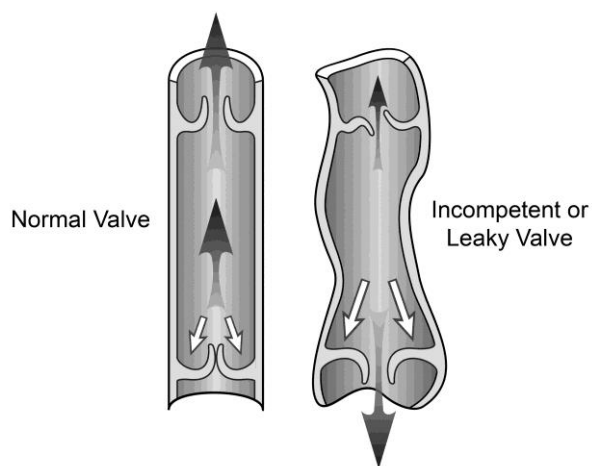


Treatment for Varicose Veins

Your blood vessels are made up of arteries and veins. Arteries bring blood rich in oxygen from the heart to all parts of your body. Veins carry blood back to the heart where they receive more oxygen from the lungs. The 2 types of veins in your legs discussed below are:

- Deep veins: they carry the most blood back to your heart. Muscle surrounds these veins and provides support for them.
- Superficial veins: they lie just below the surface of your skin. They lie over the muscle so they can twist and become enlarged.

Veins also contain valves which prevent blood from backing up. These valves help blood return to the heart. There are a number of valves spread out along your veins. The valves open to allow blood to flow to the heart. They close to prevent the blood from backing up. When your leg muscles contract, they also help push blood back up to the heart.



Leaky valve causes blood to back up and pool in legs

Varicose veins are superficial veins that have been stretched, twisted and dilated. They are very common. Blood clots rarely form in them. They may be caused by:

- Lack of muscle support in superficial veins
- Family history
- Obesity
- Pregnancy
- Weak vein walls
- Valve problems – weak or absent valves
- Jobs that demand standing for a long time
- Female hormones
- Blood clots in deep veins

Blood can pool in your legs if your valves do not close or become stretched. This pooling can worsen the problem because of the high pressure against the walls of your veins. The increased pressure makes the veins stretch more and bulge.

Spider veins are also superficial veins. They are very small damaged veins just under the surface of the skin. They are called spider veins because they may look like a spider web or even a bruise. They rarely are serious or cause problems. You may not like the way they look. Sclerotherapy is the usual treatment for spider veins.

Symptoms

Symptoms of varicose veins include:

- Heavy, aching legs when standing
- Bulging, purple or blue veins just below the skin
- Leg swelling
- Discolored skin
- Occasional bleeding with a leg injury

Tests

There are a number of treatment options. It depends how bad your varicose veins are. These tests may help decide the proper treatment:

- **Venous Blood Flow Study:** A test that checks for blockages in your deep veins.
- **Duplex Scan:** This test also checks your veins and valves. It may show blockages or faulty valves.
- **Venography:** This test also checks your valves and for blockages in the veins.

Treatments

Based on the results of your tests, your doctor will give you treatment choices. These include both non-surgery treatments and surgery. The goal of treatment is to relieve pain in your legs, prevent bleeding from varicose veins and improve the look of your legs. Treatment choices are:

- Leg elevation
- Use of support hose or ace bandages
- Exercise
- Weight loss
- Avoiding prolonged standing
- Sclerotherapy (varicose veins are injected with chemicals to make them disappear)
- Endovenous laser ablation (heat from laser makes the vein collapse and disappear)
- Radiofrequency ablation (radiofrequency energy makes the vein collapse and disappear)
- Vein ligation surgery

Sclerotherapy

This works best in treating spider veins but may also be used to treat varicose veins. Your doctor will decide the best treatment for you. With this treatment, your doctor injects some medicine into the swollen

vein. This inflames the blood vessel and causes the walls of the blood vessel to stick together and shrivel up. It can no longer fill with blood. The damaged vein then disappears over time.

There is no special prep for this treatment. It may need to be done in a few sessions. The doctor will adjust the amount of medicine based on your response to the first injection. You may feel slight burning during the treatment.

Most patients are able to return to normal and go back to work right away. There may be some bruising. It may take more than one treatment for each vein.

It is best to raise your legs and wear compression stocking after the treatment. Walking is good for you. Avoid sun exposure. Ask your doctor when you can apply sunscreen to the treated areas

Endovenous Laser Treatment (EVLT) or Ablation

This is a minimally-invasive procedure done in the clinic. It takes from 30 minutes to 2 hours. You will have numbing medicine injected into the skin. Then the laser is guided into the vein using ultrasound. The laser heats the lining of the vein. This causes it to collapse, shrink, and disappear. You may receive some medicine to relax or sedate you first. If you get sedation, you will need someone to drive you home.

