A meta-review of the impact of compression therapy on venous leg ulcer healing

Patton D[1], Avsar P[1], Sayeh A[1], Budri A[1], O'Connor T[1], Walsh S[1], Nugent L[1], Harkin D[1], O'Brien N[1], Cayce J[2], Corcoran M[3], Gaztambide M[3], Moore Z[1]

[1]Skin Wounds and Trauma (SWaT) Research Centre, School of Nursing & Midwifery, Royal College of Surgeons in Ireland, University of Medicine and Health Sciences, Dublin, IE; [2]DeRoyal Industries, Knoxville, Tennessee, USA. [3]DeRoyal International, Dublin, Ireland.

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

RCSI SKIN WOUNDS, and TRAUMA - SWaT Research Centre

1. Introduction

- Compression therapy (CT) represents the standard of care for conservative treatment of venous leg ulcers (VLU).
- Published healing rates of VLU managed with CT vary widely from 40% to 95%.
- This meta-review of existing systematic reviews considers the impact of CT on VLU healing.

2. Review Questions

1. What is the effect of compression therapy on venous leg ulcer healing?
2. What is the effect of venous leg ulcer compression therapy on adverse events?

3. Methods

- We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to guide the conduct and reporting of the meta-review.
- Five databases were searched.
- The AMSTAR-2 tool was used to quality appraise the selected articles.
- The certainty of the evidence was appraised using GRADEpro.

4. Results

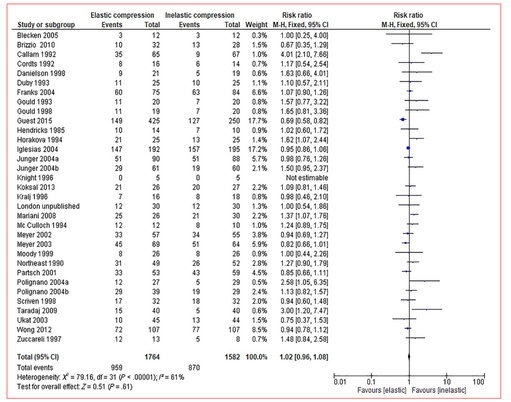
- We identified 12 systematic reviews published between 1997 and 2021.
- Three reviews were assessed as high quality, five as moderate quality, and four as low quality.
- Seven comparisons were reported, with a meta-analysis undertaken for five of these comparisons.

Key Messages

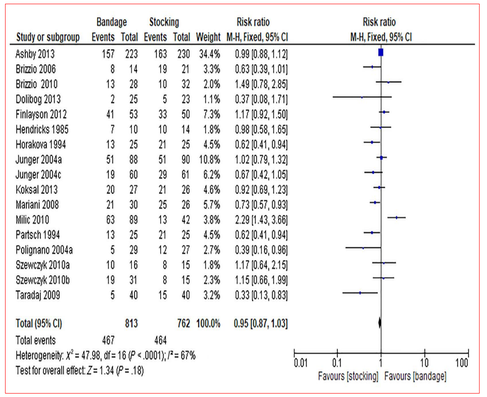
There is a statistically significant difference in venous leg ulcer healing rates when compression is utilised compared with no compression, with moderate certainty evidence.

There is no statistically significant difference in venous leg ulcer healing rates between different types of compression systems.

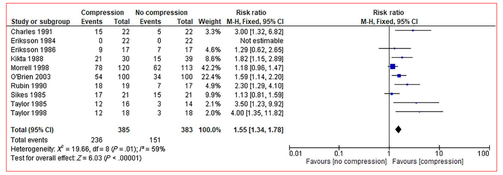
Elastic vs Inelastic compression



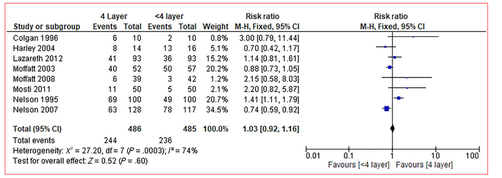
Bandage vs Stocking



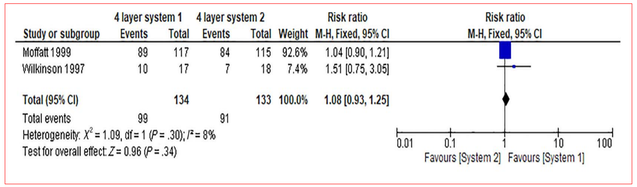
Compression vs no Compression



4 layer vs < 4 layer



4 layer system 1 vs 4 layer system 2



Reference

Patton D, Avsar P, Sayeh A, Budri A, O'Connor T, Walsh S, Nugent L, Harkin D, O'Brien N, Cayce J, Corcoran M, Gaztambide M, Moore Z. A meta-review of the impact of compression therapy on venous leg ulcer healing. Int Wound J. 2022 Jul 18. doi: 10.1111/iwj.13891. Epub ahead of print. PMID: 35855678.