

RACHA

## **Varicose veins**

### **Definition:**

Varicose veins are veins that have become enlarged and twisted.

The term commonly refers to the veins on the leg, although varicose veins occur elsewhere. Veins have leaflet valves to prevent blood from flowing backwards (retrograde).

Leg muscles pump the veins to return blood to the heart. When veins become enlarged, the leaflets of the valves no longer meet properly, and the valves don't work. The blood collects in the veins and they enlarge even more. Varicose veins

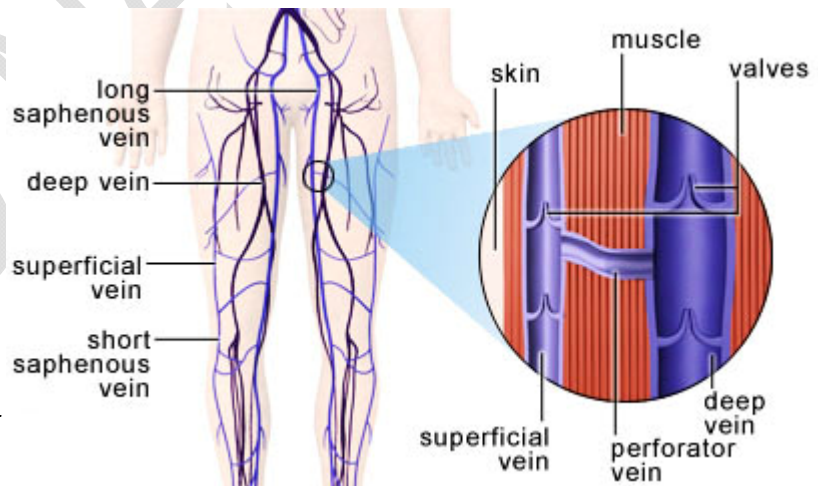
are enlarged veins that are swollen and raised above the surface of the skin. They can be dark purple or blue, and look twisted and bulging.

Varicose veins are common in the superficial veins of the legs, which are subject to high pressure when standing.

Varicose veins affect 1 out of 2 people over age 50. Varicose veins are more common in women than in men, and are linked with heredity. Other related factors are pregnancy, obesity, menopause, aging, prolonged standing, leg injury and abdominal straining. Varicose veins are bulging veins that are larger than spider veins, typically 3 mm or more in diameter.

Hemorrhoids are a type of varicose vein.

### **Symptoms**



- ▶ Aching, heavy legs (often worse at night and after exercise)
- ▶ Ankle swelling
- ▶ A brownish-blue shiny skin discoloration around the veins
- ▶ Skin over the vein may become dry, itchy and thin, leading to eczema (venous eczema)
- ▶ The skin may darken (stasis dermatitis), because of the waste products building up in the legs
- ▶ Minor injuries to the area may bleed more than normal and/or take a long time to heal
- ▶ Rarely, there is a large amount of bleeding from a ruptured vein
- ▶ In some people the skin above the ankle may shrink (lipodermatosclerosis) because the fat underneath the skin becomes hard.
- ▶ **Restless Leg Syndrome.**
- ▶ They often itch, and scratching them can cause ulcers.
- ▶ Besides cosmetic problems, varicose veins are often painful, especially when standing or walking.

### **Complications**

**Most varicose veins are relatively benign, but severe varicosities can lead to major complications, due to the poor circulation through the affected limb.**

- Pain, heaviness, inability to walk or stand for long hours thus hindering work
- Skin conditions /Dermatitis which could predispose skin loss
- Bleeding : life threatening bleed from injury to the varicose vein
- Ulcer : non healing varicose ulcer could threaten limb amputation.
- Development of carcinoma or sarcoma in longstanding venous ulcers. There have been over 100 reported cases of malignant transformation and the rate is reported as 0.4% to 1%.
- Coagulation of blood in varicose veins cause superficial thrombosis, deep vein thrombosis (DVT), Pulmonary Embolism (PE) & could precipitate stroke in the rare case of predisposed individuals (that is, patients with patent foramen oval).

### **Treatment**

#### **1-Non-surgical treatment**

- Elevating your legs when resting and not crossing them when sitting can help keep varicose veins from getting worse and provides relief.
- Advice about regular exercise sounds sensible but is not supported by any evidence.
- The wearing of graduated compression stockings with a pressure of 30–40 mmHg has been shown to correct the swelling, nutritional exchange, and improve the microcirculation in legs affected by varicose veins. They also often provide relief from the discomfort associated with this disease. Caution should be exercised in their use in patients with concurrent arterial disease.
- Losing weight
- Wearing loose clothing and avoiding long periods of standing can also help.
- Non-surgical treatments include Sclerotherapy.

