

# Compression stockings for recurrent cellulitis

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## Clinical question

Do compression stockings help patients with chronic lower limb edema decrease cellulitis recurrence?

## Bottom line

In patients with chronic leg edema, compression therapy reduced cellulitis recurrence to 15% versus 40% with education alone at 6 months. Compression stockings are a good option for patients without contraindications, although real-world uptake may be limited.

## Evidence

- In an RCT of 84 patients with edema lasting at least 3 months and a history of cellulitis (2 or more episodes in the same leg over the past 2 years),<sup>1</sup> compression was individualized (primarily knee-high, 23 to 32 mm Hg; personal communication with E. Webb, a physiotherapist at Calvary Public Hospital Bruce, in Bruce, Australia; July 21, 2021). Results were statistically significant unless noted.
  - Comparing compression plus education versus education alone, at 6 months:
    - Recurrence was 15% with compression versus 40% with education (number needed to treat=4).
    - Quality-of-life scores improved by 8 points (scale 0 to 100), but this was not statistically significant.
    - In the compression group, 88% reported wearing these garments 4 or more days per week.
    - No adverse events were reported.
  - Limitations: Not blinded; support provided by lymphoedema physiotherapists, which may limit general applicability; trial stopped early based on benefits.
- In a prospective cohort study of 107 patients with chronic edema, edema care (with daily compression, exercise, and skin care) provided in a community services model reduced the incidence of cellulitis from 41.5 per 100 patient-years at baseline to 0 at 6 to 12 months.<sup>2</sup>

## Context

- While higher compression levels (20 to 60 mm Hg) may reduce edema better, lower levels (10 to 20 mm Hg) also reduce edema and may result in better compliance.<sup>3,4</sup>
  - Only one-third of patients with a history of cellulitis were willing to wear the stockings for prevention.<sup>5</sup>
- Factors that increase the risk of cellulitis in chronic edema include wounds, male sex, diabetes, and obesity.<sup>6</sup>

- Compression stockings have been shown to increase the complete healing of venous ulcers compared with no compression within 12 months (70% vs 40%).<sup>7</sup>
- Stocking price and cost coverage vary considerably.
- Contraindications include severe heart failure (risk of fluid overload) and critical limb ischemia.<sup>3</sup>

## Implementation

Despite limited evidence regarding outcomes,<sup>8</sup> the measurement of ankle-brachial index (ABI) is generally recommended before initiating compression. Guidelines for the management of venous insufficiency suggest caution or close monitoring for patients with ABI 0.50 to 0.89 and avoidance of compression with ABI less than 0.50.<sup>9</sup> Guidelines for venous ulcer management follow similar recommendations for ABI values less than 0.50 and 0.50 to 0.89.<sup>10</sup> Compliance can be increased by including compression stocking-donning assistance in home care orders and considering lower compression levels when edema reduction can still be achieved reasonably.<sup>3,4</sup> Some patients may qualify for stocking subsidies through provincial programs. 🌿

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**Competing interests**  
None declared

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