

The effect of massage for women with breast cancer

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- I. Billhult, A., Bergbom, I., Stener-Victorin E. 2007. Massage relieves nausea in women with breast cancer who are undergoing chemotherapy. *J Altern Complement Med.* Jan-Feb;13(1):53-7.
- II. Billhult, A., Stener-Victorin, E., Bergbom, I. 2007. The experience of massage during chemotherapy treatment in breast cancer patients. *Clin Nurs Res.* May;16(2):85-99.
- III. Billhult, A., Lindholm, C., Gunnarsson, R., Stener-Victorin, E. The effect of massage on cellular immunity, endocrine and psychological factors in women with breast cancer – a randomized controlled clinical trial. Submitted.
- IV. Billhult, A., Lindholm, C., Gunnarsson, R., Stener-Victorin, E. The effect of light pressure massage on natural killer cells, cortisol, heart rate and blood pressure in women with breast cancer – a randomized controlled trial. Submitted.

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ABSTRACT

Breast cancer is the most common type of cancer in females. The effect of massage in the field of oncology has been investigated to some extent. The present thesis explored the effect of light pressure effleurage massage in women with breast cancer in six main domains; nausea, anxiety, depression, quality of life, stress and cellular immunity. It also described the experience of massage during chemotherapy.

The effect of light pressure effleurage was investigated on nausea, anxiety and depression in women with breast cancer undergoing chemotherapy. Five part-body massage treatments were given during chemotherapy infusion. Massage significantly lowered nausea ($p=0.025$) compared with control group. No significant differences were shown between study groups on anxiety and depression.

The experience of light pressure effleurage during chemotherapy treatment was studied using phenomenology as theoretical framework. The essential meaning of receiving massage during chemotherapy was described as a retreat from the feeling of uneasiness toward chemotherapy. Results revealed five themes: a distraction from the frightening experience, a turn from negative to positive, a sense of relaxation, a confirmation of caring and finally they just felt good.

The effect of light pressure effleurage on immunity was investigated in women with breast cancer undergoing radiation. Ten part-body massage treatments, 20 minutes duration, were given during three weeks. Main variables were NK (Natural Killer) and T cells. The effect of massage on cortisol, oxytocin, anxiety, depression and quality of life was also studied. We were not able to demonstrate any significant differences between study groups on any of the variables in this study.

The immediate effect of light pressure effleurage on immunity was also investigated. Patients received one full-body massage, 45 minutes duration. Main variable was NK cells, secondary variables cortisol, blood-pressure and heart rate. Massage treatment had significant effect on NK cell function compared with the control group ($p=0.03$). Furthermore, massage significantly lowered systolic blood-pressure ($p=0.03$) and heart rate ($p=0.04$) compared with the control group. No significant effects were demonstrated on cortisol or diastolic blood-pressure.

In conclusion, the present thesis demonstrated that light pressure effleurage could be effective in reducing nausea in breast cancer patients during chemotherapy. A single full-body light pressure massage had short term effects on NK cell function, it decreased heart rate and systolic blood pressure significantly compared with visit only. It appears that repeated part-body light pressure massage did not affect cellular immunity during radiation, possibly due to secondary effects of radiation on immunity. Altogether, it might be speculated that the intensity of part-body massage was too low to affect cellular immunity compared with full-body massage. Furthermore, the amount of pressure used might bear impact on results. Patients with breast cancer however, experienced light pressure massage as a retreat from uneasy, unwanted, negative feelings connected with chemotherapy treatment.

Keywords: breast neoplasm, massage, effleurage, experience, nausea, anxiety, depression, stress, immunity, quality of life.