

Knock Your Socks Off!

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Dr. Gordon F. Gibbs

Dr. Gordon F. Gibbs is the Founder and Chief Medical Officer of [Trinity Vein Institute](#) in Arlington, Texas, and [Rocky Mountain Vein Institute](#)'s Colorado facilities. Dr. Thomas E. Eidson is the Associate Medical Director and Phlebologist at Trinity Vein Institute, and is Board-Certified in Family Medicine.

In this article, Dr. Gibbs and Dr. Eidson discuss the use and benefits of compression stockings, and how they have been historically used in the treatment of varicose veins:

Q: Dr. Eidson, many people wonder about the benefits of compression stockings. Let's begin by explaining to our readers how they work.

Dr. Eidson: Blood in the legs is returned in large veins located within muscle. These veins rely on the “squeeze” of surrounding muscle to help pump the blood up the leg, against gravity. There are also one-way “check valves” that help ensure that the blood is only pumped upwards, toward the heart. The calf muscle is the primary muscle that assists the leg veins in pumping the blood. Compression stockings work by creating a pressure gradient across the leg veins. They have the highest pressure at the ankles and the pressure gradually decreases up the leg. Since fluids move from areas of high pressure towards areas of lower pressure, this gradient encourages blood to move up the leg, and it assists the calf muscle pump.

Q: Dr. Eidson, what does research say about using compression stockings during or after athletic performance?

Dr. Eidson: There are proven benefits to wearing graduated compression stockings during and after running, cycling or other athletic activity, but it is not a magic bullet. These benefits include the maintenance of muscle power and reducing muscle soreness, which can have indirect performance enhancements. Wearing light compression during races and training and wearing tighter compression during recovery does appear to be beneficial, even if it is modest. Compression technology is not new. In fact, Hippocrates described techniques to treat vein disease with leg bandaging in the 5th century B.C. The first elastic compression stocking was patented in 1848 by William Brown. They have been used for venous disorders and to prevent blood clots ever since. We have definitely noticed compression stockings being used at local runs in the last five years, but professional athletes have been using them well before that.

Q:

If someone is convinced that they should get a pair of compression stockings, how tight should the compression be?

Dr. Eidson: Tighter is not always better. One recent study looked at the effect of wearing different grades of compression (Ali, 2011). This study did not find any performance gains with the stockings, and they did not find any performance difference with wearing different grades of compression. However, wearing a tighter compression (20-30 mm Hg) was more painful than wearing a lower compression (10–20 mm Hg) during exercise, possibly due to a



tourniquet effect. Other studies that demonstrated performance improvements while wearing compression stockings used between 18 to 30 mm Hg of compression. What's an athlete to do? We recommend wearing a compression stocking as close to 18 mm Hg as tolerated and wear a higher grade compression during the recovery period.

Q:

Let's explain to our readers how compression stockings have been historically used as a conservative treatment for varicose veins.

Dr. Eidson: Historically, patients with varicose veins were recommended conservative treatment options that included the use of compression stockings. Conservative treatment options refer to a non-invasive form of treatment, where medications and surgery are not used to treat varicose veins. Patients can make lifestyle changes, such as eating less, exercising more and wearing compression stockings. This regimen has proven helpful in reducing leg pain and further deterioration of the venous system. Conservative treatment will not remove existing abnormal veins, but it may be the treatment choice for patients that may not be able to undergo other treatment methods. There's no way to prevent varicose veins. But improving your circulation and muscle tone can reduce the risk of developing varicose veins or getting additional ones.

If anyone reading this has any questions about study findings or would like to see our line of compression stockings, please feel free to call Tel. 682.999.VEIN (8346) or stop by our facility at 515 West Mayfield Road, Suite 407, in Arlington. We are we are pleased to bring our expertise and dedication to superior patient care and outcomes to the Dallas/Fort Worth community.

About Dr. Gordon F. Gibbs

The founder and chief medical officer of Trinity Vein Institute and Rocky Mountain Vein Institute, Dr. Gordon F. Gibbs is a Mayo Clinic trained interventional radiologist board certified in phlebology, diagnostic radiology and fellowship trained in vascular/interventional radiology. He is an active member of the American College of Phlebology and The Society of Interventional Radiology. Dr. Gibbs is also Medical Director of Diagnostic and Interventional Radiology at St. Mary-Corwin Medical Center in Pueblo, Colorado. For more information, please visit <http://www.trinityvein.com/>, send an email to info@trinityvein.com or call 888.730.VEIN (8346).

