operation is effective but causes significant bruising and has a recovery time of at least two weeks. Over time, symptoms can recur. Vein stripping today is typically reserved for persons with fairly severe symptoms.

New advances make it practical for persons with mild to moderate saphenous venous insufficiency to be treated with little risk or interruption in their lives. A combination of three treatment approaches is used. These are venous ablation, sclerotherapy, and micro-phlebectomy.

Venous ablation uses an energy source to close the malfunctioning saphenous vein. This has the same effect on the venous blood flow as surgical removal of the vein without the incisions, pain, and bruising. The energy used to close the vein can be laser energy or

Continued on page 4

Varicose Veins *cont. from page 3*

radiofrequency (RF) energy. To do venous ablation, a small plastic tube (similar to a long IV) is inserted into the saphenous vein. When the tube is in the proper spot, it is connected to a laser or RF generator and the unit is turned on to allow the energy to close the vein. At the end of the procedure, a support stocking or compression wrap is put on the leg. This procedure is done using local anesthesia. Once the saphenous vein is closed, symptoms of pain and heaviness decrease significantly and may go away entirely. Since many of the varicose veins are branches of the saphenous vein, they may become smaller or even disappear.

Venous ablation may be the only treatment needed for some people. However, others may still experience symptomatic varicose veins even after successful saphenous ablation. This is particularly true if the veins are extremely large or have been dilated for a long period of time—they may be so stretched out that they cannot shrink down after the reason for the blood pooling has been removed. In such cases, the other treatments are used.

Microphlebectomy is the actual removal of specific varicose veins. Local anesthesia is put in the skin over the vein to be removed. A small incision is made (about one-fourth inch or smaller). The vein is removed using an instrument that looks like a small crochet hook. After the vein is removed, a small adhesive bandage is applied and a support stocking is put on the leg to prevent bruising. This procedure can be done at the same time as venous ablation or during a second visit.

Sclerotherapy is used to close up varicose veins or “spider veins” instead of removing them. During sclerotherapy, a small needle or plastic tube is inserted through the skin directly into a varicose vein. Then a

medication is injected that irritates the vein lining and causes the vein to close. This can cause a stinging sensation. At the end of the procedure, a small adhesive bandage is sometimes applied to the site of injection. The area is also wrapped tightly or a compression stocking is placed on the leg. This is done to minimize bruising and to help close off the vein with compression.

All of these procedures are very safe and effective, but they are not appropriate for everyone. Before having any of these procedures, the patient should consult with a vein-specialist physician and have an ultrasound test to examine all the leg veins and to plan the best treatment.

Complications do occur occasionally, as with any medical procedure, which include bleeding, infection, blood clots in the legs or the lungs, and skin ulceration.

Once the veins have been closed or removed, the blood can continue to circulate. The legs actually have two main sets of veins. One is just under the skin and is called the “superficial system.” The other set is deep in your leg muscles and is called the “deep system.” All the treatments described in this article refer to treating problems with the superficial system. If the superficial veins are closed up or removed, your blood will circulate in the deep veins. People with deep-vein problems typically are not able to have these treatments for superficial venous insufficiency.

About the Author: M. Victoria Marx, MD, is a professor and Vice Chair for Education, Dept of Radiology USC Keck School of Medicine in Los Angeles, where she has been on faculty for over eight years.



P.A.D. COALITION RECRUITS NATIONAL PHARMACY CHAINS TO INFORM THE PUBLIC ABOUT PAD AWARENESS IN SEPTEMBER

As part of September's PAD Awareness Month activities, several national pharmacy chains will display information about PAD throughout the month, including PAD wallet cards with key information about PAD diagnosis, symptoms, and treatment. The Coalition will also develop additional tools for the participating pharmacies, including banner ads for Web sites and graphics for weekly circulars. Some of the participating pharmacies include Super D Drugs, May's Drug Stores, Drug Warehouse, Med-X Drugs, Ike's Discount stores, Giant Pharmacies, Stop and Shop, and Giant.

“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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PLEASE SEND ME _____ 10 _____ 20 _____ 30 preprinted envelopes

One More Reason to **GIVE UP SMOKING**

The relationship between smoking cigarettes and the development of arterial vascular disease has been observed for several decades. People who smoke develop more peripheral arterial disease (PAD) and coronary artery disease (CAD) than people who do not. Quitting smoking reduces the rate of development and slows the progression of existing arterial disease. Besides observing the relationship between smoking and arterial disease, researchers have spent many years figuring out how cigarette smoke is involved in changes to blood vessels and in the blood itself. Cigarette smoke contains more than a thousand different chemicals, including seven toxic gases and 43 known carcinogens. With each smoke inhalation, these are absorbed through the lungs into the bloodstream and circulated throughout the body. As absorption takes place, some of these chemicals affect cells that compose the important inner surface of arteries, and some of the chemicals and gasses affect the activity of certain “ingredients” in the bloodstream flowing through the arteries.

