Critical Limb Ischemia

What is Critical Limb Ischemia? Critical Limb Ischemia (is ke’m’ ee uh) (CLI) occurs when the arteries carrying blood to the limbs are so badly blocked that there is not enough blood flow to maintain healthy skin or heal open sores. Most often, it affects the feet or legs and is always associated with a severe and characteristic pain. CLI, the most serious stage of peripheral arterial disease (PAD) having progressed to the point of severe pain and even skin ulcers or gangrene, needs intense treatment by a vascular specialist. This condition will not improve on its own! Besides increasing the risk for an amputation, CLI also greatly increases the likelihood for heart attack and stroke.

Symptoms and Signs. Patients usually experience severe pain in the forefoot or toes. Sores, or actually non-healing skin ulcers, or even areas of gangrene may be present, although early on, one may have the pain without the sores. The pain can serve a warning that the sores are surely to follow. Patients often have a history of not being able to walk far without pain in the calf, called claudication (see Keeping in Circulation Spring 2004 issue). Claudication pain is associated with an earlier stage of PAD, whereas CLI causes pain at rest. Typically it is related to the leg’s position. This “rest pain,” is worse when the leg is elevated (as when lying down flat) and can usually be relieved temporarily by hanging the leg over the bed or getting up to walk around. This dependent position helps get more blood into the leg, relieving the pain. The pain can be so severe it can interrupt sleep at night, or can occur whenever lying down, such as when taking a nap. The pain caused by CLI does not respond to most pain medicines. Often the foot looks dusky purple or red when the leg is hung down and become pale when the leg is elevated. Other signs may include the thinning of the skin of the foot and its muscles and decreased or absent hair growth on the foot and toes. Additionally, the toenails may become thick and brittle and the leg may feel cool to the touch.

Diagnosis. The health care provider will perform a physical examination, followed by one or more blood flow studies. One of the most valuable blood flow studies is the Ankle Brachial Index (ABI), because it is quick and easy to perform. The blood pressure is measured at the ankle and compared to the blood pressure of the arm. An ABI of 1.0 or more is normal (except in diabetic patients, where a false high reading is not unusual). An ABI of 0.3 or below indicates critical limb ischemia. Occasionally, the patient may be asked to walk on a treadmill to see if this causes a further fall in the ankle pressure. Segmental limb pressures (blood pressures taken at different levels up the leg) can sometimes help locate the blockage.
Critical Limb Ischemia

CONTINUED FROM FRONT PAGE

Medical Treatment. Certain medications are prescribed to help prevent further progression of the underlying arteriosclerosis which is responsible for the blockages causing CLI, and can cause the blockages in arteries throughout the body, including the coronary or carotid arteries, which could result in heart attack or strokes. Therefore, it is important to take appropriate medications to control associated medical conditions like high blood pressure, high cholesterol, and diabetes. Other medications, called “vasodilators”, designed to improve the circulation in the legs may be helpful. However, these rarely improve circulation enough to control rest pain and heal up foot sores. At this stage of PAD, a major increase in blood flow is needed and some procedure will usually be required. For good reason these have been called “limb salvage” procedures.

Limb Salvage Procedures. Open surgical or endovascular procedures can be highly successful in restoring the flow of oxygenated blood to the legs and healing areas of skin breakdown or ulcers. An endovascular procedure consists of a small incision through which a catheter is inserted to where the blockages occur. Interventions might include an angioplasty, inserting a stent to hold the artery open, or having a clot broken up (thrombolysis). A bypass graft is the most common open surgical procedure, and may be performed in more serious cases. An artificial tube or one of the patient’s veins is used as a new artery to bypass the blocked segment and bring improved blood flow to the needy areas. Less often, the surgeon may cut open the artery and remove the plaque, restoring the flow channel through the diseased artery. One of the above procedures will be successful in restoring flow and saving the leg in the majority of cases where only the foot or toes are involved. Only if gangrene or secondary infection has already progressed up to the ankle or higher would amputation of the leg be needed. Amputation occurs in about 25% of CLI patients, but earlier diagnosis can reduce this significantly.

