

Ease of use and reproducibility of provided pressures, comparing 3M™ Coban™ 2 Layer Compression System with four currently marketed compression systems.

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Objective

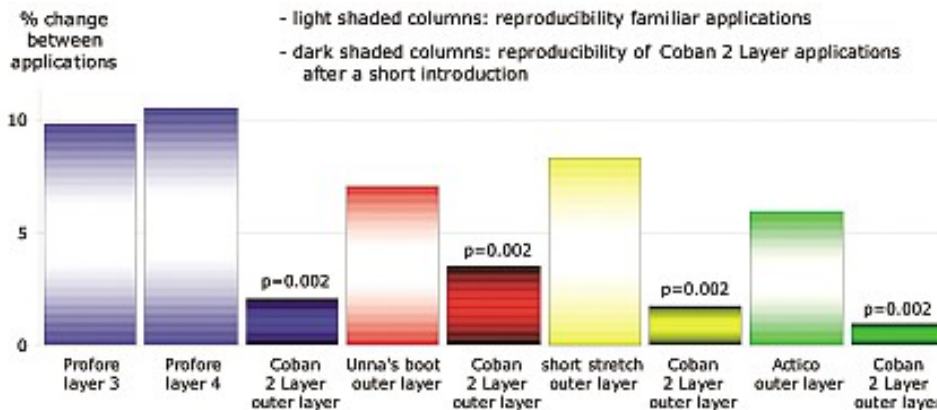
- To compare the new 3M™ Coban™ 2 Layer Compression System with established systems and evaluate ease of use and reproducibility of provided pressures.

Materials and methods

- 32 experts in the application of compression bandages were invited to apply a familiar compression system three times to a sensed artificial leg. Next they applied the Coban 2 Layer System three times to the same sensed artificial leg.
- Four compression systems were compared to the Coban 2 Layer System:
 - ProFore™ Multi-Layer Compression Bandage System, (Smith & Nephew Medical Limited, Hull, England);
 - Actico® Cohesive Short Stretch Bandage, (Activa Healthcare Limited, Staffordshire, United Kingdom);
 - Unna's boot compression system, (Graham-Field Medicopaste®) covered with a 3M™ Coban™ Self-Adherent Wrap bandage roll (3M Health Care, St. Paul, USA);
 - Rosidal® K Short Stretch Compression Bandage, (Lohmann & Rauscher International GmbH & Co. KG, Rengsdorf, Germany).
- The stretch that was produced by the bandage during use was expressed as an extension ratio, obtained by dividing the length of a line marked on the bandage after application (10 cm) by the length of the line after the bandage had been removed from the leg and allowed to relax.

Results

- Differences were calculated between application 1 and 2 and between application 1 and 3. For the differences, the % change between applied stretch during the applications was calculated. In this way 16 times a % change for each product could be calculated.
- The mean values are presented in the figure below. The analysis revealed that all applicants were significantly more consistent in applying the compression layer of the Coban 2 Layer System at the same stretch, compared to the compression layers of the materials they used routinely.



Conclusion

- In this study, the reproducibility of provided pressures with the Coban 2 Layer System was significantly more accurate when compared to four currently used compression systems.
- In addition, this evaluation revealed that the technique of application was easy and fast to learn as the applications with the new system produced these results after only a short introduction.
- It can be concluded that the new Coban 2 Layer System is a system that is easy to use, and because of a more consistently applied stretch during application, provides more consistent pressure values.

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