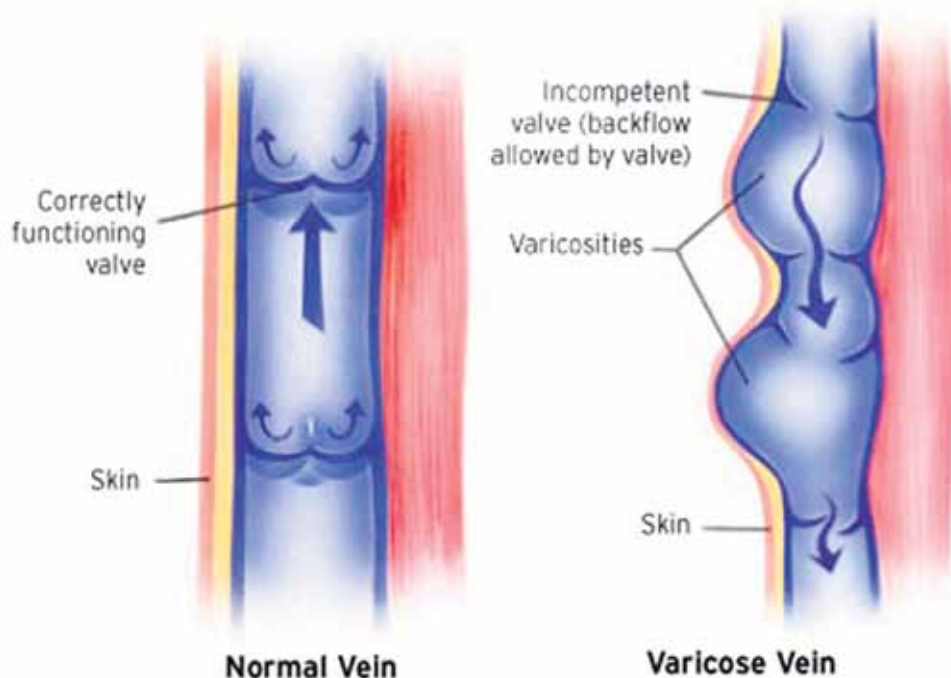


# VARICOSE VEINS : WHAT TO KNOW AND HOW TO CARE



**V**aricose veins and the spider veins are the dilated veins with reverse blood flow and it is the manifestation of underlying problem which is also termed as venous insufficiency syndrome. Venous insufficiency syndromes describe venous blood deviating from a normal flow path and flow in a retrograde direction so that fluid accumulates, causing a “congested” leg.

Mild forms of venous insufficiency are merely uncomfortable, annoying, or cosmetically disfiguring, but severe venous disease can produce serious systemic consequences and can lead to loss of life or limb.

Most patients with venous insufficiency have subjective symptoms that may include pain, soreness, burning, aching, throbbing, cramping, muscle fatigue, and restless legs. Over time, chronic venous insufficiency leads to cutaneous and soft tissue breakdown that can be debilitating.

Chronic venous insufficiency eventually

produces chronic skin and soft tissue changes that begin with mild swelling and then progress to include discoloration, inflammatory dermatitis, recurrent or chronic cellulitis, cutaneous infarction, ulceration, and even malignant degeneration.

## **PATHOPHYSIOLOGY OF VARICOSE VEINS:**

Varicose veins and spider veins are normal veins that have dilated under the influence of increased venous pressure. Elevated venous pressure most often is the result of venous insufficiency due to valve incompetence in the deep or superficial veins. Varicose veins are the undesirable pathways by which venous blood refluxes back into the congested extremity. Ablation of the varicose pathways invariably improves overall venous circulation.

Chronically increased venous pressure can also be caused by outflow obstruction, either from intravascular thrombosis or from extrinsic compression. In patients with



outflow obstruction, varicosities must not be ablated because they are an important bypass pathway allowing blood to flow around the obstruction. Specific diagnostic tests can distinguish between patients who will benefit from ablation of dilated superficial veins and those who will be harmed by the same procedure.

Deep vein thrombosis initially produces an obstruction to outflow, but in most cases the thrombosed vessel eventually recanalizes and becomes a valveless channel delivering high pressures from above downward. Varicose veins of pregnancy most often are caused by hormonal changes that render the vein wall and the valves themselves more pliable. The sudden appearance of new dilated varicosities during pregnancy still warrants a full evaluation because of the possibility that these may be new bypass pathways related to acute deep vein thrombosis.