General Care. If there is only rest pain or the foot lesions have not progressed to gangrene, and particularly if the patient is a poor risk for surgery, then non-operative measures can be tried and may prove successful. Keep the leg dependent (down) to allow more blood flow. Don’t apply external heat, but keep the legs warm and free from pressure or injury. Patients who have no blood pressure or low platelet count (anemia) or whose heart function is weak should have these vigorously corrected. A strong heartbeat, pumping well oxygenated blood at normal pressures, can often overcome block blood vessels and help save the leg. By the same token, improving lung function can also help significantly. For example, stop smoking, or inhale oxygen as needed.

Smoking Cessation. Smoking tobacco, the greatest risk factor, must be stopped as well. If you smoke, stop! It may save your leg and your life! (For more information on smoking and PAD, visit the VDF web site at www.vdf.org.)

Ulcer Care. Treatment for ulcers will likely include topical medications and dressings. Foot ulcers can be soaked periodically in mild antiseptic solutions, but soaking gangrenous areas invites infection. At other times the foot should be kept clean and dry, although clean lubricating lotions are helpful to prevent cracks and fissures. These treatments should be prescribed by a physician or nurse, but can be applied by the patient or caregivers.

Since treatment depends on the severity of the disease and many individual parameters, it is essential that someone with ulcers or rest pain in the legs or feet see a vascular specialist as soon as possible. The earlier a diagnosis can be made, the earlier treatment can be started, and the more likely the outcome will avoid serious consequences.

Prevention Tips

Several important steps will allow you to take charge of your health and prevent an amputation. First, stop smoking (or never start)! Next, keep your cholesterol and blood pressure under control. If you have diabetes, keep it under control, check your blood sugar regularly, and see your health care provider often. Diabetes puts you at higher risks for foot ulcers and infection. Proper foot care is critical. Even if you are not a diabetic, you should:

- Wear shoes that fit
- Never wear new shoes more than an hour the first time. Break them in slowly
- Keep your feet clean, but do not soak them more than five minutes at any time.
- Use good lotion or Vaseline® on the feet to keep them soft, but do not put it between the toes.
- Do not trim your nails unless you can see well enough. Go to a podiatrist if you need help, and also if you have thick hard nails.
- Have corns and calluses trimmed by a podiatrist.
- Check your feet for sores every day.
- See your health care provider for any redness or dark spots.
- Do not ignore any signs of trouble, even if they seem minor. See your health care provider right away. Regular care will help you avoid more serious problems down the road.

You CAN Still Play Golf

Don’s Story

Don came into the ER with a cold pulseless leg. His symptoms started about an hour before he came to the hospital and he was in a lot of pain.

At the hospital an attempt was made to open the leg artery. This seemed to work for a few days until the artery closed off from a clot. Don’s doctors then performed a bypass graft from his groin to his foot. Don was thrilled because his foot felt warm for the first time in years. He went home to his wife, Marilyn, and their farm in just over a week. He even got back to his only hobby—golfing.

Don continued to work the farm. He faithfully went in for regular follow-up checks and saw his podiatrist frequently. He and his wife walked several miles daily over the farm and he played golf once a week. Four years later, Don’s foot began to feel cold again and he again started experiencing more leg pain. In addition, he hurt his foot on a nail and so he made an appoint-ment to see his doctor.

By the time Don came to his doctor’s office, the injured foot was badly infected and the graft was obviously clotted. Don was prescribed antibiotics and dressings were put on his leg after the doctor cleaned the foot of dead skin. Despite initial treatment, the pain from the lack of blood flow to the foot was too intense. Without good blood flow, the foot was becoming severely damaged. Don’s doctor determined that the foot was no longer salvageable, so a below-the-knee amputation was performed. Don did well during the surgery and his recovery was excellent. He began rehabilitation and six weeks later he went to be fitted for prosthesis.

When he arrived for his fitting, Don had a special request. “Could you make the ankle turn or pivot so I can still golf?” The answer was “yes!”

Don was delighted. He learned to walk on his prosthesis and was soon back to the farm… and golfing. He can rotate on his prosthesis when he golfs, and then lock the pivot when he is not golfing.

Now, four years later, Don does less on the farm and more on the golf course. His message is encouraging. “Even if you do have to have an amputation, it doesn’t have to be the end of your normal life.”

ABOUT YOUR SUBSCRIPTION TO KEEPING IN CIRCULATION

Many of you have contacted us to say that you want to continue receiving your free subscription, if you are receiving your copy through the mail, then you will continue to receive each issue, unless you request us to stop sending it to you. However, if you have picked up a copy in a doctor’s waiting room or at a health fair, then you will need to call us to receive your own copy.

