

A photograph of a person's lower legs and feet, wearing white diabetic compression socks. The person is standing on a thick, white, shaggy rug. The background is a plain, light-colored wall. The socks have a distinct ribbed texture and a reinforced patch on the heel and toe areas. The person's legs are slightly apart, and the right leg is in the foreground, showing the sock more clearly.

SIGVARIS

DIABETIC
COMPRESSION
SOCKS –
a soft touch for
sensitive feet

SIGVARIS MEDICAL

The prevalence of leg oedema in diabetic patients

Oedema of the feet, ankles and lower legs is common in the general population and is often concomitant with diabetes.

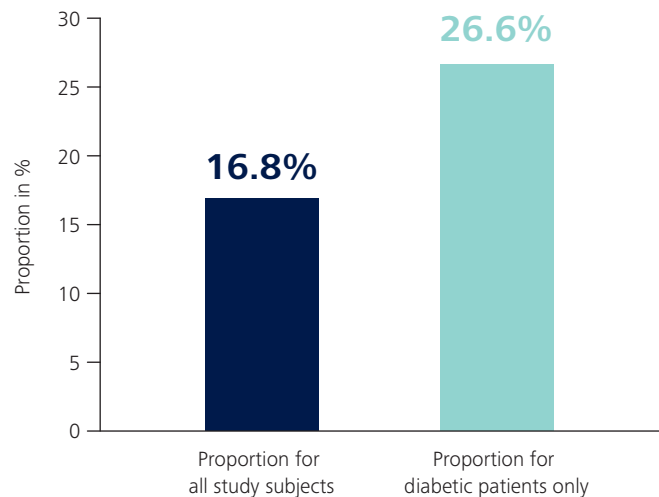
The Bonn Vein Study by the German Society of Phlebology has made a powerful statement on the subject.

The study involved about 3,000 people between the ages of 18 and 79.

Conclusion:

The occurrence of bilateral leg oedema was significantly more frequent in participating diabetic patients than in the rest of the study subjects.

Investigative findings for bilateral leg oedema (Bonn Vein Study)¹



Risks and consequences of oedema in diabetic patients

In connection with diabetes, oedema can cause extensive skin damage that often has long-term consequences:

- 1** The fluid retention impairs the transport of nutrients and oxygen into the tissue. In the long term, this can cause skin damage as well as a higher risk of infection, with associated poor healing of wounds.
- 2** The reduced sensation of pain in the feet, which is widespread among diabetic patients, can also lead to skin damage. Open wounds are often noticed very late as a result, when they have already reached an advanced state.
- 3** If the skin is damaged, wounds will heal poorly because of reduced blood circulation in the legs. This causes a long-term problem – diabetic foot ulcers.

¹ Unpublished data from: Rabe E, et al. Bonner Venenstudie der Deutschen Gesellschaft für Phlebologie. Phlebologie 2003;32:1–14.

Proven effect of mild compression

Compression therapy is recommended for oedema of the leg. This effective treatment has been known for decades and proven in numerous studies.

However, there is often a reluctance to recommend compression socks for diabetics. The reason for this is that it is not uncommon for diabetics to have restricted arterial circulation in the feet and lower legs. There are fears that the compression socks may further restrict the circulation and provoke pressure points or poorly-healing wounds.

However, studies confirm the positive effect of mild compression therapy for diabetes patients as well.²⁻⁴

SIGVARIS has therefore combined the proven effectiveness of classic compression therapy with the special requirements for the sensitive feet of diabetic patients and offers special compression socks for diabetics:

DIABETIC COMPRESSION SOCKS women
DIABETIC COMPRESSION SOCKS men



- 2 Wu SC, et al. Safety and Efficacy of Mild Compression (18–25 mmHg) Therapy in Patients with Diabetes and Lower Extremity Edema. J Diabetes Sci Technol 2012;6(3):641–647.
- 3 Belcaro G, et al. Elastic Stockings in Diabetic Microangiopathy. Long Term Clinical and Microcirculatory Evaluation. Vasa 1992;21(2):193–197.
- 4 Belcaro G, Christopoulos A, Nicolaides AN. Diabetic Microangiopathy Treated with Elastic Compression. Vasa 1990;19(3):247–251.

