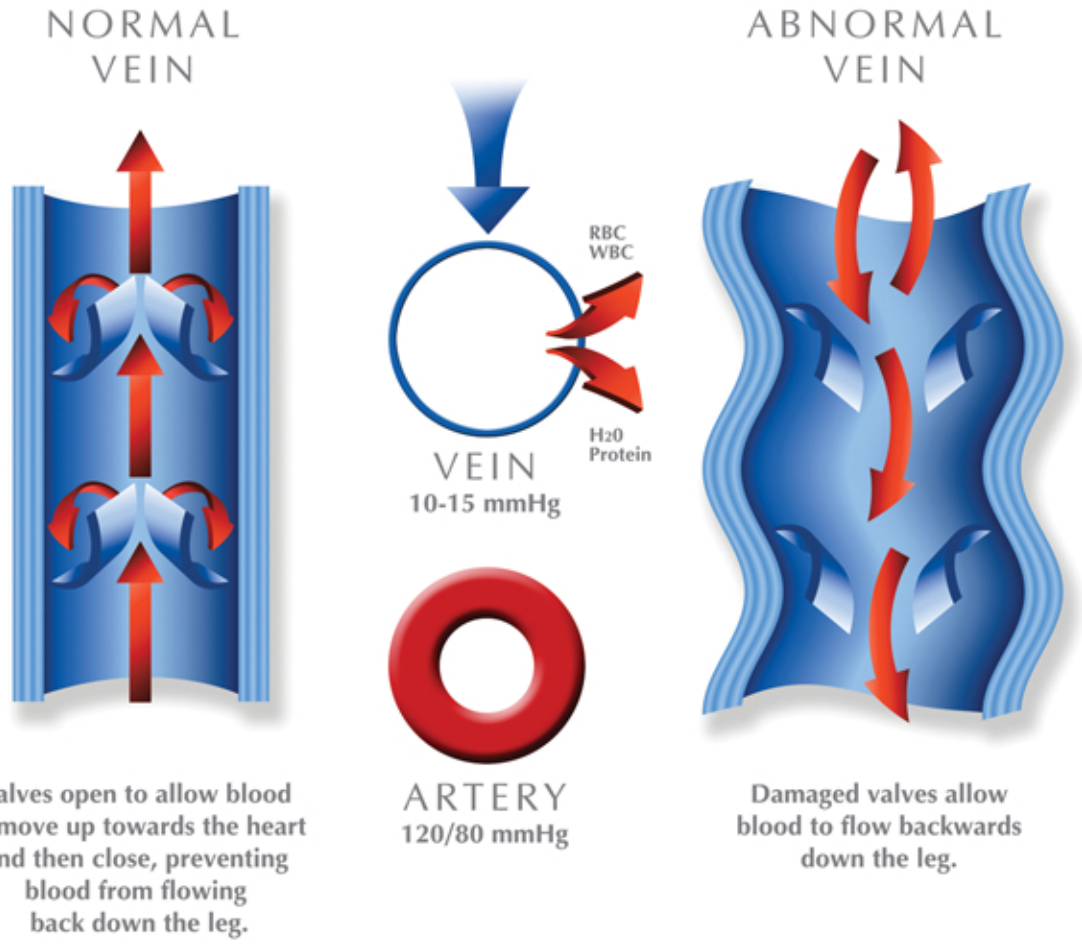
Swollen, achy legs?

By Joseph Magnant, MD, FACS

Heart failure, kidney failure, excess salt intake and obesity are typically at the top the list of causes of swollen and achy legs. However, when one looks across the spectrum of patient ages, the most common cause and most treatable cause of lower extremity swelling and achy legs is venous insufficiency, or venous reflux disease. For many years venous insufficiency was typically referred to as "varicose veins" and if no varicose veins were present the possibility of venous insufficiency was not further considered. Unfortunately for many patients this is often still the case today. The diagnosis of venous insufficiency as the potential cause for patients swollen and achy legs should not be dismissed based solely on the absence of visible varicose veins. To further clarify this point, let it be plainly stated that all patients with varicose veins have some degree of venous reflux disease or venous insufficiency, but not all those patients with venous reflux disease or leaky vein valves or venous insufficiency have varicose veins. What this means for the average patient with swollen achy legs is that the most common cause of their problem, from a statistical perspective, is venous insufficiency. Not congestive heart failure, kidney failure, lymphedema, excess salt intake or any other obscure cause like hypothyroidism. Common things affect people commonly. With approximately 40 Million adults in the USA affected with severe superficial venous insufficiency, many of these patients may have edema or swelling based on increased venous pressure in the legs.



