



Vascular Disease
Foundation

Keeping In Circulation

SPRING 2009 • VOL. 9 NO. 2

THE OFFICIAL PUBLICATION OF THE VASCULAR DISEASE FOUNDATION



Keep Mom's heart healthy for Mother's Day. See Heart Healthy Cookbook offer on page 11.

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The Cancer Clot Connection: A Patient Story

The word "cancer" is a frightening term for most of us and brings up all sorts of mental images and fears. In 2008, there were 1.4 million cases of cancer reported in the United States by the American Cancer Society. Of those, 11 percent of cancer patients will develop symptomatic deep vein thrombosis (DVT) or pulmonary embolism (PE).

While cancer is a scary thought, it pays to keep calm and become educated about the associated risks if you or your loved one has been diagnosed with cancer and is undergoing cancer treatment. DVT/PE is the second leading cause of death in those with cancer (cancer itself is the first).

DVT is the abnormal clotting of the blood in a deep vein and most commonly occurs in one or more veins of the leg or pelvis. PE occurs when a DVT breaks free from its original site in a vein and then travels through the bloodstream into the lungs. When an individual has cancer, it is thought that cancer cells may produce proteins that increase clotting and make a patient at greater risk for DVT/PE.

In 2006, "CeCe" learned the hard way about the connection between cancer and DVT. An active and dynamic woman, CeCe had a busy life and booming law practice. She was in the process of moving her office and spending a great deal of time on her feet when she noticed that her right leg had started to

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The Cancer Clot Connection Continued from Page 1



Our Mission

To improve health for all by reducing death and disability from vascular diseases.

Keeping In Circulation

is published by the Vascular Disease Foundation. To receive a free subscription or additional copies contact the VDF at 1075 South Yukon St., Ste. 320 Lakewood, CO 80226

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swell. She had broken her right foot the previous year and thought perhaps the problem with her leg was related to her prior injury. When the swelling spread to involve her knee, she sought medical advice.

The cardiologist who ordered an echocardiogram of the heart ruled out heart trouble as the cause of her swelling. Then the cardiologist looked for a blood clot and performed an ultrasound in the legs, which revealed a DVT and a large mass in her lymph nodes and right groin. A biopsy confirmed that she had a metastatic squamous cell carcinoma or cancer of the cervix.

CeCe's leg was so swollen that, in her words, it looked like a condition known as "elephantiasis." She was given the blood-thinning medication heparin to treat the clot. In order to perform surgery to remove the mass a retrievable inferior vena cava filter (*a filter which is placed in the inferior vena cava (IVC), which is the main vein in the abdomen and chest that connects to the heart. A filter is designed to trap clots that move up the vein before they can reach the lungs and cause a PE*) was placed so that the surgeon could take her off the blood-thinning medications safely in preparation for surgery.

After a successful 10 hour operation, surgeons successfully removed the tumor. CeCe was up and walking within 24 hours and had her energy back. Once the IVC filter was removed and the blood thinners were restarted, she began chemotherapy and radiation treatment.

Even though cancer runs in my family, I think I have been very lucky," said CeCe. "I believe it was because I take such excellent care of myself through good nutrition that this all resolved so well. I am happy to help others and spread the word any way I can."

After six months of blood-thinning therapy, CeCe was found to be cancer-and clot-free. She was then given a low dose of Coumadin® to prevent future clotting of the central venous line that she had placed for infusion of chemotherapy.

"It was the symptoms of DVT that led to the diagnosis of CeCe's malignancy," said Dr. Suman Rathbun of the University of Oklahoma and the Venous Disease Coalition. "The cancer in CeCe's case was caught early enough to allow her full recovery with treatment. Originally her oncologists were not optimistic about her survival since the cancer was already metastatic, but her positive attitude, self-education and perseverance prevailed."