Many of you may wonder how you got on our mailing list. The chart below will help you understand how you became a part of our free newsletter.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>You contacted us after seeing our newsletter for over one year. I enjoy it and would like to continue my subscription at my new address…. Thank you very much. I will look forward to the next issue!—L. Allford, MD</td>
</tr>
<tr>
<td>2</td>
<td>You called our toll free number wanting further information on vascular disease as a response to a magazine article you saw.</td>
</tr>
<tr>
<td>3</td>
<td>You filled out a postcard at a Legs For Life screening.</td>
</tr>
<tr>
<td>4</td>
<td>You responded to our online survey and saw our information on vascular disease as a response to a magazine article you saw.</td>
</tr>
<tr>
<td>5</td>
<td>You stopped by one of our booths at a health fair and saw our information on vascular disease as a response to a magazine article you saw.</td>
</tr>
</tbody>
</table>

TO KEEPING IN CIRCULATION

Many of you have contacted us to say that you want to continue receiving your free subscription. If you are receiving your copy through the mail, then you will receive your own copy. If you picked up a copy in a doctor’s waiting room or at a health fair, then you will need to call us to receive your own copy.

Letters to the Editor

“I am a new nurse practitioner working with a vascular surgeon and would like to receive your free newsletter. I have found your web site to be very helpful! Thanks for all the great information.”—KM

“I have got a lot of information from your web site.” Thank you—Pat

“I have been receiving your newsletter for over one year. I enjoy it and would like to continue my subscription at my new address…. Thank you very much. I will look forward to the next issue!”—L. Allford, MD

Your CAN Still Play Golf

Photo courtesy of

Several important steps will allow you to take charge of your health and prevent an amputation. First, stop smoking (or never start)! Next, keep your cholesterol and blood pressure under control. If you have diabetes, keep it under control, check your blood sugar regularly, and see your health care provider often. Diabetes puts you at higher risks for foot ulcers and infection. Proper foot care is critical. Even if you are not a diabetic, you should:

- Wear shoes that fit
- Never wear new shoes more than an hour the first time. Break them in slowly
- Keep your feet clean, but do not soak them more than five minutes at any time.
- Use good lotion or Vaseline® on the feet to keep them soft, but do not put it between the toes.
- Do not trim your nails unless you can see well enough. Go to a podiatrist if you need help, and also if you have thick hard nails.
- Have corns and calluses trimmed by a podiatrist.
- Check your feet for sores every day.
- See your health care provider for any redness or dark spots.
- Do not ignore any signs of trouble, even if they seem minor. See your health care provider right away. Regular care will help you avoid more serious problems down the road.
What is a Clinical Trial?

A clinical trial is a scientific research study to evaluate new medications, devices, or other treatments like diet and exercise in human volunteers. Clinical trials must follow guidelines established by the government in each country. In the United States the governing body for approving medications is the Food and Drug Administration (FDA) and in Canada it is the Therapeutic Health Directorate (TPD). Clinical trials may be sponsored by pharmaceutical or biotechnology companies, federal agencies like the National Institutes of Health or the Department of Veterans Affairs, or private medical institutions and foundations. The trials require volunteers, known as subjects, who fit specific guidelines or criteria. Clinical trials can be done in an inpatient or outpatient setting.

Purpose of Clinical Trials:
The purpose of a clinical trial is to find out whether a medication or other treatment is safe for use in a specific disease or medical condition and that it works as intended. Before the trial, researchers must answer several questions:

- What patient group or disease is the treatment meant to improve?
- What are the criteria to include or exclude subjects in the study?
- What general and disease-specific facts are going to be studied?

Benefits of Clinical Trials:
People who take part in clinical trials are playing an active role in their own health care. They can find out about and have access to new treatments before they are offered to the general public, and they help others by taking part in medical research.

How is the Safety of the Volunteers Protected?
The ethical and legal codes that apply to general medical practice also apply to clinical trials. Most clinical research is regulated by the government, which requires built in safeguards to protect volunteers. Trials follow carefully controlled protocols, or set of rules and study plans, which detail what researchers will do in each study. Results of clinical trials are reported by researchers at meetings, in medical journals, and to government agencies. People who take part in the study are not mentioned by their name in these reports.

