

## Varicocele

Veins normally return blood towards the heart. By virtue of the presence of tiny valves, blood flow is unidirectional. A varicose vein is simply a vein that has incompetent valves that do not function properly such that blood can reverse flow down the vein, away from the heart. These often occur in the back of the leg and accompany the aging process. When the varicose veins are present in the blood supply to the testicle, the condition is known as a varicocele. These are located within the *spermatic cord*, the rope-like tissue that contains the life support to the testicle—the artery, veins, lymphatics, and the vas deferens. Varicoceles are relatively common, being found in approximately 15% of adult men in the USA.

Men who have a varicocele often complain that directly above the testicle they feel something that is described as a “bag of worms.” These varicose veins become much more pronounced with strain maneuvers such as lifting heavy objects. Varicoceles can vary from very small, asymptomatic, unnoticeable varicose veins that are only detected by your physician, to very large, symptomatic varicose veins that can cause atrophy (shrinkage) of the involved testicle as well as testicular pain. Approximately 90% of varicoceles occur on the left side because of differences in the venous drainage patterns of the left and right testicular veins.

Varicoceles are found in many infertile men. In fact, a varicocele is the most common surgically correctable cause of male infertility. Various reasons account for the testicular dysfunction associated with varicoceles. A varicocele will increase the temperature of the testicle and this can negatively affect sperm production. Additionally, reflux of metabolites down the left testicular vein originating from the kidney and adrenal glands may be responsible. The typical abnormalities encountered on semen analysis in men with varicoceles are decreased motility, decreased sperm concentration and changes in sperm appearance.

An asymptomatic varicocele causing no discomfort or fertility problems needs no treatment. Treatment is recommended for men with associated infertility and/or chronic discomfort with activities as a result of the large varicose veins. The treatment is directed at surgically tying off the involved veins through a small incision in the groin. This is a relatively simple procedure that can be performed on an outpatient basis. Improvement in semen analysis will result in approximately 70% of patients who undergo surgical varicocele repair, with resulting conception in about 50%.