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# Preventing Varicose Veins: Role of Exercise, Diet and Physiotherapy

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**Abstract**

Varicose veins are a clinical condition which occurs due to incompetence of valves of veins of lower extremities. The blood pools down and does not flow upwards towards the heart, which in turn creates pressure on the superficial veins. These veins become enlarge, swollen and weak. This condition can create more complications, if treatment is not done at right time. So, in the light of above problem, the present study attempts to avert the attention of the people towards the natural remedies like yoga, exercises, balanced diet and physiotherapy which help in relieving the pain by natural and very simple ways that can easily be applied thereby avoiding any further delay in the treatment. Furthermore, the study provides a deep and detailed insight into the steps that can be administered by the patients at an early at their respective places itself.

**Objective:** To familiarise patients with the natural remedies like exercises, yoga, diet and physiotherapy to prevent and cure, the most common clinical condition now a days –varicose veins.

**Keyword:** Blood, Exercise, Elevation, Lower extremities, Obesity, Varicose, Veins.

## 1. Introduction

The veins are the blood vessels in our body which helps to return deoxygenated blood from all the organs of our body to the heart .They work opposite to arteries.

The structure of veins comprises of three different layers which are as under:

1)Tunica-externa: It is the thickest and outer layer of the vein.

2)Tunica- media: It is the thin and middle layer.

3)Tunica- intima: It is the layer which is present inside and contains one way valves, especially in the veins of upper and lower extremities. These valves help in preventing the backward flow of blood.

Veins can be categorized as under for better understanding:

1) Deep veins: The inner layer of the deep veins have one-way valve to prevent blood from flowing backwards. As these are found near muscles or along bones, the muscles compress the veins and help in moving blood forward.
2) Superficial veins: These are present superficially under the skin, the blood move very slowly here as compared to deep veins.
3) Connecting veins: Valves of these veins allow the blood to flow from superficial veins to deep veins.

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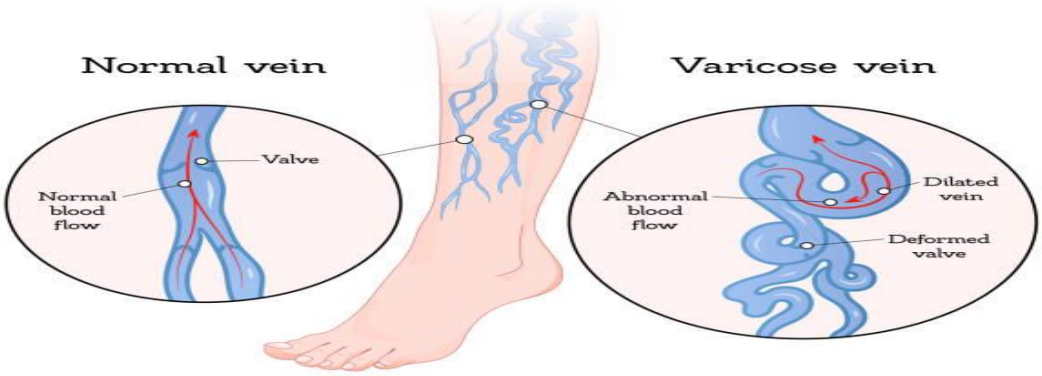


Image I: Distinction between Normal and Varicose Veins
Source: https://www.medicalnewstoday.com/articles/240129

Varicose veins is a condition which is more commonly seen now a days. The females are more affected than males. In females as during pregnancy the pelvic veins get compressed and also in multiple pregnancies the veins become weak. The other thing is obesity which is more common in women; obesity creates more pressure on the valves. These two things reveal that the ladies are more prone to this. The ladies who have , sedentary life style or who works while standing for long periods of time, don't go for exercises are severely affected by the varicose veins.

The other factors which lead to varicose veins includes age- it is common at the age of 40 -50 years. Hereditary: this is passed to generations through genes; Obesity: overweight creates much more pressure on veins. People wearing tight clothes and the professionals who work standing for long period of time e.g. bus conductors, shop assistant, nurses, prolonged sitting is also one of the factors, tight corsets, high heeled sandals, constipation etc.