Arteries are composed of layers of cells that have different functions. Arteries normally expand and contract with each heartbeat to keep blood flowing. Exposure to nicotine from cigarettes causes arteries to constrict and become narrow. The inner surface of the arteries is normally very smooth. The chemicals in cigarette smoke cause chronic changes in the activity of cells in the artery wall that result in stiffening of the arterial wall, making it less able to expand when needed. Some chemicals in cigarette smoke contribute to alteration of the inner lining of the artery with deposits of plaque, narrowing the diameter and making the surface bumpy. The end result is stiffened, narrowed arteries with a rough inner lining.

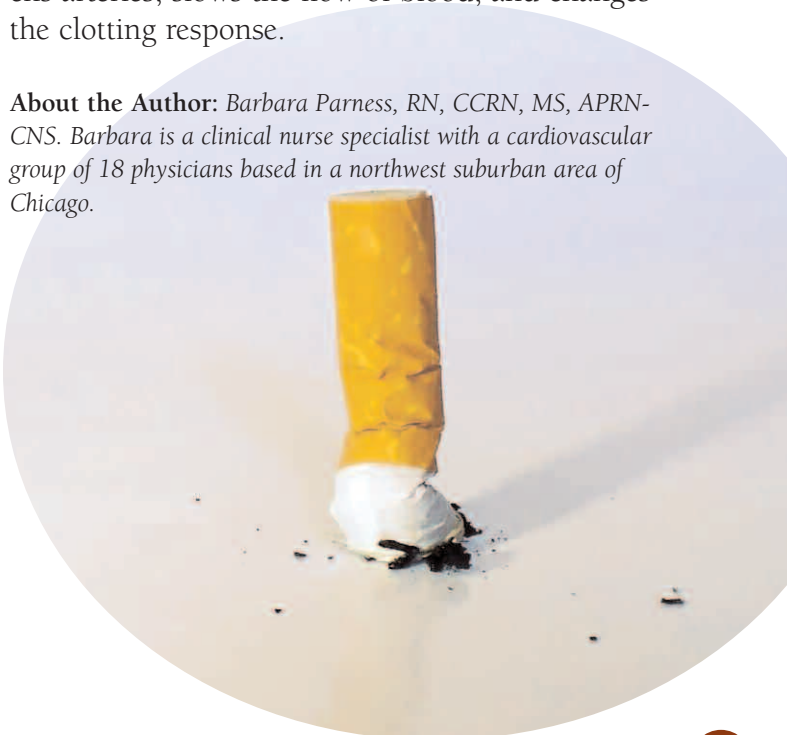
Chemicals inhaled in cigarette smoke change the activity of the liquid portion of blood (called plasma). The level of homocysteine in the blood of a smoker is elevated, which speeds plaque formation and makes blood more likely to clot. An important part of a blood-clot formation is a substance called fibrinogen, which circulates in the plasma. Fibrinogen levels are raised with smoking, again making blood more likely to clot. The effect of these

changes is that the delicate balance between proper clot formation and keeping the blood flowing is upset.

Blood also contains important cells that circulate with the liquid plasma. Platelets (*See page 9 for more information about platelets*) are very small cells that play a vital role in blood clotting. Platelets are very sensitive to chemical signals telling them when to stick together and, in turn, they send out powerful chemical messages of their own. Cigarette smoke alters the sensitivity of platelets, making them super-reactive to chemical signals, contributing to inappropriate formation of blood clots. Oxygen-carrying red blood cells are affected by exposure to carbon monoxide gas in cigarette smoke. It changes the number and size of red blood cells circulating through the blood vessels. The red blood cells become smaller than normal and in greater numbers than normal, thickening the blood. The activity and metabolism of immune-response cells in the bloodstream are altered by exposure to chemicals in cigarette smoke, aggravating the development of plaque in the arteries, among other things.

It is evident that cigarette smoke has multiple effects on the arteries and bloodstream, changing their composition, activity, and interaction. Smoking accelerates the development of arterial plaques, stiffens arteries, slows the flow of blood, and changes the clotting response.