Do not ignore the signs and symptoms of DVT and PE and seek care immediately for any of these symptoms:

Symptoms/Signs of Possible DVT:

- Recent swelling of one or both legs
- Unexplained pain or tenderness of one or both legs

Symptoms/Signs of Possible PE:

- Recent or sudden shortness of breath
- Sharp chest pain, especially when breathing in
- Coughing up blood
- Sudden collapse



Cancer and DVT Facts:

1. Up to one million Americans suffer from blood clots every year, often resulting in hospitalization.
2. In 2008, there were 1.4 million cases of cancer reported in the United States by the American Cancer Society.
3. Overall, about 11 percent of patients with known cancer will develop DVT/PE.
4. 3—5 percent of patients with DVT and PE unprovoked (“out of the blue”) will have previously unknown diagnosis of malignancy at the time DVT is diagnosed.
5. DVT/PE is the second leading cause of death in those with malignancy (their cancer is the first).
6. Those with DVT at time of their cancer diagnosis are more likely to have metastasis of their cancer and have lower overall survival rate.

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Diet and Warfarin (Coumadin®)

If you are taking warfarin (Coumadin®), you have probably been cautioned not to eat certain things, but what are they? What can and can't you eat? The most sensible advice is to keep your diet consistent. The swings of intake, whether it is from vitamin K foods or other dietary items, can upset your gastrointestinal system, causing stomach upset and diarrhea, which may upset the balance of the warfarin concentration in your blood. You should avoid supplements and vitamins (most contain vitamin K, which decreases the action of warfarin). If you feel you must take these items, make sure you clear it with your health care provider first. Whether you decide to change your diet, become a vegetarian or lose weight, talk to your doctor first. Many things may affect the way warfarin works.

You should avoid alcohol while on warfarin. If your doctor approves a certain amount of alcohol, stick to that amount daily so that the levels of warfarin in your blood will remain consistent. Do not drink grapefruit juice or eat grapefruit. You should avoid cranberry juice and green tea as well as any ginkgo supplements.

There are certain vegetables that are rich in vitamin K, which may decrease the action of warfarin. They include: broccoli, Brussel sprouts, cabbage, green onions, asparagus, cauliflower, peas, dark leafy lettuce, spinach, greens (turnip, collard and mustard), parsley, kale, leeks, bean sprouts, okra, watercress and endive. Fruits which are high in vitamin K include: blueberries, kiwi, blackberries, and canned pumpkin. Some meats to avoid are beef, liver and pork liver. Other foods to avoid include: cashews, mayonnaise, canola oil, soybean oil, fresh cilantro, garlic and dried thyme.

This is not to say don't ever eat these things. But if you eat them, eat them consistently so that your blood level of warfarin stays the same. Make sure your doctor is aware of your diet. If you travel, try to stick to your home diet so that your blood level of warfarin isn't affected after your trip.

Right: This photograph pictures some of the foods that are suggested to be regulated if you take warfarin. Please see above article on “Diet and Warfarin” for details.

Note: For more information about Coumadin®/warfarin, see page 6.



When a Wound is not Just a Wound: Arterial Wounds and Ischemic Ulcers



Toe ulcer due to PAD

Sarah S. was an 88-year-old fiercely independent woman with severe but stable peripheral arterial disease (PAD, or blockages in the leg arteries). She used a walker but lived alone and adamantly refused any help in her Manhattan apartment. Whenever a visiting nurse came to see her, she promptly discharged the nurse. She was getting along fine until she developed a break in the skin on the outside of her second toe, probably because one of the neighboring toenails was rubbing on it. The poor circulation in her leg prevented the sore from healing. A few days later, the skin on the third toe broke down as well because it was constantly wet and rubbing on the other adjacent sore toe. With arterial wounds on her toes, presumably due to her PAD, Sarah now required urgent evaluation by a vascular specialist to avoid losing her foot/leg. Vision problems and arthritis interfered with Sarah's ability to care for her wounds, so she finally agreed to a visiting nurse. She was fortunate: the wounds eventually healed with the help of her vascular doctor, her podiatrist and excellent nursing care.

Arterial wounds (sometimes called ischemic ulcers), are breaks in the skin or sores, usually found on the toes or feet or rarely on the fingers. Poor circulation causes the tissue to die and prevents these wounds from healing. In contrast to venous ulcers, which often occur on the inside of the lower leg and ankle, arterial ulcers are typically on the tips of toes, between the toes, on the outside of the ankle, or over bones at points with the least amount of blood flow. The wounds may start due to minor injuries or pressure from shoes that do not fit well. Arterial ulcers are quite painful unless surrounding nerves have been damaged, such as with diabetic neuropathy.