Most types of clinical trials in the United States and Canada must be approved and monitored by an Institutional Review Board (IRB) to make sure the trial is safe. An IRB is an independent committee of physicians, scientists, mathematicians, community advocates, and others that the trial will produce benefits either to the subjects and the rights of volunteers are protected. All institutions that conduct or support biomedical research involving humans that is funded by the federal government and most private and public organizations have an IRB that initially approves the protocol and reviews the research from time to time.

You must sign a consent form before you take part in a clinical trial. This document answers all of your questions about the trial in plain language. Explanations in the informed consent document should include:

- The trial's purpose, how long it lasts, required procedures or things you must do, if you will be paid, people to contact if there is a problem, and possible benefits.
- If you have questions that are not addressed in the written consent, your should ask the study staff for more information. An informed consent document is not a contract. Volunteers may quit the trial at any time for any reason.

Phases of Clinical Trials:
Phase I: The first group of subjects receiving the experimental drug is a small number of healthy people to determine if a drug is safe. Occasionally Phase I trials are offered to patients with a life threatening disease.

Phase II: After a drug is proven safe in Phase I, it is tested for efficacy in Phase II to determine if it works. Phase II trials are usually randomized with a group of subjects receiving the experimental drug, while a second “control” group receives a standard treatment or placebo. Often these studies are “blinded” and neither the subjects nor the researchers know who is getting the experimental drug. Phase II trials are usually conducted in a slightly larger group of people who suffer from the disease or condition for which the drug was developed.

Phase III: The third and last pre-approval round of testing of a drug is conducted on large groups of afflicted patients. Phase III studies usually test the new drug in comparison with medications currently being used for the disease. The results of these trials usually provide the information that is included in the package insert and labeling.

Phase IV: After a drug has been approved by the FDA, phase IV studies are conducted to compare the drug to a competitor, explore new patient groups, or to further study any side effects and collect safety data.

Each phase of a clinical trial must be evaluated by the FDA for safety and effectiveness before approval is given to move to the next phase. It takes approximately 8-10 years to complete the three phases of research for a new drug and typically costs millions of dollars. Choosing to volunteer for a clinical trial is an important personal decision. While study medications may provide benefit, there is often a “control group” in each study that receives a “placebo,” which is an inactive substance that has no treatment value. There are no guarantees that participation will improve your health in any way—but that is why the study is important to be done in the first place. Carefully consider the risks and benefits, and discuss these questions with your physician and the research scientists.

Check our web site for resources about clinical trials. And coming this fall, our web site will have a new section about clinical trials and risks and benefits, and discuss your questions with your physician and the research scientists.

Continued to page 4
YOU DON’T HAVE TO LOSE YOUR LEG...CONTINUED FROM PAGE 3

After an amputation, patients are usually in the hospital between five to seven days, mostly for pain control. Besides the surgery pain, the patient may experience what is known as “phantom pain”. This is the feeling that there is still pain in the lost leg and may take some time to go away. In some hospitals, a cast may be applied to the amputation site immediately or an artificial leg (prosthesis) put on. Other hospitals may use an elastic wrap or an elastic stocking to keep the swelling down and make the stump ready for a permanent prosthesis. It takes about one month for the leg to heal enough to be fitted for prosthesis.

VDF: What about rehabilitation?

Dr. Westfall: Following discharge from the hospital, the patient may go to a rehabilitation unit or a skilled nursing facility. This depends on how strong the patient is and whether other medical conditions are under control. Rehabilitation for a below-knee amputation is much easier than it is for an above-the-knee amputation. That is why the doctors always work very hard to save the knee. An above-the-knee amputation does not allow the muscles to work as efficiently in relearning to walk.

VDF: Do you have any advice to our readers, which might prevent an amputation?

Dr. Westfall: Definitely. My best advice to help prevent an amputation is to stop smoking (or never start) and keep your cholesterol and blood pressure under control. If you have diabetes, manage it carefully, check your blood sugar often, and see your health care provider regularly. If you know you have diabetes or hardening of the arteries in your leg, you need to know you are at a higher risk for foot ulcers and infection. The way to help prevent ulcers or infection is to practice good foot care and hygiene. (See the list of prevention tips on page 2.)

Most important, don’t wait or ignore any signs of trouble, thinking they are too trivial, will go away or get better. The earlier you see your doctor about foot and leg problems, the easier the treatments and less serious the consequences. With good care and attention, you can keep both legs!

