

Mild-compression diabetic socks safely reduce lower extremity edema in patients with diabetes.



Study aim & design

The aim of this study was to assess whether diabetic socks with mild compression (18–25 mmHg) could reduce lower extremity (LE) edema in diabetic patients without negatively impacting vascularity.

To this end, 80 patients with diabetes and LE edema were randomized to receive either mild-compression knee-high diabetic socks (DCS) or non-compression knee-high diabetic socks (CON). Subjects were instructed to wear the socks during waking hours. Primary outcomes were assessment of LE edema and LE vascularity.

Participants

38 patients with DCS and 39 patients with CON completed the study.

Abbreviations

ABI	Ankle brachial index
CON	Control socks
DCS	Diabetic compression socks
LE	Lower extremity
SPP	Skin perfusion pressure
TBI	Toe brachial index

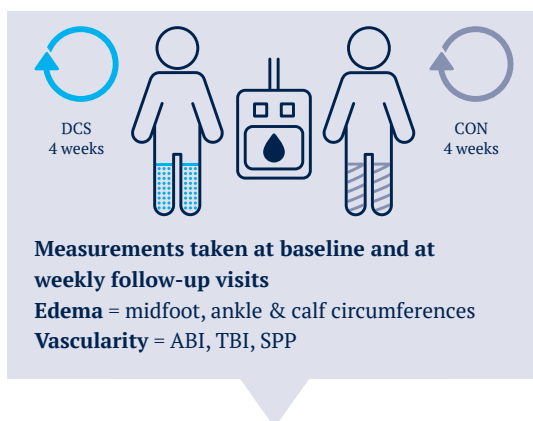


Patient randomization

Group 1 DCS

18–25 mmHg knee-high diabetic socks

- Eligible: n = 40
- Dropout: n = 2 (did not return to visits)
- Final evaluation: n = 38



Group 2 CON

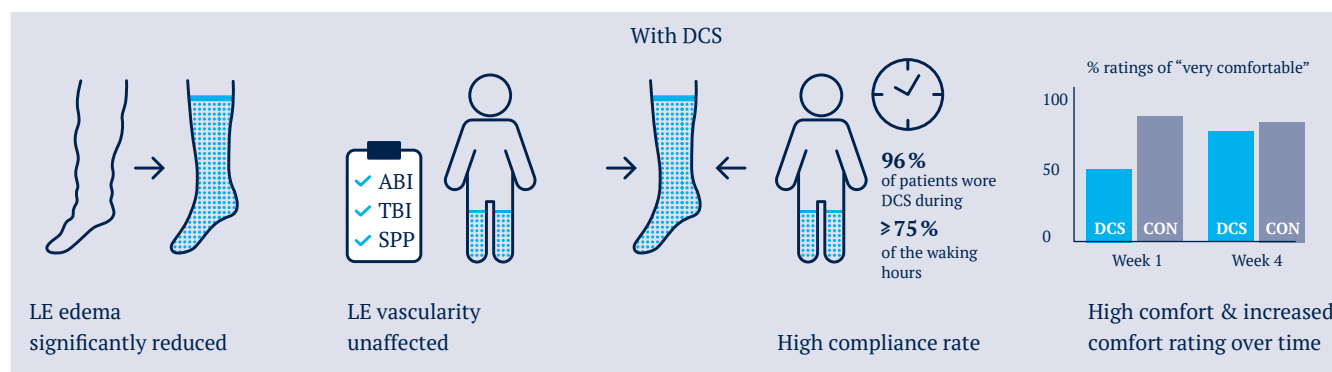
Non-compression knee-high diabetic socks

- Eligible: n = 40
- Dropout: n = 1 (due to family issues)
- Final evaluation: n = 39



Results

Primary outcomes = edema and vascularity



Conclusion

This study demonstrates that mild-compression diabetic socks effectively reduce LE edema in diabetic patients, without negatively impacting LE vascularity. This clearly indicates that diabetes is not necessarily a contraindication for mild to moderate compression.

In addition, the increase in comfort rating over time suggests that the wearing of compression is subject to a learning process during which the patient's appreciation towards compression rises.

Take-home message

Wearing mild-compression knee-high diabetic socks may be effective and safe in reducing lower limb edema in patients with diabetes.