While anyone may develop a wound on the foot, it is not considered an "arterial" problem unless blood flow to the area is reduced. Thus, vascular testing is necessary to make the

diagnosis. The ankle-brachial index (ABI) is the most commonly used test to diagnose PAD, or poor circulation. It involves placing blood pressure cuffs on the ankles and on the arms to check the blood flow. This test, along with others offered in a vascular laboratory, can be useful for determining the cause of a wound as well as predicting its ability to heal.

Once an arterial wound is diagnosed, the most critical aspect of treatment is to restore blood flow to the affected area. Restoration of blood flow may involve either 1) opening the blocked artery with balloons and catheters and at times with stents ("endovascular revascularization"), or 2) surgical treatment, such as bypass grafting. Other important aspects of treatment involve eliminating the initial inciting factor (such as the poorly fitting shoes which caused the ulcer in the first place), treating the wound itself, and protecting it. Arterial wounds are typically kept dry until the blood flow is restored. Antibiotics, topical medicines, and/or dressings may be prescribed depending on the wound. Smoking cessation is crucial because smoking interferes with wound-healing. Good nutrition and appropriate pain management are also vital. With arterial ulcers, there is always a risk of amputation. Thus, early diagnosis and treatment are essential.

Prevention of arterial wounds, what you can do:

- Meticulous foot care is important, particularly among people with PAD or diabetes.
- Wear shoes that provide support without causing pressure points.
- Clean your feet well and dry between the toes to prevent skin breakdown.
- Carefully inspect your feet on a regular basis (if you are unable to do this, have a family member do this for you).
- If your nails are thickened or if there are other foot issues, you should see a podiatrist to assist with routine foot care.
- Keep your diabetes under control if you have it.

The majority of people with PAD never suffer from an arterial wound. However, if you have PAD and you develop a sore, **it is absolutely essential to let your doctor know right away so that proper treatment can be implemented.** Similarly, if anyone develops a wound that does not heal in a reasonable amount of time, the circulation should probably be checked to ensure that the area is receiving adequate blood supply.

About the Author: *Elizabeth Ratchford, MD, is an Assistant Professor of Medicine at the Johns Hopkins University School of Medicine in Baltimore, Maryland. She is also the Director of the Johns Hopkins Center for Vascular Medicine in the Division of Cardiology.*



Varicose Veins and Treatment Options

Varicose veins (VVs) are those dilated, bulging veins close to the skin surface that affect up to 25 percent of women and 15 percent of men. Spider veins are smaller, flat, less tortuous, bluish-reddish superficial veins found in greater than 80 percent of the general population. Being a woman, advanced age, family history, pregnancy, prolonged standing, obesity and hormone therapy (birth control or hormone replacement) will all put you at risk for developing varicose veins.

VVs are not only a cosmetic problem, but may commonly produce symptoms of heaviness, fatigue, pain, swelling, restlessness, burning and itching, which interfere with daily activities and result in lost time from work. There are some complications associated with VVs, including vein rupture and bleeding, blood-clot formation and skin ulcers. Skin ulcers associated with venous disease affect approximately one percent of the population and are difficult to heal, with an estimated U.S. health care cost of \$3 billion per year.

Traditional treatments for VVs include making life-style modifications, wearing compression stockings and taking some medications. Patients with VVs are encouraged to lose weight, exercise, and elevate their legs. Compression stockings are effective in reducing swelling and pain. Low-dose diuretics (water pills) reduce swelling in the short term, topical steroid creams reduce inflammation, and antibiotics treat cellulitis (skin infection). Horse chestnut seed extract is an herbal remedy shown to reduce swelling short-term, but this preparation has not been approved by the FDA.

If these traditional treatments are not successful, then surgery is recommended. Catheter-directed (endovascular) techniques have revolutionized the treatment of VVs, with reduced complications and time away from work.