**2. Diagnosis**

The problem of varicose veins can be diagnosed with the help of under mentioned investigations:

- History taking-: ask the patient about the problem and listen carefully about his or her problem.
- Examination of the part.
- Palpate the knotted structures found on the skin.
- Observe the walking pattern this indicates the severity of the condition.
- Other investigating measures are –Angiogram, Venography.

Various tests can also be done for diagnosis these are-

- Perthes test.
- Trendelenberg test.
- Doppler auscultation.

The above mentioned tests can be performed as:

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*2.1 Perthe's Test-*

A torniquette is applied around the thigh while the legs are in elevation. Patient now stand up and he is asked to stand up and down on the toes filling of the veins show deepvenous incompetence. The image depicting this test is as under (Image III):

Image III: Perthes Test
Source:www.slideshare.net

*2.2 Trendelenburg Test-*

The patient lies in supine position and the vein is emptied by elevation of the leg. The torniquet is applied just below the sapheno-femoral junction around the proximal thigh now the patient is in standing position, The torniquette is taken off and rapid filling from above show sapheno-femoral incompetence,

The pictorial representation of the Trendelenburg Test is as under (Image IV):

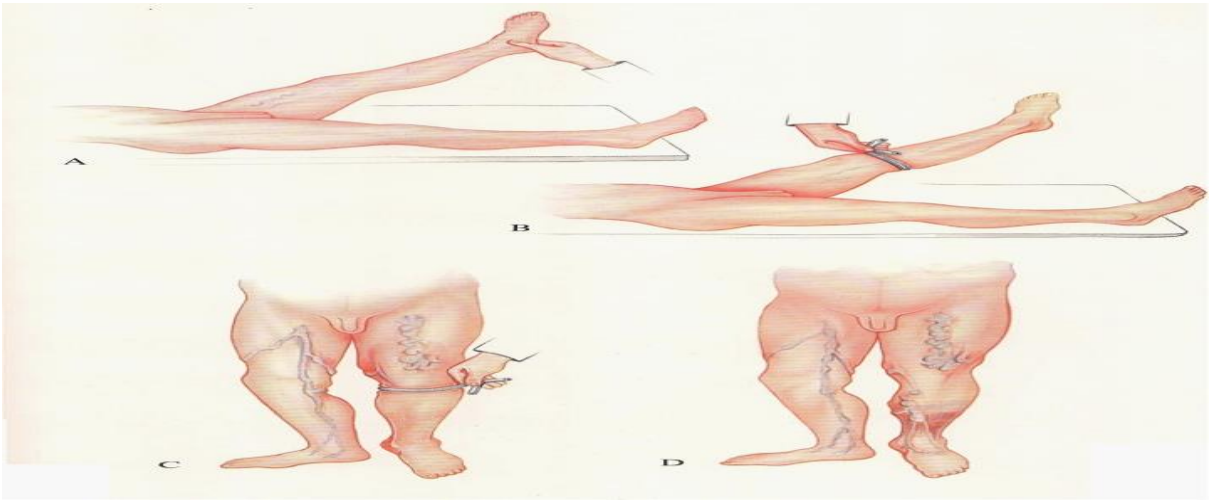


Image IV: Trendelenburg Test
Source: www.imsurgeon.com

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### 3. Symptoms

Patients with varicose veins are commonly diagnosed with symptoms that include:

- Blue mesh network of veins over the leg near to knee joint as well near to ankle, it is all over the leg but prominent near to these areas.
- There is pain in legs.
- Cramps in calf muscles during sleep at night.
- Heaviness of legs is also here.
- Tiredness.
- Swelling around ankles and knees.
- In ladies, it is much more cosmetic troublesome.

### 4. Causes

The veins of the legs which are more susceptible to varicose veins have valves which work in one direction i.e. antigravity. If these valves become weak, the blood do not move upwards to the heart and create more pressure on the superficial veins and due to gravity pull there in the blood pools down and further create more pressure on the superficial veins, which in turn become weak and appear dilated below the skin. As their walls become dilated due to more pressure, they may rupture which leads to ulcers and bleeding which in turn change the colour of the skin.

### 5. Role of Exercise

Prolonged sitting and standing is to be avoided. The patient is advised to do exercises of legs in elevated position. The legs are to be elevated and then in elevated position of legs some simple exercises like ankle and toe movements are to be done. The walk for 1-2 miles a day is with support of elastic stockings.