The first 24 hours after your EVLT, you should not do any intense exercise, lift heavy weights or sit in cramped quarters (such as in a car or airplane). The next day you should be able to resume your normal activity. Exercise is good for you and helps blood flow back to your heart. You may have some mild pain, bruising, or feeling of tightness for a week. Take pain medicine as ordered.

Wear compression stockings for the first 3 weeks. You may shower after 24 hours, but do not take tub baths or swim for 1 week.

Radio Frequency Ablation (RFA) and Stab Ablation Phlebectomy (SAP)

Radiofrequency ablation (RFA) is also a minimally-invasive treatment for varicose veins. The doctor uses radiofrequency energy (instead of laser energy) to damage the varicose vein. This forms scar tissue which closes off the varicose vein. It will likely be done as an outpatient in the operating room. To prepare for RFA, read instructions below under Vein Ligation Surgery.

Stab ablation phlebectomy (SAP) is a procedure where several tiny cuts (incisions) are made in the skin through which the varicose vein is removed. SAP might be done along with other treatments for varicose veins, such as ligation and stripping, laser treatment, or radiofrequency treatment.

Vein Ligation Surgery and RFA

When the veins are removed in surgery, the upper end of the damaged vein is tied off and removed. This will not affect blood flow in your legs because the blood will then flow through the deep veins back to the heart. Both vein ligation surgery and RFA will likely be done as an outpatient in the operating room.

Prior to Surgery

1. Be sure to keep wearing your compression stockings until surgery, as you were taught. Bring them along to the hospital the day of surgery as you will wear one home on the non-surgical leg.

2. A day or two before surgery, look closely at the leg that will be operated on. Locate the varicose veins. On the day of surgery the surgeon will mark the bulging varicose veins with a surgical marker while you are standing upright. This is easier to do if you know where your varicose veins are so that none are missed.
3. Do not eat or drink anything at least 6 hours prior to surgery. In most cases this means that you should not eat or drink anything after midnight if you're having morning surgery. Don't eat or drink anything after breakfast if you're having afternoon surgery. If you do, your surgery will likely be cancelled. There are some exceptions to this rule if you have diabetes or take certain medicines. We will discuss this with you at your pre-op clinic visit.
4. Someone will call you sometime in the afternoon on the day before surgery. They will ask you some questions about your health. You will be told when to arrive and where to go the day of surgery.
5. **You must arrange for someone to drive you home from the hospital and stay with you that night.** It is best if that person stays at the hospital during the surgery.

Day of Surgery

1. When you arrive, you will be shown to your room. You will be told what to do to get ready for surgery.
2. Nursing staff will ask you some questions and discuss the nature of your visit. They will also review your health history, medicines and allergies. They will tell you what to expect. They will review the type of surgery

being done and check which side of your body is being operated on.

3. A nurse will start an intravenous (IV) line. He or she will prepare your leg by washing it with sterile soap and water.
4. An Anesthesiologist will talk to you about the type and risks of your planned anesthesia. You will be told what to expect. Your questions will be answered.
5. Your Vascular Surgeon will stop by and answer any questions you or your family have about your surgery. He or she will have you stand at the bedside while the visible varicose veins on your leg are marked.
6. Then you will be brought to the operating room (OR) on a cart. Family members may wait in the waiting room until you return. We request that they stay in the hospital during your surgery but it is not required.
7. When you enter the OR, you will be met by the OR staff. They will transfer you from the cart to the OR table. The surgeon, the anesthesiologist, and nursing staff will perform a final review of the procedure and surgical site. The anesthesiologist will then give you anesthesia.
8. Your surgeon will then begin surgery with the help of a physician assistant and OR technicians. When surgery is done, the small incisions will be closed with sutures. Your leg will be wrapped with ace wraps from toe to groin. You will wake up from anesthesia and be brought to the recovery room.
9. Most patients are in the recovery room for about 45 minutes. While there, you will slowly become more awake.

Nurses will be checking your vital signs, surgical dressings, and asking about your pain. Once you are awake again, your vital signs are stable, and your pain is under control, you will be brought to the post-op unit where your family will be waiting for you.

10. Nursing staff will keep checking your vital signs, treat any surgery pain, and change your dressings if needed. They will discuss discharge medicines and your care at home. You also will be taught about special precautions. When your pain is under control, and you have gone to the bathroom and walked around, you will be able to go home. This should take about 1 to 2 hours.