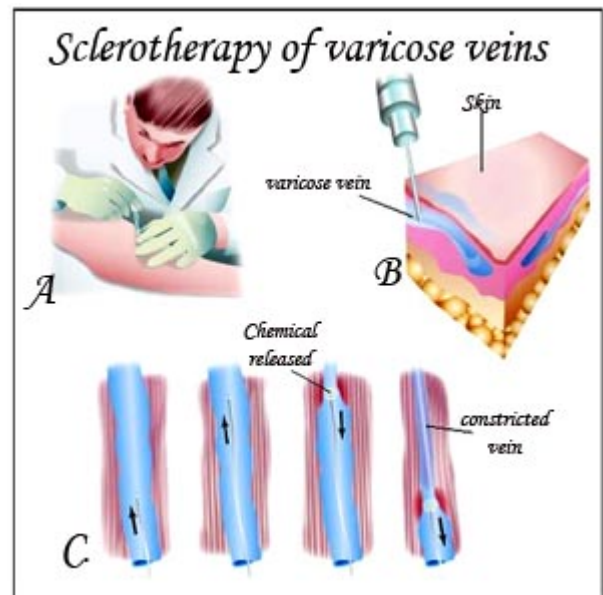
## Sclerotherapy :

Today, many plastic surgeons are treating used for telangiectasias (spider veins) and varicose veins that persist or recur after vein stripping with Sclerotherapy. In this rather simple procedure, veins are injected with a sclerosing solution, which causes them to collapse and fade from view. The procedure may also remedy the bothersome symptoms associated with spider veins, including aching, burning, swelling and night cramps.

Although this procedure has been used in Europe for more than 50 years, it has only become popular in the United States during the past decade. The introduction of sclerosing agents that are mild enough to be used in small veins has made Sclerotherapy predictable and relatively painless.

Sclerotherapy can also be performed using micro-foam sclerosant under ultrasound guidance to treat larger varicose veins, including the greater and short saphenous veins. A Health Technology Assessment found that Sclerotherapy provided less benefit than surgery, but is likely to provide a small benefit in varicose veins without reflux.

Complications of Sclerotherapy are rare but can include blood clots and ulceration. Anaphylactic reactions are "extraordinarily rare but can be life-threatening," and doctors should have a resuscitation cart ready. There has been 1 reported case of stroke after ultrasound guided Sclerotherapy when very a large dose of sclerosant foam was injected.



*Sclerotherapy* During sclerotherapy for the treatment of varicose veins, the doctor injects a chemical solution directly into the vein (A and B). The needle travels up the vein, and as it is pulled back, the chemical is released, causing the vein to form fibrous tissue that collapses the inside of it (C).

## 2-Surgical treatment

The traditional surgical treatment is vein stripping to remove the affected veins. Newer surgical treatments are less invasive but have not been tested as thoroughly. Since most of the blood in the legs is returned by the deep veins, and the superficial veins only return about 10%, they can be removed without serious harm. Varicose veins are distinguished from reticular veins (blue veins) and telangiectasias (spider veins) which also involve valvular insufficiency, by the size and location of the veins.

**Some doctors favor traditional open surgery, while others prefer newer methods. Newer methods for treating varicose veins, such as:**

- ▶ Endovenous laser Treatment
- ▶ Radiofrequency ablation
- ▶ Foam Sclerotherapy

Endovenous laser and radiofrequency ablation require specialized training for doctors and expensive equipment. Doctors must use ultrasound during the procedure to see what they are doing. Follow-up treatment to smaller branch varicose veins is often needed in the weeks after the initial procedure. Some practitioners also perform traditional surgery at the time of endovenous treatment.

**Complications include:**

- ▶ Deep vein thrombosis (5.3%)
- ▶ Pulmonary embolism (0.06%)

► Wound complications including infection (2.2%)

**Complications for radiofrequency ablation include:**

Bruising, burns, *paraesthesia*, clinical phlebitis, and slightly higher rates of deep vein thrombosis (0.57%) and *pulmonary embolism* (0.17%).

**Complications for endovenous laser treatment also include:**

Bruising (24%-100%), burns (4.8%), *paraesthesia* (1%-36.5%), and indurations' along the length of the saphenous vein (55-100%).

Another concern in varicose vein surgery is the recurrence rate. For traditional surgery, reported recurrence rates, which have been tracked for 10 years, range from 5-60%. Because the new treatments haven't been studied that long, their recurrence rates aren't known that well. One 3-year study compared radiofrequency, with a recurrence rate of 33%, to open surgery, which had a recurrence rate of 23%. The longest study of endovenous laser ablation is 39 months.

### 3-Medical Treatment

#### Dioced-C tablets



**Dioced-C tablets contains:**

**1-Diosmin** which is a bioflavonoid extracts of rutacease (Aurantiae).

Diosmin increases the venous tone of the veins and venules and thus improves venous insufficiency and edema of venous origin.

