

21. Others

Reference

Tonegawa Y, Uchizaka S, Takemura E, et al. Changes in leg skin temperature after foot bath — Comparison of the effects of massage and no massage*. *Nagano Sekijūji Byōin Ishi (Medical Journal of Nagano Red Cross Hospital)*. 2004; 17: 116–8 (in Japanese). Ichushi Web ID 2004208587

1. Objectives

To evaluate heat retention effectiveness of massage immediately after foot bath.

2. Design

Randomized controlled trial (RCT).

3. Setting

Nagano Red Cross Hospital, Japan.

4. Participants

Six healthy adults (age range: 20 to 21 years, mean age not described).

5. Intervention

Arm 1: Massage group. Combination of massage and footbath (n=3, mean age not specified).

Arm 2: No-massage group. Footbath alone (n=3, mean age not specified).

6. Main outcome measures

Skin temperature measured by infrared thermography.

7. Main results

1) All skin temperature measurements (up to 5 hours after treatment) at the toes (third toe) and anterior surface of the leg were elevated by foot baths in both groups. Third-toe skin temperatures (°C) at rest and at 5 hours after treatment were 18.4 and 21.1, 18.1 and 24.3, and 19.7 and 28.3, respectively, in the three Arm 1 participants and 22.0 and 24.2, 20.3 and 24.1, and 20.8 and 22.6, respectively, in the three Arm 2 participants. Similarly, the anterior leg surface temperatures (°C) were 28.6 and 32.5, 27.2 and 30.7, and 28.6 and 32.2 in Arm 1 and 31.4 and 33.1, 30.8 and 32.8, and 31.0 and 32.1 in Arm 2. The sample size was too small for statistical analysis.

2) A stronger heat-retention tendency was found in Arm 1 than Arm 2.

8. Conclusions

Massaging the feet for 10 minutes after a foot bath tends to improve heat retention.

9. Safety assessment in the article

Not mentioned.

10. Abstractor's comments

This study investigates the heat retention effects of combining foot bath with massage, and is commendable for having investigated the effects up to 5 hours after a foot bath. However, sample size (only three participants per group) is insufficient for definite outcomes. In addition, the authors should have had the no-massage group keep their legs horizontal for 10 minutes, to control for the effect of treatment in the horizontal in the massage group. Furthermore, simultaneous measurement of skin blood flow and temperature at nearby sites would have increased the reliability of the study.

11. Abstractor and date

Ogata A, 12 December 2011