DIABETIC COMPRESSION SOCKS women

DIABETIC COMPRESSION SOCKS men

Conventional diabetic socks on the market focus exclusively on protecting diabetic feet by using soft material. They do not have any compression.

SIGVARIS DIABETIC COMPRESSION SOCKS have compression, but with degressive pressure (18–25 mmHg). This speeds up the blood flow in the veins and reduces oedema.

These DIABETIC COMPRESSION SOCKS use the positive aspects of compression therapy in this regard. At the same time, they also cater for the specific needs of diabetic feet through the use of material with special properties and the processing of this material.



Benefits at a glance



Mild compression (18–25 mmHg)



Compression-free foot area



Soft knit, special padding on the sole of the foot and in the toe area



Seamless toe area to protect the toes





Wider and softer tricot band

Other positive features



- Water-absorbing and water-repellent yarn components to provide a good climate for the skin inside the socks
- Socks available in both men's and women's designs for the best possible fit in the foot area
- The white socks will make any leaking wounds visible
- Socks can be washed at 95 °C

Sock specification

| Compression for diabetic patients | Toe | Rim | CCL | Colours |
|---|--------|----------|------------|---|
| DIABETIC COMPRESSION SOCKS women/men  | closed | Soft top | 18–25 mmHg |  white |

Sizing

As for all SIGVARIS compression socks, sizing is based on determining the circumference and length measurements:

| Circumference in cm | S | M | L | XL* | Length in cm | long |
|--|-------|-------|-------|-------|--|------|
|  | 27–33 | 31–39 | 35–45 | 41–51 |  | >41 |
| | 18–22 | 22–26 | 26–29 | 29–36 | | ≤41 |

* XL size is available only as a man's sock. All of the other sizes are available in both women's and men's designs.

The two varieties, DIABETIC COMPRESSION SOCKS men and DIABETIC COMPRESSION SOCKS women, differ in the size of the foot area. In addition to the standard sizing, the following guide values can be consulted for exceptionally large or small shoe sizes. In case of doubt, the patient can change alternatively to men's or to women's socks.

| Shoe sizes (guide values) | short | long | Shoe sizes (guide values) | short | long |
|---------------------------|----------|----------|---------------------------|-----------|------------|
| Euro women | up to 39 | up to 42 | US women | up to 8.5 | up to 10.5 |
| men | up to 43 | up to 46 | men | up to 10 | up to 12 |
| UK women | up to 6 | up to 8 | AUS/NZL women | up to 7 | up to 8.5 |
| men | up to 9 | up to 11 | men | up to 8.5 | up to 11.5 |

Important information on dispensing the socks

Absolute contraindications

Severe arterial circulatory disturbance (ABI <0.5 or toe blood pressure <30 mmHg or ankle arterial pressure <60 mmHg), decompensated heart failure.

Relative contraindications

Advanced peripheral neuropathy, arterial circulatory disturbance (ABI between 0.5 and 0.8), intolerance to the material of the compression socks, pronounced exuding

dermatoses, stage 2 lymphoedema and higher, stage 2 lipoedema and higher, pronounced oedema in the foot area.

Foot pulse should be palpable in diabetic patients. For further information, please refer also to the package leaflet with the DIABETIC COMPRESSION SOCKS.

Existing studies

Two different studies with a total of 98 patients have shown that SIGVARIS DIABETIC COMPRESSION SOCKS reduce leg oedema in diabetic patients without affecting the blood circulation.