About the Author: *Barbara Parness, RN, CCRN, MS, APRN-CNS. Barbara is a clinical nurse specialist with a cardiovascular group of 18 physicians based in a northwest suburban area of Chicago.*





Vascular Disease
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Jacobson Award for Physician Excellence

Jay D. Coffman, MD, Receives Prestigious Jacobson Award

Dr. Jay D. Coffman, former professor of medicine at Boston Medical Center, has been posthumously awarded the 2006 Julius H. Jacobson II, MD Award for Physician Excellence. Dr. Coffman established an academic section on peripheral vascular disease within the Department of Medicine at University Hospital in Boston. He also conducted research on the pathophysiology of intermittent claudication and the mechanisms and treatment of Raynaud's phenomenon. It was his research that led to an extensive series of investigations that provided the foundation of information used in many of today's medical therapies for these vascular disorders.

His scholarly writings are used in major medical textbooks by medical students to acquire the knowledge needed in caring for vascular patients. Dr. Coffman was also the founder and second president of the Society for Vascular Medicine and Biology, chairman of the Council on Circulation of the American Heart Association, and a member of the American Society of Clinical Investigation.

"Dr. Coffman was one of my mentors and I consider him a leader in the field of vascular medicine," said Dr. Mark Creager, President of the Vascular Disease Foundation. "He was a man of great personal and professional integrity who maintained the highest level of standards in his research and patient care."



Dr. Jay Coffman, winner of the Julius H. Jacobson II MD Award for Physician Excellence

Wanted: Nominations for Jacobson Award for Physician Excellence

Nominations for the 2008 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 for the 2008 award are being accepted through Friday, November 30, 2007. For complete criteria, please contact VDF at info@vdf.org or 888.VDF4INFO.



Help us get the word out about PAD! Place this sticker* on your car or other window and help us save limbs and lives!

What is PAD? One in every 20 Americans over the age of 50 has peripheral arterial disease, or "PAD". It develops when arteries in your legs become clogged with plaque - fatty deposits that limit blood flow to your legs. Just like clogged arteries in the heart, clogged arteries in the legs mean you are at risk for having a heart attack or stroke.

You can lower your risk for PA.D. Timely detection and treatment of PAD can improve the quality of your life; help you keep your independence and mobility; and reduce your risk of heart attack, stroke, leg amputation, and even death. Taking steps to learn about PAD, including asking your health care provider to check your risk, can help you stay in circulation longer to enjoy your life. For more information about PAD, please see page 10 or visit www.aboutpad.org or vdf.org.

*If there isn't a sticker affixed to this page, please call (866.723.4636) e-mail us (info@vdf.org) to receive your free Stay in Circulation static cling sticker!

VDF HealthCasts Continue

The Vascular Disease Foundation is proud to continue its audio HealthCasts that cover all aspects of vascular disease. Our guests are the leading scientific and clinical experts in their respective fields.

HealthCasts are hosted by Dr. David Meyerson and produced by Dr. Kerry Stewart. Dr. Meyerson is a cardiologist at Johns Hopkins and a scientific advisor to VDF. Dr. Stewart is a Professor of Medicine at Johns Hopkins and a member of the VDF Board of Directors.

Here are the latest HealthCasts episodes and topics:

Episode 13: Vascular Disease and the Foot— Podiatrist Dr. Jordan Stewart, Director of the Timonium Foot and Ankle Center in Lutherville, Maryland, discusses diagnosis, signs and symptoms, treatment, and the prevention of foot problems in persons affected with vascular disease.

Episode 14: Diabetic Foot Care—Caring for the Feet in Persons with Diabetes

Carolyn Robinson, vascular nurse practitioner at the Veterans Administration Hospital in Minneapolis, MN, discusses recognizing signs and symptoms, prevention, and treatment of foot problems in people with diabetes.

Episode 15: The Ankle-Brachial Index (ABI) as the “ECG of PAD”

Alan T. Hirsch, MD, Director of the Vascular Medicine Program, Minneapolis Heart Institute, discusses the ankle-brachial index (ABI), a simple test for diagnosing

PAD, and also reviews strategies for treating PAD and preventing future cardiovascular events.

Episode 16: The Critical Role of Research: Why Clinical Research Is So Important to Your Health; More about the ABI

Dr. Hirsch returns for a conversation about the value of clinical trials for providing the data that becomes the basis for medical recommendations for identifying disease risk factors, procedures for diagnosis, and treatments for prevention and disease management.

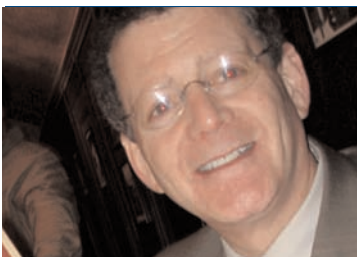
Episode 17: How We Learn about the Best Treatments: How Patients and Physicians Learn about What Treatments Are Effective

Dr. Hirsch discusses the role of clinical research trials for patients with vascular disease, with a focus on the CLEVER and CORAL clinical trials.

