

Doctor, I have post-thrombotic syndrome. Do I have to wear a compression stocking?

The evidence supporting the use of a graduated compression stocking to treat PTS is very limited and does not show benefit for everyone. Whether you should wear a graduated compression stocking should be discussed with your doctor.

What's the evidence?

Understanding the problem

About 2 to 5 out of every 10 people who have a DVT in their leg will experience PTS.

PTS consists of one or more of the following signs and symptoms: leg discomfort, swelling, skin discolouration, or ulcers. It can range from mild (e.g., a little bit of swelling at the end of the day) to severe (e.g., chronic pain with severe swelling and ulcers that take months to heal). PTS is caused by damage to valves within the veins that are supposed to keep blood from pooling in the lower part of the leg. Pooling of blood increases pressure within the blood vessels, which causes fluid to leak into the skin.

Unfortunately, medications and surgery are not effective at treating PTS. The treatment most often used for PTS is a graduated compression stocking. Graduated compression stockings forces fluid back out of the tissues and improves blood flow upward toward the heart. Not everyone can wear graduated compression stockings. They can make skin problems worse in some people with poor circulation, and for others, they are too expensive or too uncomfortable.

The goal of this article was to report the results of a systematic review of studies assessing the risks and benefits of graduated compression stockings for treatment of PTS.

The research

Only 1 study compared graduated compression stockings to placebo stockings or no treatment in studies published up to July 2018.

Who? The study included 35 people who had PTS one year after a DVT.

What? The study compared graduated compression stockings with placebo stockings.

Graduated compression stockings	vs	Placebo stockings
Graduated compression stockings are custom-fitted stockings that cover the leg from the ankle to just below the knee or up to the mid- thigh. They provide pressure to the leg that is highest at the ankle (30 to 40 mmHg in this study) and decreases gradually to the top of the stocking.		Placebo stockings: stockings that look and feel like graduated compression stockings but are 1-2 sizes too large so they do not provide enough pressure to improve blood flow.

What the researchers found

Wearing graduated compression stockings did not improve leg pain or swelling or the reduce the chance of developing a leg ulcer compared to placebo stockings. This was the finding from one small study, which means new studies may find different results.

Please note: There is evidence that wearing a graduated compression stocking speeds up healing in people who already have a leg ulcer. People who already had a leg ulcer were excluded from this study.

Summary of findings

Graduated compression stockings vs placebo stockings in people who have PTS (average age 48 years; 60% female)

Outcomes at 2 years	Rate of events with Graduated Compression Stockings	Rate of events with Placebo Stockings	Results	Number of studies and quality of the evidence

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Treatment failure = leg pain or swelling that did <u>not</u> improve or worsened after 3 months OR could <u>not</u> go to work or perform housework for 5 days or more due to leg symptoms during a 3-month period OR developed a new leg ulcer	60 out of 100 people	60 out of 100 people	No difference	1 study Low quality
New leg ulcer	0 out of 100 people	0 out of 100 people	No difference	1 study Low quality

This Evidence Summary is based on the following article:

Azizar S, Appelen D, Prins MH, et al. **Compression therapy for treating post-thrombotic syndrome**. *Cochrane Database Syst Rev*. 2019 Sep 18;9:CD004177. doi: 10.1002/14651858.CD004177.pub2. PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/31531971?dopt=Abstract>)

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