Surgical treatments traditionally included vein ligation and stripping performed in the operating room under general anesthesia. The procedure involves making an incision in the

groin, tying off the large vein and its branches, advancing a wire along the length of the vein, and retrieving the wire through a second incision in the upper calf to remove (strip) the entire vein. Effectiveness of vein stripping in removing the VVs is about 76 percent at five years. Tying off the vein alone results in a higher recurrence rate and is typically performed with other

treatment modalities. Ambulatory phlebectomy, an outpatient alternative to vein ligation and stripping, is performed under local anesthesia and involves making multiple incisions along the leg, through which the vein is hooked and removed. Complications of surgical interventions include pain, bleeding, infection, nerve injury and blood-clot formation. Recovery time from surgery is approximately two or three weeks.

Catheter-directed procedures, including endovenous laser therapy, radio-frequency ablation (RFA) and foam sclerotherapy, have emerged as minimally invasive outpatient treatments for VVs. Laser therapy and foam sclerotherapy are also used to treat spider veins. Laser and RFA are performed under local anesthesia and involve advancing a catheter through an incision at the knee and directly heating the vein wall or affecting the blood to destroy the vein. Foam sclerotherapy involves injection of a foam substance into the VV, which irritates the inner lining of the vein and causes it to scar and disappear over time. While RFA and foam sclerotherapy are equally effective as compared to surgery in eradicating VVs (75-80 percent obliteration rate at five years), laser therapy may have a greater long-term success rate (95 percent obliteration rate at five years). Complications of laser and RFA include pain, skin burns, infection, and skin-color changes along the treated vein, bloodclot formation, bleeding and nerve injury. Foam sclerotherapy can be associated with mild post-procedure discomfort and skin-color changes along the treated vein. Other adverse events, including blood-clot formation, skin ulcers, bleeding, cough, visual changes and headaches are rare.



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A Patient's Guide to Taking Coumadin®/Warfarin

Warfarin (brand names Coumadin® and Jantoven®) is a prescription medication used to prevent harmful blood clots from forming or growing larger. Beneficial blood clots prevent or stop bleeding, but harmful blood clots can cause a stroke, heart attack, deep vein thrombosis, or pulmonary embolism. Because warfarin interferes with the formation of blood clots, it is called an anticoagulant. Many people refer to anticoagulants as “blood thinners”; however, warfarin does not thin the blood but instead causes the blood to take longer to form a clot.

How Does Warfarin Work?

The formation of a clot in the body is a complex process that involves multiple substances called clotting factors. Warfarin decreases the body's ability to form blood clots by blocking the formation of vitamin K–dependent clotting factors. Vitamin K is needed to make clotting factors and prevent bleeding. Therefore, by giving a medication that blocks the clotting factors, your body can stop harmful clots from forming and prevent clots from getting larger.

Monitoring and Dosing Tips

The goal of warfarin therapy is to decrease the clotting tendency of blood, not to prevent clotting completely. Therefore, the effect of warfarin must be monitored carefully with blood testing. On the basis of the results of the blood test, your daily dose of warfarin will be adjusted to keep your clotting time within a target range.

The blood test used to measure the time it takes for blood to clot is referred to as a prothrombin time test, or protime (PT). The PT is reported as the International Normalized Ratio (INR). The INR is a standardized way of expressing the PT value. The INR ensures that PT results obtained by different laboratories can be compared. It is important to monitor the INR (at least once a month and sometimes as often as twice weekly) to make sure that the level of warfarin remains in the effective range. If the INR is too low, blood clots will not be prevented, but if the INR is too high, there is an increased risk of bleeding. This is why those who take warfarin must have their blood tested so frequently.

Unlike most medications that are administered as a fixed dose, warfarin dosing is adjusted according to the INR blood test results; therefore, the dose usually changes over time. Coumadin®/warfarin pills come in different colors, and each color corresponds to a different dose.

Difference Between Brand-Name and Generic Medications

Generic drugs are supposed to have the same dosage, therapeutic effects, route of administration, side effects, and strength as the original drug. The US Food and Drug Administration requires that all generic drugs be as safe and effective as brand-name drugs. Generic drugs are often less expensive than their brand-name counterparts, because the generic manufacturers have not incurred the expenses of

developing and marketing a new drug. In the United States, trademark laws do not allow generic drugs to look exactly like the brand-name drug; however, the generic drug must have the same active ingredients. In the case of Coumadin® (a brand-name product) and warfarin (a generic product), the manufacturers attempted to keep the colors consistent with the strength of the pills.