Episode 18: Eye Disease: A Consequence of Vascular Disease and Diabetes

Dr. Stuart Dankner, an ophthalmologist in Baltimore, MD discusses the risk factors for vascular disease, including diabetes and obesity, and how diabetes affects the eye and how to prevent or delay eye complications.

HealthCasts may be found online at www.vdf.org, iTunes, Feedburner, Yahoo, and other sites. Listening instructions and a complete description of each episode may be found on VDF's Web site. Our continued thanks go to Drs. Meyerson and Stewart for volunteering their time and energy to the creation and production of these informative HealthCasts.



HealthCast Hosts Dr. David Meyerson (left) and Dr. Kerry Stewart (right)

**Listen to HealthCasts at
www.vdf.org**



Excellence in Care

If you know a health care provider or medical professional who has shown you or your family special kindness or care that you feel deserves recognition, nominate him or her for VDF's Excellence in Care Award! Tell us whom you'd like to nominate and why you feel he or she deserves recognition. We'll acknowledge the individual in a future issue of *Keeping in Circulation* and on VDF's Web site. Just drop us a note with a tax-deductible donation of \$50 or more to VDF Excellence in Care, 1075 S. Yukon Street, Ste. 320, Lakewood, CO 80226.

Chronic Venous Insuffi

This title sounds as if we are talking about not having enough veins in our bodies! Actually, this topic discusses veins that do not work correctly. This term usually implies any venous disease that causes symptoms in the leg, such as swelling (edema), color changes, skin changes, or ulcerations. It normally does not include simple varicose or spider veins. The latter two are often perceived as unsightly and may or may not cause symptoms.

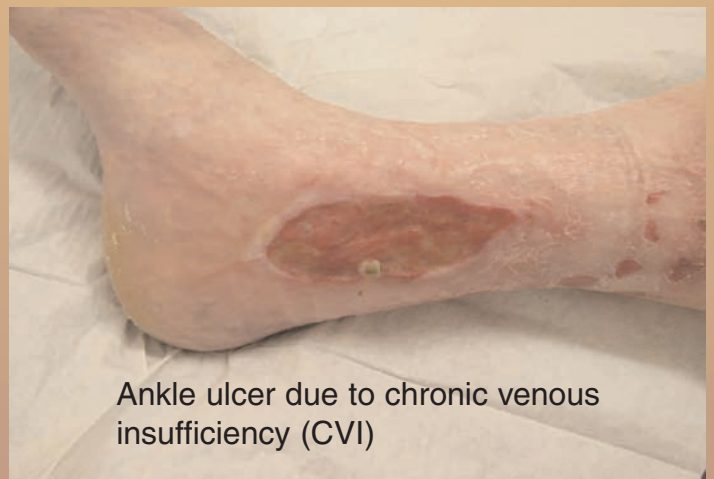
Veins are the vessels that return the blood from the extremities to the heart. This movement of blood is helped by the “calf pump.” The calf muscle pumps the blood “upstream” to the heart when it contracts. If all of the valves are working, the blood continues to flow upwards; however, if the valves are not working correctly (incompetent), then the blood flows backwards and pools during the time the muscle relaxes. This may result in *varicose veins*, which are veins in which the valves do not work and blood pools at the next lowest valve. Under the pressure of gravity, they continue to enlarge, and in the course of time, they may become elongated, twisted, pouched, and thickened.

There are three locations of venous insufficiency in the leg: superficial, communicating, and deep. The *superficial veins* are the veins we can generally see. *Communicating veins* are veins which connect the superficial and deep systems like the rungs of a ladder. If the communicating veins are working properly, the blood is channeled to the deep system.

If they do not work, the blood may be forced to the surface veins when the calf muscle contracts. *Deep veins* are, as their name implies, deep in the leg, and are the main channel for the blood to return to the heart. If those valves do not work properly, the blood pools and can cause the symptoms of chronic venous insufficiency. Another cause of chronic venous insufficiency is blockage, such as deep-vein thrombosis (DVT) in the deep veins which prevents blood flow from returning.

Changes which occur in the leg include pain, swelling, scaly skin, skin discoloration (usually a brownish color), and ulcers (*see photos*). The skin becomes particularly susceptible at the ankle where the back-flow pressure is the highest.

Treatment of chronic venous insufficiency includes compression therapy such as prescription stockings, Unna's boot, four-layer wraps, single elastic bandages, or a Velcro device that prevents edema. The article on page 3 describes other treatments for superficial venous insufficiency.