Leaky valves in the superficial veins of the legs lead to increased venous pressure downstream in the calf region. The thin walls of the veins in the legs are only built to withstand 10-15 mm of mercury (mm Hg) pressure, and when the valves are faulty and pressures of 50-70 mm Hg exist for prolonged periods (8-12 hours/day for many years), the result is the accumulation of fluid and protein in the skin fat and muscles of the calves. This fluid and protein actually leaks through the thin walls of the veins into the soft tissue of the legs. Patients may complain of heaviness, achiness or tiredness in the calves usually worse at the end of the day and improved with elevation and rest. Others may also complain of swollen ankles, tight fitting shoes and problems with their legs swelling after long auto or plane trips. The edema make takes 3-5 days to resolve or over time they may notice a constant swollen state exists. When one considers the amount of time we spend upright, either sitting or standing, greatly exceeds the amount of time we spend lying down(as in sleeping), there is a gradual build up of fluid in the legs of patients with venous reflux disease or venous insufficiency. This may also lead to damage of the lymphatic channels in the legs which may be diagnosed as primary lymphedema. The lymphatic channels normally serve a scavenging function, returning this type of leaked fluid back to the jugular vein through the complex systems of lymphatic channels which coalesce into the thoracic lymphatic duct and joins the left internal jugular vein just deep to the left medial collar bone. The build up of protein rich fluid (serum) in the skin from any cause may lead to an orange skin appearance of the leg skin ("peau d'orange" in French).

One such patient who recently presented on her own for further evaluation of her long standing left leg lymphedema had been told for years that it was related to her chemotherapy she had undergone in the distant past. She did not have any previous scars in the left leg, had any previous left pelvic surgery nor had she undergone radiation therapy to her left pelvis or leg.

Never had she undergone ultrasound examination of her left leg for deep vein clots nor for insufficiency. She underwent venous insufficiency ultrasound evaluation and was found NOT to have deep vein thrombosis or deep vein insufficiency, although she was found to have severe left great saphenous vein insufficiency. She underwent successful endovenous ablation (sealing of the great saphenous vein) and had more than 50% reduction in the size of the left leg within 2 weeks of the procedure and continues to improve. She did not have any external signs of venous insufficiency such as varicose veins, skin discoloration or spider veins. Her only complaint was that of left leg swelling, aching and what she had been told was untreatable lymphedema. She is now able to live a more active and unrestricted life today as a result of her persistence in ruling out all treatable causes of her swollen, achy leg and subsequent endovenous sealing of her severely leaky vein. Many other patients have presented with variations of this story. The 25 year old healthy woman, who went as far as to write to Dr. Oz and The Doctors to inquire about her "Cankles", subsequently was diagnosed with severe venous insufficiency and is currently being treated with a mandatory trial of compression hose therapy while awaiting her sealing procedure. Teachers, nurses, homemakers, auto mechanics, pharmacists, retirees, students may all be affected by leg swelling and aching caused by undiagnosed venous insufficiency merely because they do not have the classic "varicose veins" most physicians still believe is a requirement for the diagnosis of venous insufficiency. The take home advice for the general public is to remember that lack of varicose veins does not mean lack of venous insufficiency. So if you have swollen achy legs, unexplained lymphedema (usually unilateral), heavy and fatigued legs worse at the end of the day and improved with elevation and rest, night time leg cramps (especially after in bed), restless leg syndrome or nocturnal urination insist on a venous insufficiency evaluation by a dedicated and well trained vein specialist. A run of the mill ultrasound looking only for clots will not suffice. Venous insufficiency can and should be effectively evaluated and stratified by location and severity by specially trained vascular ultrasound technologists. The modern treatment of venous insufficiency with endovenous sealing or ablation using laser or radiofrequency energy is an effective, minimally invasive and time tested technique which continues to offer hope for millions of patients with symptomatic superficial venous insufficiency. The diagnosis needs only be first considered in those many patients without varicose veins.

Before

After