

## 18. Symptoms and Signs

### Reference

Noto Y, Sato T. The effect of back rub massage in healthy subjects. *Hirosaki Daigaku Igakubu Hokengakka Kiyō (Bulletin of Health Science Hirosaki)*. 2005; 15: 97–102 (in Japanese with English abstract). Ichushi Web ID 2006303302

#### 1. Objectives

To evaluate the physiological and subjective effects of back rub massage and their dependence on massage duration.

#### 2. Design

Quasi-randomized controlled trial (quasi-RCT).

#### 3. Setting

Not described (the authors belong to the Hirosaki University), Japan.

#### 4. Participants

Sixty-seven healthy adults (gender ratio and ages not described).

#### 5. Intervention

Participants' backs were massaged while seated and leaning forward.

Arm 1: Ten-minute oil massage group (n=13).

Arm 2: Three-minute oil massage group (n=16).

Arm 3: Control group (rest) (n=13).

Additional experiment: Same as control group (rest) (n=25).

#### 6. Main outcome measures

Blood pressure, heart rate, respiration rate, saturation of peripheral oxygen (SpO<sub>2</sub>) level, body temperature, back skin temperature, State-Trait Anxiety Inventory (STAI) score (Japanese edition), stress and relaxation visual analogue scale (VAS) score.

#### 7. Main results

Back skin temperature increased significantly immediately after the 10-minute massage compared to Arm3 ( $P<0.001$ ). STAI, Stress VAS, and relaxation VAS scores decreased significantly after both the 3- and 10-minute massage ( $P<0.001$ ). There were no significant changes in blood pressure, heart rate, respiration rate, SpO<sub>2</sub>, or body temperature.

#### 8. Conclusions

Back massage (rub) increases back skin temperature. Massage duration affects the magnitude of the temperature increase. Back massage has a relaxation effect but no effect on vital signs.

#### 9. Safety assessment in the article

Not mentioned.

#### 10. Abstractor's comments

Efficient use of time in the nursing workplace is an important matter. For the sake of patients, it is important to know the duration to produce favorable results in a timely manner. The authors do not fully understand the method of measuring back skin temperature, which was the only parameter to change in this study. The authors used a thermography device, but their room temperature setting differed from the one specified by the Japanese Society of Thermology, and they did not describe how they use the oil. Skin temperatures in the control group did not remain stable because the room temperature and humidity fluctuated.

#### 11. Abstractor and date

Tokutake T, 9 December 2011.