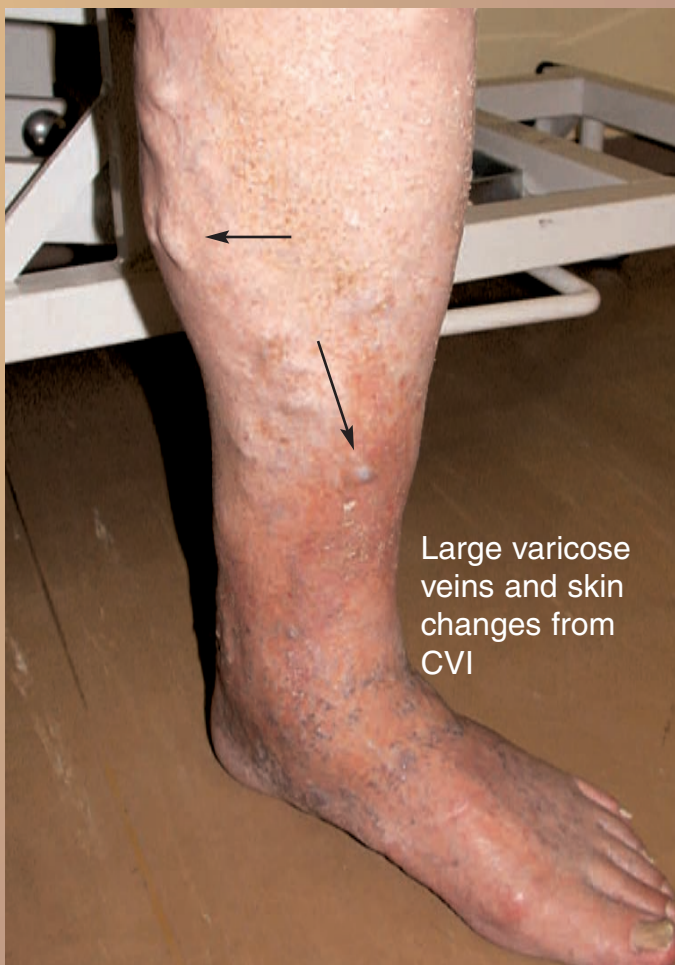
Ankle ulcer due to chronic venous insufficiency (CVI)

iciency

About . . . Platelets



Irregular ulcer and skin color changes from CVI



Large varicose veins and skin changes from CVI

Blood platelets were first discovered in the mid-1800s. We now know that they help make the blood clot, an important function of blood. Platelets are formed in the bone marrow. They are irregular in shape and are colorless. Normally, the body has between 150,000 and 400,000 per cubic millimeter. The normal life span of a platelet is 8-10 days and then it gets discarded through the spleen. If the spleen does not work normally or is absent, the platelet count increases, whereas over-activity of the spleen may cause a low platelet count.

Platelets are activated when the lining of the blood vessel is damaged. The platelets stick together and along with fibrin form a plug or clot. Formation of clots is important to stop bleeding. Everyone is familiar with a clot that forms on the skin's surface, a scab. Calcium and vitamin K must be present for the clots to form. If the levels of calcium and vitamin K are abnormally low, then blood takes longer to clot.

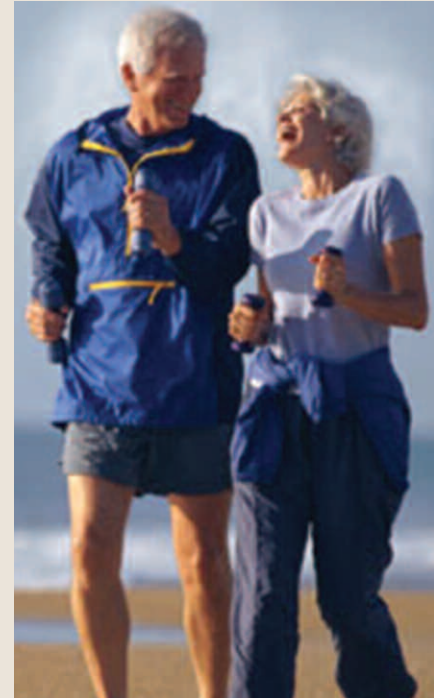
Some medications inhibit platelet function and are called "anti-platelets." Three common examples are aspirin, clopidogrel (Plavix®), and non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen. Other less common drugs also affect platelet function. Many diseases either elevate or reduce the number of circulating platelets and increase the risk of bleeding or clotting. Some diseases affect the adhesion or aggregation (clumping together) of platelets.

Platelets are tiny, but they are an essential part of clots to stop bleeding in the body.