Elevation of legs at 60- 70 degrees is advised and also while sleeping, legs are to be elevated by keeping the two or three pillows under them.

Static cycles can be used for cycling at homes.

Swimming is also a good form of exercise to strengthen the leg muscles.

Pendular exercises of legs are also advised in work places.

All these exercises improve the flow of the blood.

### 6. Diet

In case of ~~obesity~~, whereas the walk and exercises are important also diet plays a major role in reducing the weight. The patient is advised to take fibre rich diet –salads. We should avoid junk foods like pizzas, burgers, cold drinks etc. Plenty of water intake, balanced diet is very important to get rid of overweight. Here are some seeds like melon seeds, pumpkin seeds, flax seeds are to be taken (In case of hypertension, pregnancy and some food allergies flax seeds are not to be consumed). Fresh fruits should be included in diet.

Cow ghee is also helpful in varicose veins as recommended by Ayurveda. Blueberries are also helpful.

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**7. Role of Physiotherapy**

**Tens, ultrasound and cycling** helps in recuperating the blood circulation and help in relieving the pain.

**Resisted exercises with there bands** helps in strengthening the muscles of legs.

**Elastic stockings** are also effective; it maintains constant pressure and helps in improving the blood circulation.

**Contrast** Bathis one of the best methods to relieve pain. Here we take two buckets one is filled with hot and other is with cold water, dip your legs inside one bucket filled with warm water and then in the other bucket filled with cold water. Repeat it 5 times .This is to be done once in a day.

**Yoga asanas**, Yoga increases the flexibility, muscle strength and body tone. Now a days various yoga asanasare most preferred to get rid of diseases naturally. Here are some yogaasanas which help in preventing varicose veins: Tadasana, Sirasana, Salabhasana and UrdhavPrasarita Padasana. In case of pregnancy and other problems various asanas like sirasana is not to be performed.

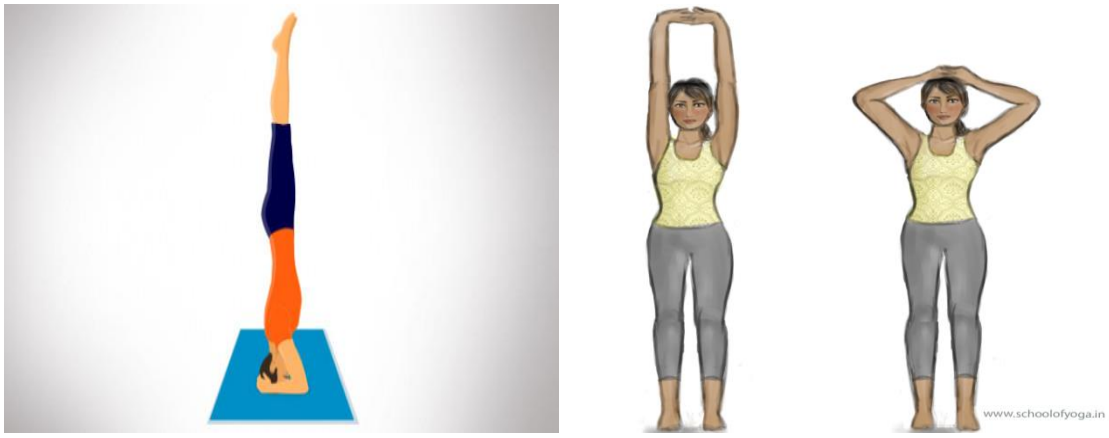


Image V: Sirasana Source; Image VI: Tadasana Mountain Pose
Source: www.artofliving.orgSource: www.schoolofyoga.in


Image VII: Urdhva Prasarita padasana
Source: yoga for beginners: **urdhva prasarita padasana** (upward extended www.youtube.com

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The other invasive treatments for varicose veins are: **Sclerotherapy,** wherein a chemical is injected into veins which cause irritation and scarring inside the veins and Surgery.

## 8. Conclusion

Varicose veins can be successfully managed by using all the above treatment methods naturally. As exercises strengthen the muscles of legs, diet helps in reducing the weight, yogasanas reduce the stress and improves the blood circulation ,whereas physiotherapy relieves the pain, reduce edema and improves the overall functioning of legs.

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