#### **18. Symptoms and Signs**

#### Reference

Uebaba K, Xu FH, Wang HB. Physiological and psychological change with stepping massage<sup>\*</sup>. *Nihon Toho Igakkai Shorokushu (Japan Eastern Medical Association Abstracts)*. 2008; 25: 54 (in Japanese). Ichushi Web ID 2008255561

#### 1. Objectives

To verify that physiological and psychological change occurs with stepping massage.

# 2. Design

Crossover randomized controlled trial (RCT-cross over).

#### 3. Setting

Miyuki Hospital, Japan.

# 4. Participants

Fifty-nine healthy adults (18 males, 41 females, mean age 40±12 years).

#### 5. Intervention

Arm 1: Massager group (participants doing the massage, n=15, mean age not specified). Arm 2: Massaged group (participants receiving massage, n=15, mean age not specified). Arm 3: Control group (n=29, no treatment).

#### 6. Main outcome measures

Psychological (anxiety level) testing; salivary Na, K, IgA, and cortisol concentration; urinary catecholamine, serotonin, and creatinine concentration; mood (massage questionnaire).

# 7. Main results

1) Anxiety decreased in both Arm1 and Arm 2. There was no change in Arm 3. (No statistical analysis.)

2) Salivary cortisol decreased, and urinary catecholamine decreased significantly in Arm 2. (No statistical analysis.)

#### 8. Conclusions

Giving or receiving massages decreases anxiety. Decrease in salivary cortisol and urinary catecholamine suggests a relaxation effect. More widespread use of methods described as "touch communication" techniques for families may have value.

# 9. Safety assessment in the article

Not mentioned.

# 10. Abstractor's comments

This study evaluated the before-after effects of stepping massage, which family members can readily give each other without the need for training. Massage was effective even though administered by different massagers, indicating that stepping massage is a simple and effective technique and that the authors achieved the goal of their study. The study (abstract) includes only limited information. The results of between-group comparison with the control group are not described, meaning the reliability of the results is not robust.

# 11. Abstractor and date

Ogata A, 17 December 2011.