The goal is to allow the patient to identify the color-coded dose and prevent mix-ups or errors. Therefore, if the color or

dose of the dispensed tablet appears different from the pill taken previously, the patient should immediately notify the dispensing pharmacist or healthcare provider.

In January 2006, the Food and Drug Administration issued a public health advisory to healthcare professionals and consumers that US prescriptions filled abroad may give patients the wrong active ingredient for treating their health condition. Some Food and Drug Administration–approved products have the same brand names as drug products that are marketed outside the United States but contain completely different active ingredients. Therefore, patients who fill US prescriptions abroad, either when traveling or when shopping at foreign Internet pharmacies, need to maintain caution and vigilance. We advise US residents against purchasing drugs at foreign Internet pharmacies. Foreign drugs may use identical or potentially confusing brand names for products with active ingredients that differ from US drugs. Warfarin has many foreign brand names. Patients who do fill prescriptions abroad should ensure the accuracy and quality of the medication dispensed. Warfarin must be taken exactly as prescribed. Never increase or decrease your dose unless instructed to do so by your healthcare provider. If a dose is missed or forgotten, call your healthcare provider for advice.

Side Effects

The major complications associated with warfarin are clotting due to underdosing or bleeding due to excessive anticoagulation. The most serious bleeding is gastrointestinal or intracerebral. Excessive bleeding can occur in any area of the body, and patients taking warfarin should report any falls or accidents, as well as signs or symptoms of bleeding or unusual bruising, to their healthcare provider. Signs of unusual bleeding include bleeding from the gums, blood in the urine, bloody or dark stool, a nosebleed, or vomiting blood. An unusual headache or a headache that is more severe than usual may signal intracerebral bleeding.

When to Call Your Healthcare Provider

If you experience the following signs of bleeding, you should call 911 or your healthcare provider immediately:

- Severe headache, confusion, weakness, or numbness
- Coughing up large amounts of bright red blood
- Vomiting blood
- Bleeding that will not stop
- Bright red blood in stool
- Fall or injury to the head
- Headache that is severe or unusual

Some simple changes to decrease the risk of bleeding while taking warfarin include the following:

- Use a soft-bristle toothbrush
- Floss with waxed floss rather than unwaxed floss
- Shave with an electric razor rather than a blade
- Take care when using sharp objects, such as knives and scissors
- Avoid activities that have a risk of falling or injury (eg, contact sports)

Warfarin and Lifestyle

Changes in daily living can affect the INR. It is important to know common do's and don'ts for warfarin therapy.

Common Do's and Don'ts

What to Do

- Do watch for signs and symptoms of bleeding.
- Do tell your healthcare provider when you get sick or hurt.
- Do take warfarin exactly as prescribed.
- Do tell anyone giving you medical or dental care that you are taking warfarin.
- Do keep appointments for blood tests.

What Not to Do

- Never double a dose because you missed a dose.
- Don't start new medications, herbals, or supplements without talking to your healthcare provider.
- Don't make changes to your warfarin dose without talking to your healthcare provider.

Pregnancy

Warfarin is not recommended during pregnancy. A woman who becomes pregnant or plans to become pregnant while undergoing warfarin therapy should notify her healthcare provider immediately.

Surgery/Dental and Other Medical Procedures

It is important to tell all your healthcare providers that you are taking warfarin. If you are having surgery, dental work, or other medical procedures, you may need to stop taking warfarin.

Travel

Check with your healthcare provider if you expect to travel. While traveling, it is important to carry your medication

with you at all times. Do not put medication into checked baggage.

Warfarin Interacts With Other Medications

Patients who take warfarin should consult with their healthcare provider before taking any new medication, including over-the-counter (nonprescription) drugs, herbal medicines, vitamins, or any other products. Many medications can alter the effectiveness of warfarin, resulting in an INR that is either too high or too low. Some of the most common over-the-counter pain relievers, such as ibuprofen (brand name Advil®) and naproxen (brand name Aleve®), enhance the anticoagulant effects of warfarin and increase the likelihood of harmful bleeding.