The first study⁵ is a study of efficacy carried out by Dr. Stephanie C. Wu, Podiatrist, M.S., and Charles A. Andersen, MD, et al. on 18 patients with diabetes and leg

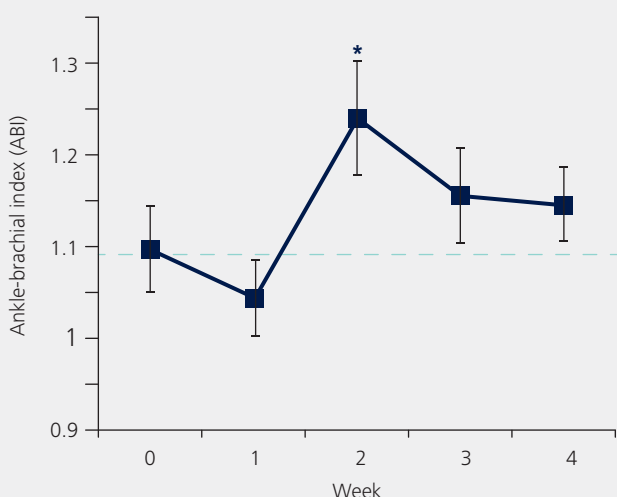
oedema and an average ankle-brachial index (ABI) greater than 0.6.

Results and pilot study: Wearing the DIABETIC COMPRESSION SOCKS reduced leg swelling without affecting the blood circulation for all patients.

Reduction of leg oedema in diabetic patients by means of wearing mild compression socks: A pilot study.

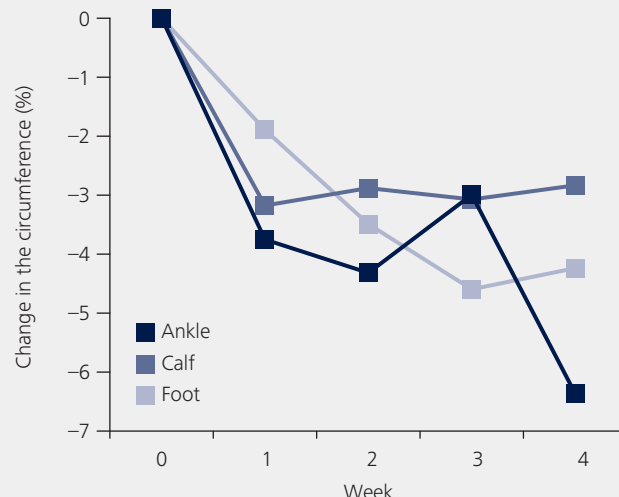
Jessica Minder, BS, Stephanie Wu DPM, MS, Ryan Crews, MS, Center for Lower Extremity Ambulatory Research (CLEAR), Scholl College of Podiatric Medicine at Rosalind Franklin University of Medicine and Science North Chicago, Illinois.

Change in the ABI



* Shows a statistically significant data point.

Change in the circumference



A second study to validate the first results was carried out by Dr. Stephanie C. Wu, Podiatrist, M.S., and Charles A. Andersen, MD, et al. The abstract was presented at the American Diabetes Association symposium in June 2015, and publication of the study is planned in a specialist medical peer-reviewed journal. This was a double-blind study with 80 subjects (77 completed the entire protocol), randomised into 2 treatment groups:

SIGVARIS DIABETIC COMPRESSION SOCKS (18–25 mmHg) and diabetic knee-length socks with no compression. Subjects and testers were randomly allocated to the randomised sock types.

Results of the second study: The subjects with the SIGVARIS DIABETIC COMPRESSION SOCKS very clearly showed a reduction in leg oedemas with a significant reduction of the lower leg and ankle circumference measurements. Blood circulation was not affected in either of the two groups.

Conclusions

The original pilot study and the larger randomised, double-blind follow-up study show that SIGVARIS DIABETIC COMPRESSION SOCKS are safe and effective for diabetes patients with leg oedema.

⁵ Wu SC, et al. Safety and Efficacy of Mild Compression (18–25 mmHg) Therapy in Patients with Diabetes and Lower Extremity Edema. J Diabetes Sci Technol 2012;6(3):641–647.

Export

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