International REACH Registry Verifies High Rates of Major Adverse Outcomes for Patients with Peripheral Arterial Disease (PAD)

In March 2007, the REACH Registry (Reduction of Atherothrombosis for Continued Health) published, in the *Journal of the American Medical Association*, a one-year study that highlighted the clinical outcomes for patients with atherothrombosis, including patients with peripheral arterial disease (PAD). The study showed that outpatients with *atherothrombosis*, although provided with ongoing care in physician office practices, continue to suffer surprisingly high rates of major cardiovascular events or death. Atherothrombosis occurs when a blood clot (a thrombus) forms on a ruptured plaque (atheroma) in the wall of a blood vessel. Plaques consist of fatty deposits and cholesterol, calcium, and other materials. The presence of plaque in many arteries throughout the body serves as the common thread linking heart attack, stroke, and PAD in individuals with atherothrombosis.

This large international Registry included more than 68,000 individuals to show that patients with PAD have a one in five (21%) chance of suffering a heart attack or stroke, being hospitalized, or dying due to cardiovascular complications within one year. If these patients with PAD also have artery disease in the heart and brain, the risk again doubles over the same period of time. These high-rates for heart attack, stroke and death in patients with PAD are equal to, or greater than, rates observed in individuals with coronary heart disease alone.



Who is at risk for PAD?

Everyone over 50 is at risk for PAD. However, your risk is increased if you:

- Smoke, or used to smoke
- Have diabetes
- Have high blood pressure
- Have abnormal blood cholesterol
- Are of African American ethnicity
- Have a personal history of vascular disease, heart disease, or stroke

The most common warning signs and symptoms of PAD include one or more of the following:

- Claudication—fatigue, heaviness, tiredness, or cramping in the leg muscles (calf, thigh, or buttocks) that occurs during activity such as walking and goes away when you rest.
- Foot or toe pain at rest that often disturbs sleep.
- Skin wounds or ulcers on the feet or toes that are slow to heal (or that do not heal for 8 to 12 weeks).

At least half of PAD patients do not have recognizable leg symptoms. Those who do have leg muscle discomfort often think it is a natural part of aging and do not tell their health-care provider. However, leg discomfort can be a sign that the leg arteries are already clogged.

See your doctor if you have any risk factors or symptoms. If you have PAD, getting treatment and taking action to reduce your risk may reduce your chances of having a heart attack or stroke. For more information about PAD, please visit www.vdf.org or contact us at 866.PAD.INFO to receive information by mail.

Reference: Steg G, Bhatt DL, Wilson PWF, D'Agostino R, Ohman EM, Rother J, Liau CS, Hirsch AT, Mas JL, Ikeda Y, Pencina MJ, Goto S, for the REACH Registry Investigators. One-Year Cardiovascular Event Rates in Outpatients with Atherothrombosis. *JAMA*. 2007; 297:1197-1206.

P.A.D. raises your risk of heart attack and stroke.

P.A.D. (peripheral arterial disease) means clogged arteries in your legs.

It raises your risk of heart attack, stroke, and even death. If you are over age 50, especially if you are African American; if you smoke or have smoked; have diabetes, high blood pressure, high blood cholesterol; or a personal or family history of vascular disease, heart attack, or stroke, your chances of getting P.A.D. are higher. Talk to your health care provider and take steps to learn about P.A.D.

Visit www.aboutpad.org to learn more.



Coordinated by the National Heart, Lung, and Blood Institute.



Keeping In Circulation in Colorado

The 7th annual *Keeping In Circulation* Event will take place in Denver and for the first time, in Colorado Springs.



Thanks to a grant from the Ford Motor Company, we are able to expand to a second location. Both events will take place in late August to kick off National Pad

Awareness Month. Please check our Web site or call **888-VDF-4INFO** (or in Denver 303-989-0500) to find out details about dates, locations and registration. As always, we will have informative speakers and free screenings for PAD.

SAVE THE DATE



The 2nd Annual Run for Your Legs and Your Life VIVA07 fun run/walk 5K will be held on September 26 in Las Vegas. Last year almost 300 runners came out to enjoy the Vegas sun for this inaugural event. Please join us for fun in the sun and help raise awareness about vascular disease and PAD. Call us at 888.VDF.4INFO for details.



**For More Information about Vascular Disease
Visit www.vdf.org or Call 888-VDF-4INFO**

Frequently Asked Questions

Q. I've been diagnosed with Raynaud's phenomenon and my doctor has recommended a sympathectomy. Will this provide me any relief, and what are the benefits and future problems that can occur with this test?