Dr. Scott G. Westfall, is a board certified in both surgery and vascular surgery. He has been in practice for 14 years in the St. Louis area.

What is a Recurring Donation?

A recurring donation is an automatic monthly donation that makes it easy to support VDF via our online giving tool. You designate the amount you would like the Vascular Disease Foundation to receive every month. You indicate when you would like the funds charged to your credit card or electronically transferred via secure encrypted technology from your bank account. VDF will do the rest AND send you an acknowledgment either monthly or once a year, whichever you prefer.

The Vascular Disease Foundation has been designated a 501(c)(3) organization for tax purposes by the Internal Revenue Service.

Many Ways to Help

Matching Gifts—Matching gifts maximize your donation to the Vascular Disease Foundation. Many companies offer matching gift programs that encourage employees to contribute to charitable organizations. Most of these programs match contributions dollar for dollar—some even double or triple the amount of your gift! Please check with your company’s matching gift program or human resources staff to confirm if your company offers a matching gift program that will match your gift to the Vascular Disease Foundation.

Life Insurance—A gift of life insurance may be made from a new or existing policy—premium payments may be deducted as a gift. An additional benefit—income tax deduction for the value of the policy when transferred is possible, as is a future estate tax deduction.

Stocks, Bonds or Mutual Fund Shares—Donating securities may provide significant benefits to you and to the Vascular Disease Foundation. The Foundation benefits from the value of the securities. You may benefit from:

- Income tax savings the year the investment is transferred.
- Capital gains tax that can be avoided on appreciated securities.

Make a Planned Gift—Planned gifts are a special way that you can plan lasting support for a cause this important to you now, as well as making a much larger gift in the future—larger than you may have imagined. Many planned gifts offer tremendous personal and financial benefits to you and to your family. Imagine:

- Receiving a life-long income for yourself or your loved ones;
- Transforming low-yielding assets into higher income;
- Reducing or even eliminating capital gains taxes;
- Reducing or eliminating federal estate taxes
- Providing for your heirs.

You can create a charitable annuity with your gift of securities. You can create a charitable remainder trust. Or, you can remember the Vascular Disease Foundation in your will.

Suggested bequest language is: “I, [name], of [city, state, ZIP], give, devise and bequeath to the Vascular Disease Foundation [written amount or percentage of the estate or description of property] for its unrestricted use and purpose.”

Before making any decisions about your financial affairs, please consult your attorney or financial advisor.

Questions about these or other ways to give to help the Vascular Disease Foundation? Please call our toll-free number or contact Linda@vdf.org.
**Frequently Asked Questions**

**Q.** Please advise the purpose of an ultrasound of the carotid arteries. Recently during a physical, my husband’s doctor did not like the sound of his carotid arteries and has ordered an ultrasound.

**A.** An ultrasound provides information about how blood flows in your arteries both as a waveform that looks similar to a heart EKG and as an image of the artery. The shape of the waveform gives the doctor useful information about the blood flow. The images help to determine if you have plaque, narrowed arteries or blockages in the blood vessels of the carotid. The ultrasound can give a doctor information about the speed or the blood at different points along the carotid, or if it slows or speeds up which would indicate a narrowing. (Think of a river. If it goes through a narrow channel, it will go faster than if it then goes through a wider section.) Often ultrasounds are in color which also lets the doctor know if the blood is flowing correctly or not.

The advantages are that it does not hurt to have the exam. Your husband will lie on an exam table. Gel is spread on his neck and an ultrasound instrument will be moved over the neck to track the flow in the carotid artery. It would be normal for an adult to have some narrowing, but if the narrowing is significant, the risk for a stroke or TIA increases.

The results of the ultrasound exam will help the doctor determine if additional treatment is needed at this time.

**Q.** Do doctors routinely perform an ultrasound or scan of the abdominal area to check for AAA’s? Otherwise how do you know if you have one if you don’t have any symptoms?

**A.** If someone has high risks for AAA, it should be checked by ultrasound. The other way to possibly identify a large AAA, is by a physical exam. However, this is not highly accurate. Also, it is not as useful in obese persons. A recently published article (Journal of Vascular Surgery, January 2004, pp 267-269.) recommends screening for all men 60-85 years; women 60-85 with cardiovascular risk factors; and anyone over 50 with family history of AAA.