*Diosmin also increases the resistance of the capillary walls and normalizes its permeability by restoring the biological integrity of the capillary endothelium.*

*It is an oral phlebotropic drug used in the treatment of venous disease, i.e., chronic venous insufficiency (CVI) and hemorrhoidal disease (HD), in acute or chronic hemorrhoids, in place of rubber-band ligation, in combination with fiber supplement, or as an adjuvant therapy to hemorrhoidectomy, in order to reduce secondary bleeding. To control internal symptoms of hemorrhoids (piles), it is used with Hesperidin.*

*Diosmin improves lymphatic drainage by increasing the frequency and intensity of lymphatic contractions, and by increasing the total number of functional lymphatic capillaries. Furthermore, diosmin with Hesperidin decreases the diameter of lymphatic capillaries and the intra-lymphatic pressure.*

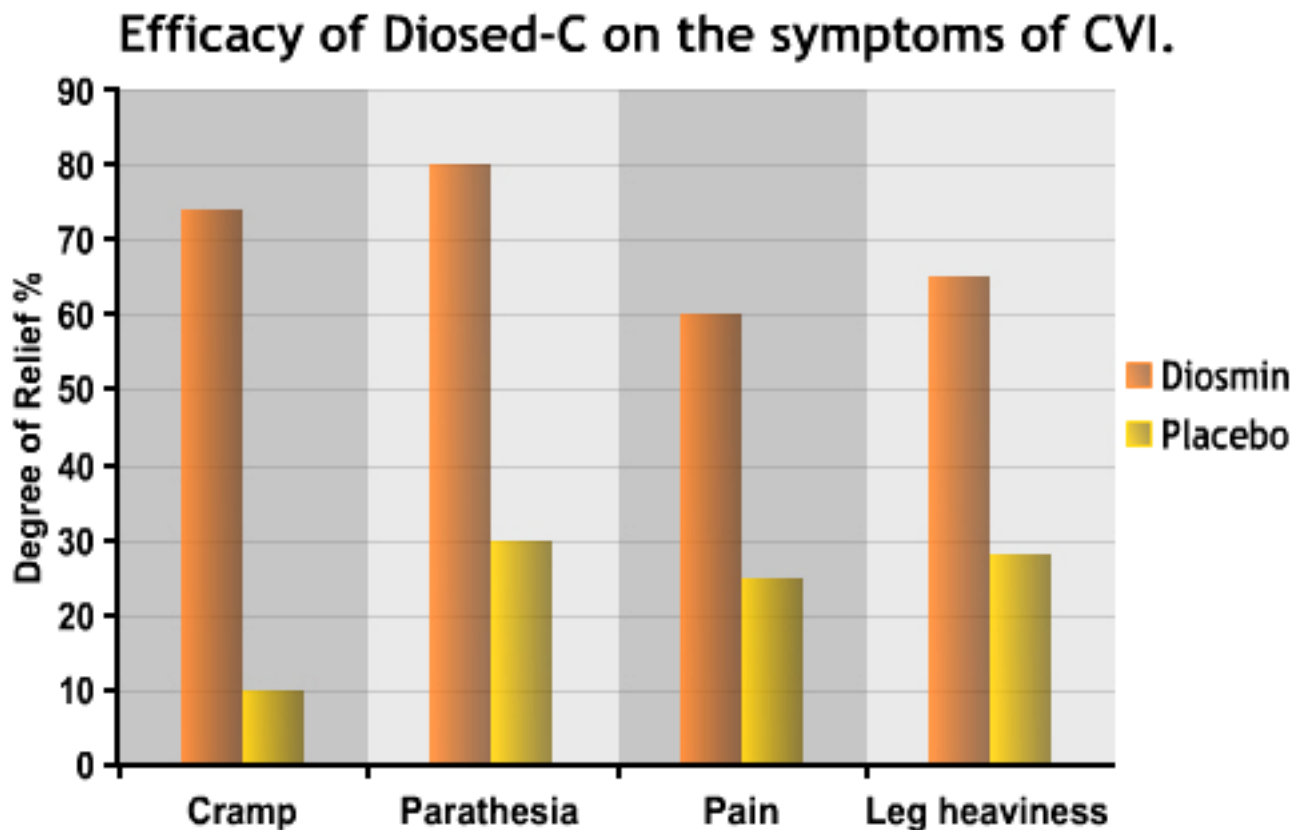
*At the microcirculation level, diosmin reduces capillary hyper-permeability and increases capillary*

resistance by protecting the microcirculation from damaging processes.

Diosmin reduces the expression of endothelial adhesion molecules (ICAM1, VCAM1), and inhibits the adhesion, migration, and activation of leukocytes at the capillary level. This leads to a reduction in the release of inflammatory mediators, principally oxygen free radicals and prostaglandins (PGE2, PGF2a).

**2-Ascorbic acid** : which compensates the deficiency is characterized by capillary fragility bleeding, especially from the small blood vessels. Its also important for the formation and the maintenance of intercellular ground substances and collagen and hence promotes the healing of the wounds.

**3-Hesperidin**: is a flavonoid isolated from the rind of certain citrus fruits .Hesperidin has been used in the treatment of capillary fragility



So, **Diosed-C** by its very active combination of three essential factors, acts synergistically for the treatment of capillary fragility and the prevention of accidents which may entail.