Warfarin Interacts With Alcohol and With Certain Foods

Alcohol intake can affect how the body metabolizes warfarin. Patients undergoing warfarin therapy should avoid drinking alcohol on a daily basis. Alcohol should be limited to no more than 1 to 2 servings of alcohol occasionally. The antiplatelet effect of alcohol increases the risk of major bleeding, even if the INR remains within the target range.

Some foods can interfere with the effectiveness of warfarin. The most important point to remember is to eat what you normally eat and not to make any major changes in your diet without contacting your healthcare provider.

Vitamin K

Eating an increased amount of foods rich in vitamin K can lower the PT and INR, making warfarin less effective and potentially increasing the risk of blood clots. Patients who take warfarin should aim to eat a relatively similar amount of vitamin K each week. The highest amount of vitamin K is found in green and leafy vegetables such as broccoli, lettuce, and spinach. It is not necessary to avoid these foods; however, it is important to try to keep the amount of vitamin K you eat consistent.

Wear Medical Identification

Those who require long-term warfarin should wear a medical alert bracelet, necklace, or similar alert tag at all times. If an accident occurs and the person is too ill to communicate, a medical alert tag will help responders provide appropriate care. The alert should include a list of major medical conditions and the reason warfarin is needed, as well as the name and phone number of an emergency contact.

Where to Get More Information

Your healthcare provider is the best source of information for questions and concerns related to your medical problem. Because no two patients are exactly alike, and recommendations can vary from one person to another, it is important to seek guidance from a provider who is familiar with your individual condition.

Authors: Karen Fiumara, PharmD and Samuel Z. Goldhaber, MD.
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Varicose Veins and Treatment Options Continued from Page 5

Currently, clinical trials are underway to definitively evaluate the role of foam sclerotherapy in the treatment of VVs. The recovery time after laser therapy and RFA is approximately three to five days and after foam sclerotherapy, recovery takes less than 24 hours.

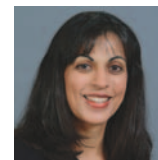
Treatment options for VVs have greatly improved over the last decade, with less invasive outpatient catheter-directed modalities showing results as good as surgical techniques, and with the benefits of reduced complication rates, recovery time, and procedure costs. Consultation with a vein specialist who can discuss the available options is recommended prior to any vein procedure.

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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.

Here is the latest HealthCast episode and topic:

Episode 29: The Surgeon General: DVT Call to Action. Acting Surgeon General RADM Galson discusses the Call to Action he issued for the prevention of DVT and PE.

Ask the Doctor

VDF is proud to continue to offer live online chats with a medical professional about different areas of vascular disease. Chats occur during the first Tuesday of the month at 4pm EST/ 3pm CST/ 2pm MST. Join us on the following dates to chat live with a medical professional:
Tuesday, April 7 • Tuesday, May 5 • Tuesday, June 2

Can't sit in on a live chat? You can e-mail us your questions up to 30 minutes prior to each chat at info@vdf.org or view the transcripts online.

Please visit www.vdf.org and click the "Interactive Resources" tab for more information.

Excellence in Care

If you would like to nominate someone for the Excellence in Care Award, please send us a note or e-mail with a tax-deductible donation of \$50 or more telling us who you are honoring and why he or she deserves the recognition. Nominees can be any medical professional who has helped you or your family or has shown special kindness which you feel deserves recognition.

"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 will 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 **888.VDF.4INFO** or contact us by e-mail at info@vdf.org.

Frequently Asked Questions

Question: I'm currently undergoing cancer treatment and would like to know if I need to be worried about DVT while taking chemotherapy.

Answer: Patients with cancer are certainly at higher risk of DVT because cancer cells produce proteins that increase clotting. You should definitely receive DVT-prevention measures (mainly blood thinner injections and/or compression devices) while you are in the hospital. If you are at home and walk several times a day at least, most physicians would not take special measures to prevent DVT. Talk to your oncologist about your risk of DVT during your treatment.

