



# Varicose Veins in Pregnancy

by Judy Slome Cohain

## Classic advice to prevent varicose veins in the legs during pregnancy:

- Walk or swim for a minimum of an hour per day.
- Maintain normal weight.
- Eat a high-fiber, low-salt diet.
- Elevate your legs whenever sitting.
- Avoid standing and wearing high heels for long periods. If you have to stand, such as when doing dishes or cooking, rock from heel to toe to keep the blood moving.
- Use compression stockings if varicose veins start, to prevent more.



**W**hy would varicose veins appear in your legs? Leg muscles help push the blood in the leg veins back toward the heart. There are also one-way valves in the veins to make sure the blood doesn't flow backward and pool in the legs. Yet many people develop varicose veins in which the blood pools in one area, subsequently stretching the walls of the veins. Once the veins are stretched out, the varicosity is usually there to stay. It is not known why some people get them and some do not, although the tendency may be inherited. Varicose veins in the legs can be prevented with exercise such as swimming, walking, or running. Perhaps nutrition also plays a role.

Increased blood volume, combined with sedentary behavior, contributes to the development of varicose veins during pregnancy. A healthy woman bearing a normal-sized fetus, with an average birth weight of about 3.3 kg (7 lb 4 oz), will increase her plasma volume by about 1200 ml during pregnancy. By 35 weeks, she will have about 3800 cc of blood—rather than the average non-pregnant blood volume of 2600 ml (Hytten 1985). There is little increase during the first trimester, but there is a progressive rise in the maximum blood volume at about 34–36 weeks, after which little further increase occurs. The maximum increase depends largely on the size of the conceptus. It increases about 1300 cc in-

stead of 1200 for higher-birth-weight babies and slightly more with twins, triplets, and quadruplets. Due to gravity and increased blood volume, the lower extremities experience elevated pressure, dilating veins, which may be slowly transformed into varicose veins. About 30% of women develop varicose veins during pregnancy.

In addition to increased blood volume, direct pressure on the iliac veins by the gravid uterus increases inefficient blood return by the veins and may damage venous valves.

There is a hypothesis that some people inherit weaker vein walls, which allows progressive venous dilation even at a normal venous pressure, and valve failure occurs as a secondary event. There are estrogen and progesterone receptors in the main saphenous vein that runs the length of the leg, although their function is not known. It is also unknown whether good-quality compression stockings worn during pregnancy will prevent valve rupture.

High-heeled shoes reduce calf muscle pump function by restraining the motion of the ankle. The higher the heel, the worse the calf pump. The continuous use of high-heeled shoes causes higher levels of pooling and venous pressure in the leg sometimes leading to varicose veins (Tedeschi et al. 2012).

Most women with varicose veins in pregnancy can be reassured that pregnancy varicose vein pain will probably resolve after pregnancy and any treatment other than the wearing of graduated compression stockings may not be needed (Stansby 2000).

## Conditions Related to Varicose Veins

Deep vein thromboembolism occurs about once in every 700 births. Although there is a risk for six months, 90% of thromboembolism occurs in the first week after birth. Varicose veins are one of the many risk factors for thromboembolism during the first six months after birth (Galambosi et al. 2017). Other documented risk factors for thromboembolism are cesarean, hypercoagulability/thrombophilia, cardiac and renal disease,

obesity, gestational diabetes, and diabetes, threatening premature birth, chorioamnionitis or other infection, and in vitro fertilization with ovarian hyperstimulation syndrome. Anemia is associated with thromboembolism, but the anemia is probably not what increases the risk. More likely, postpartum hemorrhage results in anemia and the postpartum hemorrhage disturbs the balance of blood clotting factors and, therefore, the hemorrhage rather than the anemia brings on thromboembolism (Galambosi et al. 2017). Thromboembolism after cesarean is one of the main causes of maternal death (Lai 2018).

May-Thurner syndrome (MTS), sometimes called iliac vein compression syndrome, primarily affects women between the ages of 20 and 50. This involves restricted blood flow, which in turn causes pain, swelling, and, oftentimes, varicose veins in the left leg. Hemorrhoids are another kind of varicose vein that is aggravated by pregnancy. Hemorrhoids are best treated by cleaning with soap and water after bowel movements, because sweat and fecal matter attract yeast—which can inflame the area. Rue oil is very helpful in calming hemorrhoids and so is any zinc oxide ointment such as Desitin. A Russian suppository called Procto-Oblipicha is very helpful.

## Leg Varicosity Vein Treatments

Quality research on treatments for varicose veins during pregnancy involves one study of 69 women assigned to either receive rutin or a placebo (Smyth, Aflaifel, and Bamigboye 2015). The study concluded that rutosides (rutin) appeared to decrease swelling but not pain. There is no research regarding the safety of rutins in pregnancy. In addition, as can be expected, two small, low-quality (biased) studies involving a total of 20 (reflexology) and 15 (water immersion) women found that these treatments decreased pain.