A. Sympathectomy is a procedure which uses surgical or minimally invasive tools to remove or interrupt the nerve supply to an extremity. Sympathectomy is generally reserved for only the most severe cases of Raynaud's phenomenon, especially those cases which have not responded to conservative measures, such as a trial of vasodilator medications or some newer medical therapies that have been studied within the past five years. This is a procedure of last resort for patients who have severe disease, including ulcers of the fingers, and have not had relief with other treatments. Sympathectomy procedures may be performed on nerve roots to the arms, legs, or even the small nerve fibers of the fingers (digital sympathectomy). The nature of the procedure, including the nerves which are to be targeted and the technique to be used, determines the potential side effects. If you have not done so already, you may wish to obtain a second opinion from a vascular specialist regarding your Raynaud's phenomenon.

Q. I suffered a DVT a few months ago in my right leg and have now been experiencing the same sort of symptoms in my left leg. Is it possible for DVT to travel from one leg to another?

A. It is unlikely that a DVT will travel from one leg to the other. People who have one DVT episode are certainly at higher risk for future episodes. These can occur in either leg. Development of new symptoms should prompt an immediate visit to your health-care provider.

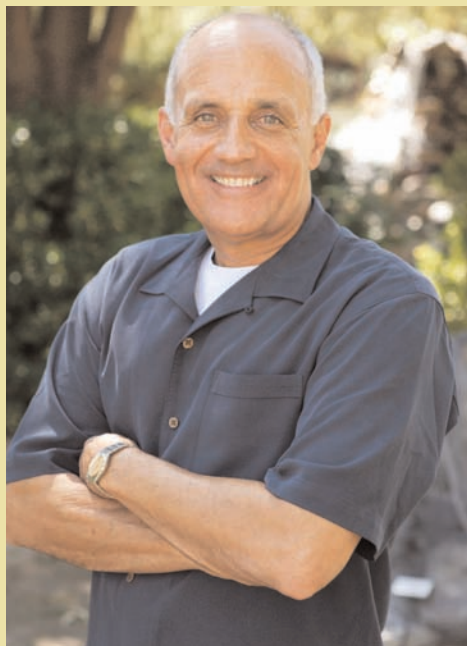
Q. I developed DVT after knee surgery over three years ago and still get swelling and occasional flare-ups if I'm on my feet or sitting for too long. I've been told that the blood is slower due to scar tissue in the vein caused by DVT. Should I be concerned about this, and is there something I can do to reduce the daily swelling and prevent flare-ups?

A. About half of all DVT patients develop long-term symptoms similar to yours. This is called post-thrombotic syndrome (PTS). Many patients may benefit from prescription graduated compression stockings. These help decrease swelling in the leg and come in a variety of colors and materials. Some other helpful things are swimming or walking. In both of these activities, you flex your foot and activate the calf muscle pump (see article on chronic venous insufficiency on page 8). Periodic leg elevation may also be helpful (remember to keep "your toes higher than your nose"). Beyond these measures, PTS is difficult to treat once it has developed. Very carefully selected patients who have extensive blockage of the vein in the groin and pelvis can sometimes be treated with advanced catheter-based procedures such as stent placement. Ask your health-care provider about whether you have PTS, or consult a vascular expert.

Did You Know?

Wearing compression stockings can make a difference. Wearing a well-fitted pair of below-knee elastic support hose (30 to 40 mmHg at the ankle) for two years reduced the long-term rate of post-phlebotic thrombotic syndrome by 50%, according to one study. (*Prandoni et al, Annals of Internal Medicine, 2004*).

Surgeon General Richard Carmona Joins Vascular Disease Foundation Board of Directors



VDF is proud to announce the addition of Richard H. Carmona, MD, M.P.H., F.A.C.S., and the 17th Surgeon General of the United States to the Board of Directors to continue his commitment to improving American cardiovascular public health.

Dr. Carmona's efforts as U.S. Surgeon General provided a high focus on vascular disease prevention as a major contributor to American public health, including the first "Surgeon General's Workshop on DVT" and the major opportunities available to prevent this common vascular illness. He also issued a report entitled "The Health Consequences of Involuntary Exposure to Tobacco Smoke" which described the definitive scientific evidence relating tobacco smoke exposure to preventable health risks.

As a member of the Vascular Disease Foundation Board, Dr. Carmona will provide leadership and guidance to VDF in its efforts to provide the public, health professionals, and government agencies with educational information to improve their vascular health.

"The challenge we face today is not in gathering more information or waiting for more science. Instead, we must translate the best science into steps that people can understand and use to improve their health," said Dr. Carmona. "We must change from being disease-oriented to being health-oriented, and focus attention on preventing health problems, not fixing them after they've happened."

September Is National PAD Awareness Month!