Question: I am a 52-year-old male with varicose veins all over my legs and discolored skin on my shins and ankles. Injuries to my shins take a very long time to heal, sometimes many weeks. Could I have PAD?

Answer: Yes, it is possible that you have PAD, but the skin can also be slow to heal with venous stasis (what you describe). You need to see a vascular specialist and talk to him/her about your concerns. The specialist may want to do tests for PAD if he/she does not feel pulses or if the pulses are weak. A specialist will also need to know if you have diabetes.

Question: I think that I may have Raynaud's Syndrome. Will this go away on its own or will I have this for life? I am 45 and I have had this now for about five years.

Answer: It probably will not go away. You need to protect your hands and feet (use mittens, not gloves) and tell your doctor. Sometimes Raynaud's Syndrome is a symptom of other problems. You might need to see a rheumatologist.

Question: Is Pletal[®] better than Plavix[®]? From everything I read it appears that both are platelet inhibitors. Do you know of any reason why one is preferred over the other? I have been taking Pletal[®] since it first became available and have had no side effects.

Answer: Pletal[®] and Plavix[®] work differently and are given to patients for different reasons. Pletal[®] or cilostazol is used for claudication to reduce leg pain, while Plavix[®] or clopidogrel is an anti-platelet medication that keeps platelets in the blood from sticking together and forming blood clots. While Pletal[®] does have some platelet-blocking properties, it is generally not used alone as an anti-platelet medication. They are not interchangeable.

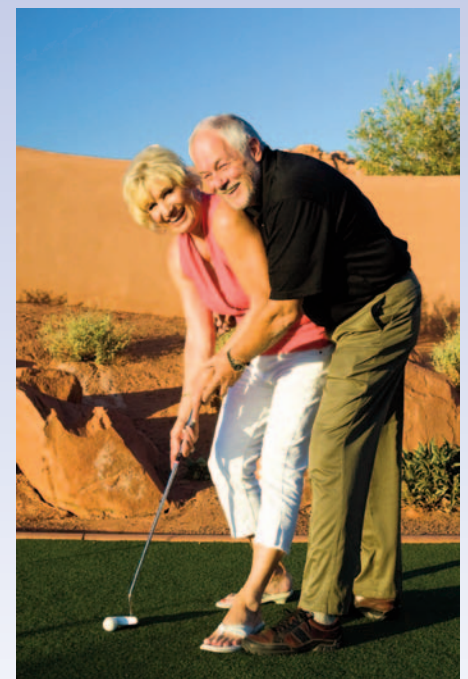
In the News

March is DVT month – Learn about DVT online at www.vdf.org/diseaseinfo/dvt and www.venousdiseasecoalition.org.

May is stroke awareness month – Learn the symptoms of stroke on VDF's Web site in the disease section or by listening to HealthCast episode #10.

VDF HealthCasts Transcribed – Did you know that all of VDF's HealthCasts have been transcribed? You may now view the text for all of our HealthCasts online or call the office to receive a free transcript by mail.

Call for Nominations – The P.A.D. Coalition is now accepting nominations for the Best PAD Research award. Visit www.PADCoalition.org for information. Deadline for submission is April 29th.



Diagnosing Problems of the Blood Vessels: Vascular Ultrasound

Vascular Ultrasound (US) is used to diagnose blood vessel or heart problems. This non-invasive test does not use needles, dyes, radiation or anesthesia. It uses harmless sound waves whose frequencies are too high to be heard by humans.

A technologist will administer the test by first putting a water-based gel over the areas to be checked. A transducer (which looks like a small microphone) is placed into the gel and passed over the areas to be examined. This makes an image (or picture) on the US machine. In addition, it measures the blood flow in specific vessels. You will probably hear noises as the technologist moves the transducer around. When the exam is over, a physician reviews and interprets the images and measurements.

Make sure you wear comfortable clothing to the lab. You will be asked to change into a hospital gown to uncover whatever part of you is being examined. The only special preparation is for the abdominal US test. Most exams take 30-60 minutes to complete. You may resume your normal activity after the test. Your health care provider will give you the results when they are available.