Going Home after Surgery

1. **You will need someone to pick you up and drive you home.** You will not be able to drive. You should sit sideways in the backseat with your feet up and resting on the seat. You will be helped into your car by nursing staff. You will have to be able to get out on your own once you are home.
2. You may walk and bear as much weight as you can. While you will start out slowly, you may progress daily as comfort allows. A rule of thumb to remember for the first week after vein surgery: if you are up, then you are moving. If you are not moving, then you should rest with your feet up.
3. When you get home, rest in a comfortable chair, couch, or recliner, but not your bed. Keep both feet up on at least 1 pillow. You should perform ankle pumps with both legs about 3-4 times every 8-10 minutes. Get up and walk around the house for 5-10 minutes every hour during the day.

These hourly walks are very important to help prevent blood clots.

4. When it's time to go to bed at night, place a pillow lengthwise under the surgical leg from knee to ankle.
5. During the daytime you may also apply ice to your incisions over top the dressings. Only leave it on for 15 minutes at a time. Ice should feel cold but not freezing to the leg. This helps reduce pain, bleeding, bruising, and swelling. You may use it as often as you prefer.
6. Do not lift more than 10 pounds. Do not do any strenuous, prolonged, or impact physical activities or exercise for about 2 weeks after surgery.
7. Do not drive for at least 3 days after surgery or if you are taking narcotic pain medicine. This is very important if you had surgery on your right leg.
8. Try to take some time off from work if you can. Be sure to plan for this before surgery. Most patients need to be off work for 2-4 days after surgery. You may need to be off longer depending on the type of work that you do.
9. As you start to feel better, increase your walking speed and duration...but remember the rule of thumb. You may go outside, go to the mall, and do stairs as you feel better.
10. It is common to feel some pain right after surgery. You will be prescribed narcotic pain pills at the time of surgery. Use it only if you need it. If you do, take it with some food as it can be hard on an empty stomach. Narcotics also cause constipation. Take a daily stool softener like

Docusate while on pain pills.

Sometimes over-the-counter, non-narcotic pain medicines such as ibuprofen, Advil[®], Tylenol[®], naproxen, or Aleve[®] are preferred. They may work as well without narcotic side effects. If this works for you, they may be used in place of narcotic pain pills.

11. You may also be prescribed an anti-nausea medicine. This may help if you have nausea from your narcotic pain medicine. Again, use it only if you need it.
12. You may resume all of your regular home medicines again after surgery.
13. After surgery, your leg is wrapped with ace wraps from toe to groin. Keep this wrap clean, dry, and in place for 48-72 hours, depending on when your follow up imaging and appointment are (read #15 below). If it feels too tight, you may loosen it and rewrap it the same way. Compression is vital right after surgery. This means you should sponge bathe at the sink for the first few days after surgery. Wear a compression stocking on your other leg.
14. If you see any blood seeping through the dressings before you are allowed to shower (see #15 below), do not remove the dressings. Instead, cover the area with gauze dressings and more ace wrap. We will provide you with extra ace wraps at discharge.
15. You may remove your bandages and shower on post-op day 3. **If you are scheduled to come back for your follow up imaging and appointment before this, you may remove your bandages and shower the morning of your appointment.** Shower and

gently wash your leg and incisions with soap and water. Pat dry and rewrap your leg with new or clean ace wraps from toe to groin (see below or ace wrap instructions). You may use antibiotic ointment and gauze dressings under the ace wraps if you wish. The dressings should stay on during the day. It can be taken off during the night. Keep doing this for 7-10 more days with the surgical leg. Then return to using compression stockings on both legs. You should still be using a compression stocking during the day on the non-surgical leg during this entire period of time.

16. Most patients have 2 clinic visits for follow-up at UW Health West Clinic on Junction Road. The first will be 2-3 days after surgery for venous imaging of the surgical leg. This test ensures that certain veins are closed off and that no blood clot has formed. It will be done by the vascular technologist. Your dressings will be changed at this time. The second clinic visit will be about 1 week after surgery when your sutures will be removed by one of the health care team.

17. Do not soak in a tub or swim for 2 weeks.

When to Call the Doctor:

After 2 days, you should look at your incisions daily for signs of infection. Call if you notice:

- Red and warm incision
- Foul smelling or pus from incision (yellow or green drainage)
- Temperature over 100.4° F for 2 readings taken 4 hours apart
- Increased swelling, firmness or tenderness around the incisions
- An opening in the incision
- Severe pain, not relieved with elevation, rest or pain medicine
- Changes in blood flow in leg – unusual coolness, swelling, pale or blue color, numbness or tingling.