**Frequency:** The prevalence of venous disease is higher in Westernized and industrialized countries, most likely due to alterations in lifestyle and activity. Also it is more common in old age and female patients.

### **CAUSES :**

1) Heredity is important in determining susceptibility to primary valvular failure. The prevalence of varicose veins is 43% in female relatives of patients with varicose veins but is only 19% in male relatives. 2) Prolonged standing leads to increased hydrostatic pressures that can cause chronic venous distention and secondary valvular incompetence anywhere within the superficial venous system. 3) Pregnancy is a common cause of varicosities. During pregnancy, circulating hormonal factors increase the

distensibility of vein walls and soften valve leaflets. At the same time, the veins must accommodate a greatly expanded circulating blood volume. Late in pregnancy, the enlarged uterus compresses the inferior vena cava, causing further venous hypertension and secondary distension of leg veins. 4) Age is an independent risk factor for varicosities. With advancing age, the elastic lamina of the vein becomes atrophic and the smooth muscle layer begins to degenerate, leaving a weakened vein that is more susceptible to dilatation.

**Presentation:** Patients with varicose veins may present with acute varicose complications, including variceal bleeding, new onset of dermatitis, thrombophlebitis, cellulitis, and ulceration. Patients may also consult a physician because of worsening chronic symptoms or for a variety of other reasons. Some are seeking advice on the medical implications of varicose veins. Common symptoms that should be elicited include leg heaviness, exercise intolerance, pain or tenderness along the course of a vein, pruritus, burning sensations, restless legs, night cramps, edema, skin changes, and paresthesia. Pain and other symptoms may worsen with the menstrual cycle, with pregnancy, and in response to exogenous hormonal therapy (eg, oral contraceptives). A small number of women regularly experience pain associated with their varicose veins after sexual intercourse.

### **THE VENOUS HISTORY SHOULD ALSO INCLUDE THE FOLLOWING ELEMENTS:**

- History of venous insufficiency (eg, date of onset of visible abnormal vessels, date of onset of any symptoms, any known prior venous diagnoses, any history of



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- pregnancy-related varices)
- Presence or absence of predisposing factors (eg, heredity, trauma to the legs, occupational prolonged standing, sports participation)
  - History of edema (eg, date of onset, predisposing factors, site, intensity, hardness, modification after a night's rest)
  - History of any prior evaluation of or treatment for venous disease (eg, medications, injections, surgery, compression)
  - History of superficial or deep thrombophlebitis (eg, date of onset, site, predisposing factors, sequelae)
  - History of any other vascular disease (eg, peripheral arterial disease, coronary artery disease, lymphedema, lymphangitis)
  - Family history of vascular disease of any type

Inspection may reveal such findings as ulceration, telangiectasias, atrophie blanche, interdigital mycosis, acrocyanosis, eczematous lesions, microulcers, stasis dermatitis, flat angiomas, prominent varicose veins, scars from a prior surgical operation, or evidence of previous sclerosant injections.

## DIAGNOSIS :

**Duplex ultrasonography :** Duplex ultrasonography is the standard imaging modality for diagnosis of varicose insufficiency syndromes and for treatment planning and preoperative mapping.

Modern color-flow duplex ultrasonography equipment can provide flow information in conjunction with surprisingly high-resolution views of both deep and superficial venous systems. Structural details that can be observed include the most delicate venous valves, small perforating veins,

reticular veins as small as 1 mm in diameter, and (using special 13-MHz probes) even tiny lymphatic channels.

## Magnetic resonance venography (MRV)

Magnetic resonance venography (MRV) is the most sensitive and most specific test for deep and superficial venous disease in the lower legs and in the pelvis, where other modalities cannot reach.

## TREATMENT:

### Chemical sclerosis

Chemical sclerosis or endovenous-chemoablation (sclerotherapy) is the most widely used medical procedure for ablation of varicose veins and spider veins.

In this procedure, a sclerosing substance is injected into the abnormal vessels to produce endothelial destruction that is followed by formation of a fibrotic cord and eventually by reabsorption of all vascular tissue layers

### Radiofrequency ablation

Radiofrequency ablation is a thermal ablation technique that uses a specially developed proprietary RF catheter placed inside the vein. It will ablate the abnormal & dilated vein which the culprit of all signs & symptoms. It is the gold standard treatment in present era. It is less invasive & has high success rate as compared to other modalities.

### Stripping of Varicose Vein

It is invasive method where the whole dilated vein is removed from body by an instrument called "vein stripper". It is more painful & causes more blood loss as compared to other modalities.



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