

BEST PRACTICE: Vascular Vein Centers

Pregnancy and Leg Health

Pregnancy in a woman's life is not only one of the most wonderful experiences she will have but also one of the most challenging. It is unique and miraculous. The physiologic changes in a woman's body are phenomenal and often under appreciated. Although there are other risk factors for the development of varicose veins, pregnancy is the most significant. It also represents a significant risk for deep and superficial venous thrombosis in otherwise very healthy young women in the prime of life.

Pregnancy represents a potential obstacle to a woman's leg health acutely and long term. It requires major adaptations in maternal anatomy, physiology, and metabolism.

There is an increase in total body water of approximately 40-50 percent. The expansion of blood volume begins shortly after conception and there is significant sodium retention. Clearly demonstrable pitting edema is seen in the ankles and legs in most women especially by the end of the day. This is caused by an increase in venous pressure below the level of the uterus secondary to the partial blockage of the vena cava and the pelvic veins by the gravid uterus.

Swelling also occurs because fluid accumulates in the tissues of the lower leg secondary to hydrostatic pressure. The changes cannot be completely avoided, but they can be decreased. Elevation of the legs and use of elastic compression stockings can help. Low impact exercise- power walking, elliptical trainer, bicycling and especially swimming are excellent. These exercises activate the calf pump, which is responsible for pumping most of the blood from the legs. Swimming is antigravity and lessens the hydrostatic pressure in the legs.

Under normal circumstances, running is a great exercise, but during pregnancy, the pounding and increased pelvic pressure can increase the pressure within the veins and potentially damage the valves. Runners benefit from wearing compression stockings while running. When lying down to rest or sleep it is helpful to elevate the legs and/or sleep on the left side to decrease the pressure of the uterus on the pelvic veins and vena cava. High heels should be avoided as much as possible because they inhibit the calf pump. An expectant mother should try to limit her weight gain during pregnancy to 20 – 30 pounds and avoid salt when possible. A woman's veins enlarge during pregnancy. After delivery they decrease in size but don't go back to their former size.

There are two systems of veins in the leg; the deep and the superficial.

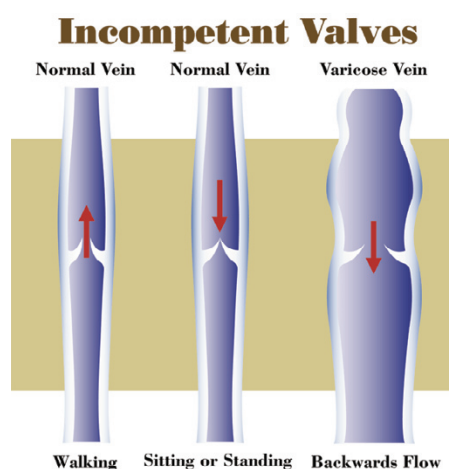
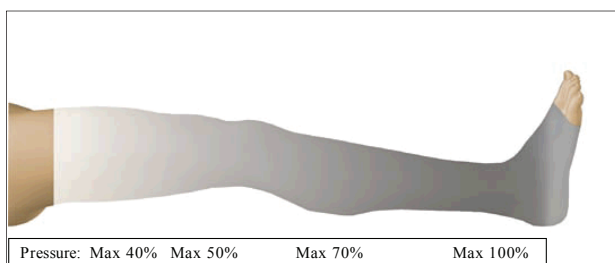


Clots that form in the superficial veins can often be seen or felt. They may be painful or tender to touch but they are not dangerous and can be treated with anti-inflammatory medications such as ibuprofen and warm or cold compresses. Even with overlying erythema in the skin, antibiotics are not necessary-this is inflammation, not infection. Clots in the deep veins can be dangerous especially when they occur above the knee. These clots can cause significant vein problems after delivery or can break off and travel to the lungs (a pulmonary embolus) and cause breathing distress or even death. Compression of the pelvic veins and inferior vena cava by the enlarging uterus causes blood to sometimes "stagnate" in the veins of the legs. In the past, the maximum incidence of DVT occurred postpartum when mothers were often kept at bed-rest and given estrogen to suppress lactation. There has been a significant decrease in the occurrence of venous thromboembolism with early mobilization and greater awareness.

In pregnancy the coagulation factors are activated.

There are numerous clotting factors and almost all of them are increased. Pregnancy is referred to as a hypercoagulable state not only because of the increase in clotting factors but also because there is a decrease in the body's fibrinolytic factors. A pregnant woman with a personal or family history of venous thrombosis should have a thrombophilia work-up. A positive test with subsequent treatment could be potentially life saving to the mother and fetus.

During pregnancy expectant mothers should stay well hydrated, be active and exercise. It is also important to wear elastic compression stockings when up for a periods of time, avoid tight garments, especially in the groin area, and elevate the legs when possible.



Dr. Samuel P. Martin one of the leaders in venous diagnosis and treatment. Since their inception, the Vascular Vein Centers have served the Central Florida community as a recognized, educated resource with more than 25 years experience treating venous disease.