

# **VenUS IV (Venous leg Ulcer Study IV) – compression hosiery compared with compression bandaging in the treatment of venous leg ulcers: a randomised controlled trial, mixed-treatment comparison and decision-analytic model**

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## **Plain English summary**

**Compression hosiery and bandaging in the treatment of venous leg ulcers**

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## Plain English summary

Venous leg ulcers are common, chronic wounds that are painful and reduce quality of life. The application of compression is known to assist in the healing of venous leg ulceration. The four-layer bandage (4LB) (which delivers 40 mmHg of compression at the ankle) is the current gold standard treatment for healing venous leg ulcers. Two-layer hosiery (HH, i.e. below-knee stockings) has been designed to deliver the same amount of compression as the 4LB with the potential advantages of being easier for patients to wear and apply. At the start of this study it was thought that these factors may increase patient use of compression and thus improve ulcer-healing rates and cost-effectiveness.

In total, 457 people agreed to take part in this study. Data showed that ulcers treated with the 4LB or with HH took a similar amount of time to heal. More people in the HH changed from their treatment and reported non-serious adverse events. On average, people receiving hosiery were less likely to experience ulcer recurrence and the hosiery was shown to be more cost-effective.

We also investigated the clinical effectiveness and cost-effectiveness of all important high-compression treatments [e.g. the short-stretch bandage and two-layer bandage (2LB)], using robust methods to combine data from relevant studies [including Venous leg Ulcer Study IV (VenUS IV)]. Analyses suggested that the 2LB system was the most clinically effective and cost-effective treatment for healing venous leg ulcers. However, this finding is uncertain, reflecting the limited data for this treatment. More research on the potential effectiveness of the 2LB would further inform decision-making in this area.

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