Stay in circulation and take steps to learn about PAD at
www.aboutpad.org



**For More Information
about
Vascular Disease
Visit www.vdf.org
or Call 888-VDF-4INFO**

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.

**Visit www.vdf.org or call 888-VDF-4INFO for a free copy of
*Keeping In Circulation***

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IN THE NEWS

Free vascular screenings in September



The annual Legs for Life® screenings will be conducted across the country during the month of 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 at www.vdf.org, legsforlife.org or vascularweb.org.

Annual AARP Life@50+Convention

Join us in Boston, MA, on September 6-8. VDF board member Dr. Michael Jaff will provide an interesting presentation on PAD and circulation. We hope to see you there!

VDF's Annual Report

Thanks to all of our donors and supporters, VDF had a great year in 2006! If you want to read about it, please contact us at 888.VDF.4INFO to get your free copy of the 2006 Annual Report

Web site

VDF has recently improved our Web site! Check it out at www.vdf.org.

Grants Renewed

VDF is pleased to announce that **Bard Peripheral Vascular** and **W.L. Gore and Associates** have renewed their grants. These grants are multi-year unrestricted grants and will help VDF continue to increase awareness and provide education about vascular disease. We greatly appreciate this support.

Support Team VDF and Help Us Meet Our Goal!

Team VDF is currently in training for the 30th annual LaSalle Bank Chicago marathon on Sunday, October 7. Our runners could surely use your support; it takes a lot to run 26.2 miles! Team VDF's fundraising goal for this year's marathon is \$25,000. Please help us meet this goal by supporting one of our runners. You can make a donation online at <http://www.active.com/donate/vasculardisease>. One hundred percent of all donations for the marathon are used by VDF to fight vascular disease and are tax-deductible. VDF would like to thank its sponsors for supporting Team VDF: Bard Peripheral Vascular, Cordis Endovascular, CV Therapeutics, DIOMED, W. L. Gore & Associates, and Red Robin.



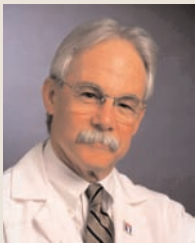
So far, Michelle Newman is Team VDF's top fund raiser! Michelle has helped raise over \$900 to fight vascular disease. Support her and the other team members by making a donation online at www.vdf.org. Michelle is pictured here with her husband Spencer in Costa Rica.

BOARD UPDATE

New Board Members

VDF is proud to announce the addition of our newest board members. Please join us in welcoming: **Richard H. Carmona, MD, M.P.H., FACS**, 17th Surgeon General of the United States; **Patricia S. Hofstra**, Partner, Duane Morris LLP; **Suresh Vedantham, MD**, Washington University School of Medicine; **Jeffrey Weitz, MD**, MacMaster University Henderson Research Centre.

Farewell and Thanks



The Vascular Disease Foundation continues to be very fortunate to have the expertise, contributions, and dedication of so many wonderful board members who volunteer their time and energy to the foundation. The term of one of our members, Dr. William R. Flinn of the University of Maryland, has expired. His passion and energy helped lead the redesign of our Web site, development of strategies, and creating public awareness on PAD. The groundwork he laid for helping to improve vascular health will continue. We are extremely grateful to Dr. Flinn for his six years of service.



Outgoing President Alain Drooz & Incoming President Mark Creager

VDF would also like to thank Dr. Alain Drooz of Fairfax Radiological Consultations, for his two years of service to VDF as president of our board. It has been Dr. Drooz's energy and vision that have helped the foundation grow and expand in the past few years. We are extremely grateful to him for his service. Dr. Drooz will continue to be a member of the board, but will now serve in the capacity of "past president."

Stepping into the president's position is Mark A. Creager, MD, who served as president-elect during the past two years. Dr. Creager is Director of the Vascular Center at Brigham and Women's Hospital in Boston and Professor of Medicine at Harvard Medical School. Dr. Creager's commitment to VDF and to improving vascular health will make an enormous impact over the next few years.



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Spirit of Women Shoe Auction to Benefit P.A.D.

Spirit of Women Health Network and "Carlos by Carlos Santana" footwear recently announced the launch of the **Red Shoe Celebrity Auction**, an online auction of celebrity-autographed footwear to benefit several health organizations, including the P.A.D. Coalition. Throughout the year, celebrities will autograph one shoe from each pair of red shoes that have been donated by "Carlos by Carlos Santana" footwear, and individuals will be able to bid on the shoes through eBay. All shoes will also be on display at <http://www.spiritofwomen.com/redshoe>, where the public can sign up to receive updates on celebrity shoe-signings. The auction will conclude in September as part of Spirit of Women's Peripheral Arterial Disease Screenings program.

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