Carotid Duplex

Ultrasound is used to evaluate the carotid arteries located in the neck that feed the brain with blood. Gel will be applied to the skin of the neck. A transducer will be placed on the gel-covered areas to obtain images and evaluate and listen to the blood flow in the arteries.

Transcranial Doppler (TCD)

The blood vessels that supply the brain within the skull are evaluated by Transcranial Doppler. This exam is performed with a small transducer that is placed on the skin of the face and head. This exam takes approximately 60 minutes.

Arterial Duplex

Ultrasound is used to evaluate the arteries that feed the arms and legs with blood. Gel will be applied to the skin of the legs or arms. A transducer will be placed on the gel-covered areas to obtain images and listen to the blood flow in the arms or legs.



Venous Duplex

Ultrasound is used to evaluate the veins that carry blood to the heart from the legs or arms. Gel will be applied to the skin of the legs or arms. A transducer will be placed on the gel-covered areas to obtain images and evaluate flow in the veins.

Abdominal Vascular Duplex

Ultrasound is used to evaluate the blood vessels that bring blood to and away from your abdominal organs. Gel will be applied to the abdomen. A transducer will be placed on the gel-covered areas to obtain images and listen to blood flow in the arteries and/ or veins. Prior to your exam, you must fast (nothing by mouth) for 12 hours prior to your scheduled appointment.

Arterial Pressures and Waveforms



Ultrasound and blood pressure cuffs are used to evaluate the arteries that supply the arms and legs with blood. Several blood-pressure cuffs will be placed at different segments of your legs or arms. When inflated, the cuffs will provide blood

pressure readings as well as waveforms. This test will locate areas of blockage within the arteries.

This article was excerpted courtesy of the Society for Vascular Ultrasound (SVU)'s "Vascular Testing and You" patient brochure. For more information, visit www.svunet.org.

Help Keep Mom's Heart Healthy this Mother's Day



This Mother's Day get mom something special to let her know how much you care. Get her a copy of the National Heart, Lung, and Blood Institute's "*Keep the Beat Heart Healthy Recipes*" cookbook!

For a \$25 tax deductible donation to VDF you'll get a copy for mom. Want a copy of this yummy cookbook for yourself? Get a second cook book for only \$10 more.

To order your copy of this heart healthy cookbook, contact VDF by e-mail at info@vdf.org, call 888.833.4463, or return this order form to VDF, 1075 S. Yukon St., Ste. 320, Lakewood, CO 80226.

- Yes I want to order a *Keep the Beat* cookbook for a \$25 tax deductible donation to VDF.
- Please send me _____ (number) additional cookbooks at \$10/ea.

NAME _____

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PHONE _____ EMAIL _____



Cardiovascular Healthy Recipe

VDF is proud to offer heart healthy recipe for you and your loved ones from the "*Keep the Beat: Heart Healthy Recipes*" cookbook from the National Heart, Lung, and Blood Institute (NHLBI).

Chicken and Spanish Rice

This peppy dish is moderate in sodium but high in taste.

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|----------------------------|--|
| 1 C onions, chopped | 1/2 tsp black pepper |
| 1/4 C green peppers | 1 1/4 tsp garlic, minced |
| 2 tsp vegetable oil | 5 C cooked rice (in unsalted water) |
| 1 can (8 oz) tomato sauce* | 3 1/2 C chicken breast, cooked, skin and bone removed, diced |
| 1 tsp parsley, chopped | |

*Reduce sodium by using one 4-oz can of no salt added tomato sauce and one 4-oz can of regular tomato sauce. New sodium content for each serving is 226 mg.

1. In large skillet, sauté onions and green peppers in oil for 5 minutes on medium heat.
2. Add tomato sauce and spices. Heat through.
3. Add cooked rice and chicken, and heat through.

Yield: 5 servings. Serving size: 1 1/2 cups

Each serving provides: Calories: 406; Total fat: 6 g; Saturated fat: 2 g; Cholesterol: 75 mg; Sodium: 367 mg; Potassium: 527 mg; Total fiber: 2 g; Protein: 33 g; Carbohydrates: 52 g



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Keeping in circulation™

the official newsletter of the Vascular Disease Foundation

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Newsletter designed by Concepts Unlimited

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