



TITLE: Compression Bandage Measurement Devices for the use in Adult Patients with Chronic Venous Insufficiency: Clinical Effectiveness

DATE: 10 April 2013

RESEARCH QUESTION

What is the clinical evidence regarding the effectiveness of compression bandage measurement devices to determine extent and amount of pressure from compression wrapping procedures in adults with chronic venous insufficiency?

KEY MESSAGE

One non-randomized study was identified regarding the effectiveness of compression bandage measurement devices to determine extent and amount of pressure from compression wrapping procedures.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 3), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2003 and April 1, 2013. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are

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presented first. These are followed by randomized controlled trials, and non-randomized studies.

One non-randomized study was identified regarding the effectiveness of compression bandage measurement devices to determine extent and amount of pressure from compression wrapping procedures. No relevant health technology assessment reports, systematic reviews, meta-analyses, or randomized controlled trials were identified. One additional reference of potential interest is provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One non-randomized study¹ examined the accuracy, repeatability, and sensitivity to flexion of compression treatment of three interface pressure sensors. When measuring the pressure of compression hosiery in a pressurized chamber on a wooden leg model, overall errors of 15.4%, 3.1%, and 4.3% were obtained for the Salzmann, Talley, and Kikuhime sensors, respectively. No relevant in vivo studies were identified.

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

1. Flaud P, Bassez S, Counord JL. Comparative in vitro study of three interface pressure sensors used to evaluate medical compression hosiery. *Dermatol Surg.* 2010 Dec;36(12):1930-40.
[PubMed: PM21126279](#)

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APPENDIX – FURTHER INFORMATION:

Additional References

2. Keller A, Muller ML, Calow T, Kern IK, Schumann H. Bandage pressure measurement and training: simple interventions to improve efficacy in compression bandaging. *Int Wound J*. 2009 Oct;6(5):324-30.
[PubMed: PM19912389](#)