Advice from one woman who has completed 12 full-term pregnancies: “There are three issues: pain, pressure, and appearance. The best treatment for all three issues, and to prevent them from getting worse, is swim-

ming twice a week for 30 minutes—or once a week, if you can't do twice. Internal treatments that work: taking licorice root for a year improves circulation and begins to help after several months; aloe vera drink is anti-inflammatory; R42 homeopathic drops help some women but not others. External: witch hazel, olive oil, and tea tree oil externally calm the veins."

### An Unusual Case

(See photo.) A 33-year-old healthy woman who had five natural, vaginal, medically uneventful births with birth weights ranging from 3250 to 3850 gm (7 lb 3 oz to 8 lb 8 oz). With each pregnancy she had increasingly painful varicosities in her left leg, with none in her right leg. They began when she was 20 years old and in her first pregnancy and advanced with each pregnancy. Her mother and sister also had varicosities in one leg. Medical History: No known allergies. BMI = 20, Hgb = 13. Blood type O+. Eats meat about once a month and fish twice a week, otherwise vegetarian diet and is health conscious. Takes prenatal vitamins during pregnancy. Two hospital births, followed by three homebirths. During every pregnancy, the left leg veins got progressively worse week by week and more painful until the last two weeks, when they bothered her less. She thinks this was because she knew the pregnancy would end soon and also because she got used to dealing with the pain. Pain started around the seventh week of pregnancy. Vein specialist physician sent her for a Doppler exam, which found superficial varicose veins not associated with deep vein thrombosis. She wore supportive stockings the whole pregnancy, even at night, because "without them the pain is unbearable."

The day after the fourth birth, she had a clot in the veins that was hot and painful but not red. Doctors insisted that she take subcutaneous Clexane shots for two days and, after that, an anti-inflammatory steroid pill. She did both. The steroid pill is not recommended while nursing so she discontinued it after two days. She took homeopathic Traumeel. The hard areas resolved after four days, with no other complications.

Fifth pregnancy—once again veins began to hurt at seven weeks and got progressively worse. Toward the end of the pregnancy, during a prenatal visit, an Ob/Gyn gave her a prescription for subcutaneous Clexane shots to be taken for six days, daily, after the birth.

She had her usual approximately eight-hour labor, delivered a 3500 gm (7 lb 11 oz) boy at 40+2 weeks, at home, with a very minimal blood loss at birth as well as in the following days. She took five days of Clexane shots starting on first postpartum day. Despite this, again on the second postpartum day she felt two hard clots in her varicose veins. The veins felt hot and painful but, again, did not look red. They resolved themselves two days later with some daily massage, hot packs only twice, one bath, elevating feet, moving toes often, homeopathic cream, homeopathic drops, as well as the daily shots of Clexane. A vein specialist examined them and said they were all superficial and there was no risk of deep vein thrombosis. The doctor agreed that she needs a thorough venous duplex ultrasound scan and additional imaging of the iliac system. Severe, asymmetrical left-sided disease may be from occlusive disease in the pelvis, most commonly anatomic iliac vein compression or May-Thurner. There is no known treatment for either. She can be

evaluated for endovenous laser ablation but knows this is cosmetic, not medical, surgery.

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### Varicose vein treatments suggested by Midwifery Today Facebook page and Researchgate readers:

- Support hose and staying off your feet
- Water immersion therapy to encourage movement with less pressure
- Instead of compression stockings, cotton batting around the legs and wrap with ace bandages starting at the toes
- Elevate the foot of her bed using bricks
- Rutin 100 mg twice a day
- Vitamin C
- Vitamin E 600 IU
- Butcher's broom for the pain
- Cypress and geranium, no more than 1% dilution for pregnancy. Even 0.5%.
- Acupuncture and chiropractics
- Varicosity Extract for Pregnancy by Wishgarden Herbs
- Grapeseed OPC (Oligomeric Proanthocyanidins), a concentrated source of polyphenols and bioflavonoids that provides "even more antioxidant support than vitamins E and C"
- Bioflavonoids, white oak bark, alfalfa—fresh or capsules
- Stinging nettles infusion or tincture
- Cayenne pain relief salve
- Oat straw baths
- Bioflavonoids such as the white part of grapefruit skins
- Topical horse chestnut, butcher's broom, witch hazel, Metagenics Venaplex
- DioVasq is pill made of hesperidin and diosmin, which are both bioflavonoids made from citrus fruit that you can buy online. As a pill it may be safe in pregnancy and nursing, though research is lacking. Herperin can slow blood clotting and increase bleeding. It is recommended not to take it two weeks before surgery.