Phone Numbers

Monday-Friday, 8:00 am – 5:00 pm, call the Peripheral Vascular (PVS) Clinic at UW Health West Clinic at **(608) 263-8915.**

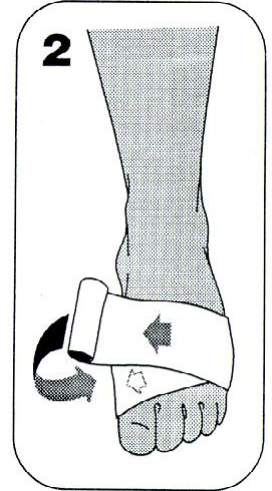
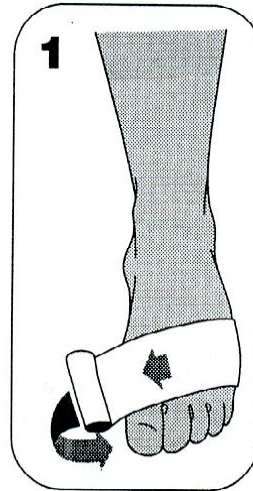
After hours, weekends and holidays, this number will give you the paging operator. Ask for the PVS doctor on call. Leave your name and phone number with the area code. The doctor will call you back.

If you live out of the area, call **1-800-323-8942.**

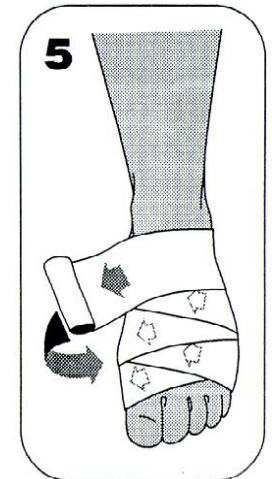
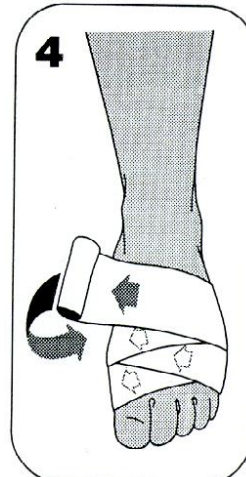
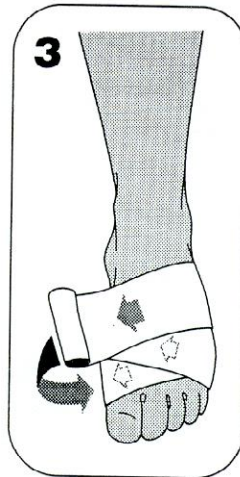
Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright ©10/2016 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7573

How to Apply Ace Wraps to the Legs

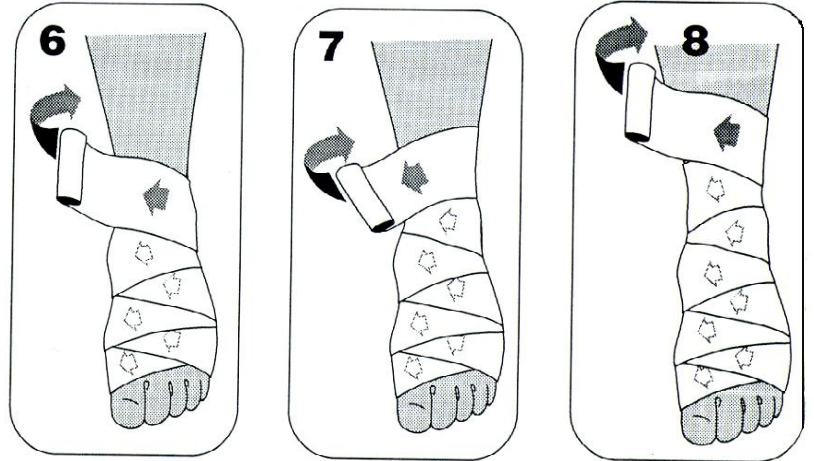
1. Use a 4 inch ace bandage for the foot and lower leg. A 6 inch ace bandage might be best for adult thighs. (In children and smaller adults the width of the ace bandage will be chosen based on the size of the child). Start the ace wrap at the top of the foot, just below the toes. Wrap over the top of the foot and around the back of the foot. This will secure the ace bandage and prevent the ace bandage from riding up the leg.
2. Pull the ace wrap diagonally, not at a right angle to the leg.



3. Wrap up the foot diagonally, reversing the direction with each turn.
- 4, 5. Keep wrapping in a criss-cross pattern, adding the most pressure as you wrap up the foot, toward the ankle.



6,7,8. As you apply the ace wrap around the ankle, begin to move up the leg, using the same technique. Apply less and less pressure as you move up toward the body.



9,10. Keep wrapping up the thigh and secure the end of the ace wrap with metal clips or tape. Check the toes to see if they are pink and warm. There should not be any numbness or tingling. If the toes become paler, cool, numb, or tingle, the ace bandage may be too tight. Remove and rewrap the ace bandage to apply correct pressure without cutting off the circulation.