**Q.** I have been having chronic leg pain mostly at night but it also occurs while I’m sitting. This has disrupted my sleep. I cannot get comfortable in bed, and I don’t like for my legs to touch each other because of the pain. Could this be PAD?

**A.** We can be reasonably sure that this is not PAD. If it were rest pain, it would be primarily at night or when lying down, and be relieved when the legs were down/dependent, as in sitting or standing (See our cover article on CLI). Nor does it sound like it is venous or lymphatic. Lymphedema is painless, and venous pain is relieved by lying down and made worse by standing or walking, and both are associated with swelling, which you did not mention. If you have diabetes, the pain can be from damage to the nerves in the feet, and you should discuss this with the doctor who manages your diabetes.

You may consider consulting with a dermatologist (a skin specialist) or a neurologist (nerve specialist). Perhaps your primary care doctor can suggest the best step for you.

---

**Amputee Resources**

**Excellence in Care Award**

You can nominate a health care professional for our “Excellence in Care Award” simply by sending us a note or email with a tax-deductible donation telling us who you wish to honor and why they deserve the recognition. Checks or credit card charges of any amount are accepted. Be sure to identify the honoree’s name, address and phone number so we can send them their award. Also, send us your name and address so we can thank you as well!

**COMING SOON...**

Watch for information about VDF’s new Legacy Club
In The News

Workshop on ABI

The Vascular Disease Foundation developed and presented a workshop on learning to perform the Ankle-Brachial Index examination. This program was developed for the Learning Center of the American College of Physicians, and presented at its Annual Meeting held in New Orleans in April. It was highly rated by the approximately 100 participants who attended.

Upcoming Meetings and Activities

The VDF is making plans for the 4th Annual Keeping In Circulation Walk at the Gardens this summer. This annual event is held in Denver in August and is an opportunity to learn about PAD, have a free screening for PAD and enjoy a walk. Check our web site for the time and location at www.vdf.org or call us at 303-949-8337.

The VDF is making plans to have an information booth at this year’s AARP Annual Convention to be held in Las Vegas on Oct. 14-16. Come and meet our staff.

Free Screenings

If you missed the recent free screenings held at many sites across the country in May, don’t worry. Legs For Life® will be conducting free screenings for those at risk for PAD at hundreds of places during September. This is the 5th year for the Legs For Life screening program. To locate a site near you, visit our web site at www.vdf.org and link to the Legs For Life web site.

VDF BOARD OF DIRECTORS

Dennis Newman, Board Chairman
Peter Gloviczki, M.D., President
Alain Drooz, M.D., President-Elect
Alan T. Hirsch, M.D., Past-President
Mark A. Creager, M.D., Treasurer
Marge B. Lovell, RN, CVN, Secretary
Byron R. Chrisman, J.D.
Janette Durham, M.D.
William R. Flinn, M.D.
Judy Fried, R.V.T.
Pamela McKinnie
Judith G. Regensteiner, Ph.D.
Robert B. Rutherford, M.D.
Anton Sidawy, M.D.
Kerry Stewart, Ed.D.

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

Thank you to our recent contributors:

ACI Medical, Inc.
Mr. Joseph Albergo
Ms. Kelly Baker
Ms. Gloria Baker
Ms. Joan Bolgiano
Barbara Bridges Family Foundation
Ms. Elizabeth Barton
Ms. Linda Bean
Ms. Roseone Becker
Mr. Vincent Bellite
Ms. Sheryl J. Benjamin
Mr. John E. Benson, Jr.
Mr. Al Bethard
Adrian & Joan Betley
Mr. Lawrence Bishop
Ms. Marjorie V. Brandt
Ms. Kathryn Byrne
Cardiovascular Associates of the Peninsula
Mr. Oscar Chavez
Ms. Isabelle Cohen-Adler
Ms. Dora Copeland
Ms. Marie F. Crain
Ms. Michele Davis
Ms. Minnie R. Davis
Ms. Lillian Di Girolamo
Ms. Thomas F. Dorsay, Jr.
Ms. Judith Dyer
Ms. Josephine Dyer
Ms. Mary L. Edwards
Mr. Jon K. Evans
Ms. Thelma Fanmorca
Ms. Gloria Fine
Ms. Patricia Poremaster
Ms. Lynn Franklin
Ms. Phyllis Fuyuma
Ms. Paula Gass
Mr. Diana L. Gilk
Ms. Phyllis Gordon
Ms. Kathleen Gross
Ms. Dee Quinta
Dr. Vivienne Halpern
Ms. Dolores Hanson
Dr. Clay Haskins
Ms. Virginia Hayes
Ms. Geneva Heath
Ms. Sylvia Hickman
Mrs. Annette Holmes
Ms. Nancy Hopson
Ms. Marie A. Haster
Ms. Barbara Hudson
Ms. Mary Hynes
Mary Kathryn and Leslie S. Jackson, Sr.
Dr. Michael R. Jaff
Ms. Tracy Johnson
Wayne and Connie Johnson
Ms. Marcia Jonasson
Mr. Ward Jones
Ms. Lillian Juhter
Ms. Carol Kenyon
Mrs. Donnell King
Ms. Jackie Klinsky
Ms. Gladys Kubbernus
Ms. Elaine Laesle
Ms. Don Latessa
Ms. Elizabeth Lindley
Ms. Phyllis Lipkowitz
Ms. Margaret M. Littlejohn
Pat and Ray Lofhis
Mr. Donald A. Mager
Ms. Ann M. Mallon
Ms. Nancy Mars
Ms. Nancy Martin
Ms. Julie Martz
Mr. E. J. Maurer
Mr. Martin McGill
Ms. Pamela McKinnie
Dr. Katiya Mehta
Mr. Mark Meler
Mr. Edward T. Monahan
Ms. Adrienne Morrow
Ms. Beth Myers
Ms. Ellen M. Nelson
Ms. Verla Nielsen
Dennis and Patricia Newman
Dr. Jeffrey W. Olin
Mr. Sam Oliva
Dr. Mark Oliver

Donors

Ms. Janine Oliveri
Ms. George E. Parrish
Ms. Judith Perinkoff
Ms. Patricia A. Pfau
Dr. John Pfeifer
Michael and Mary Powell
Ms. Linda Regensburger
Dr. Judith Regensteiner
Mr. Edward P. Revis
Waldo and Louise Roberts
Ms. Mildred Rosenfeld Buda
Mr. Max Schnee
Mr. David Seymour
Ms. Jacqueline R. Sherman Chaise
Dr. Anton Sidawy
Ms. Debra J. Simels
Dr. Sukir Sinnathamby
Mr. Charles G. Slayman
Mr. Gregory Smith
Ms. Florence Smorkol
Dr. David S. Summer
Surgical Associates of Central New Jersey
Ms. Suzann D. Tarvin
Ms. Roberta Tsuyama
Mr. Marshall D. Tucker
Dr. Chandrasekar Venugopal
Cdr. H. K. Wallace
Mr. Joseph M. Walsh
Keith and Rosemary Webb
Ms. Ethel Weiner
Ms. Elizabeth O. Wells
Dr. Thomas L. and Helen P. Whitsett
Dr. Harvey M. Wiener
Mr. Ronald Williams

In memory of Michael Ennis
Dorothy Wetmore

Excellence in Care Awards:
In honor of Dr. Kathryn Mulligan
Mrs. Rosemary Amb

In honor of Dr. J. Gary Wroblewski, Jr.
Patricia and WilliamMichitsch

Discount Drug Program for VFD Friends and Families!

The Vascular Disease Foundation announces an opportunity for you to purchase discounted medications through a mail service of Quality Pharmaceutical Services, Inc. (QPS). You can save up to $30 off retail prices of brand name pharmaceuticals and even greater savings on generic medications. This program is totally free. There are no cost, enrollment fees, annual fees, shipping fees or handling fees. In addition, a special Retail Pharmacy Discount Card, honored at 50,000 pharmacies nationwide, is offered as well. For free price quotes and enrollment, call QPS toll-free at 1-866-500-3460. Be sure to say you’re with the Vascular Disease Foundation.

In memory of Michael Ennis

Dorothy Wetmore

Excellence in Care Awards:
In honor of Dr. Kathryn Mulligan
Mrs. Rosemary Amb

In honor of Dr. J. Gary Wroblewski, Jr.
Patricia and William Michitsch

Thanks!

Thanks for sending the many surveys telling us how much you like this newsletter and suggestions for improvement. We will share the results in the next issue of Keeping In Circulation and will hope to begin to implement some of the ideas then, too.