



# The Effects of Foot Massage and Reflexology on Decreasing Anxiety, Pain, and Nausea in Patients With Cancer

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## Foot Massage

Grealish, L., Lomasney, A., & Whitman, B. (2000). Foot massage. A nursing intervention to modify the distressing symptoms of pain and nausea in patients hospitalized with cancer. *Cancer Nursing*, 23, 237–243.

### Study Summary

The purpose of this quasi-experimental study was to examine the therapeutic effects of foot massage as a complementary treatment. More specifically, the goals were to measure the effects of foot massage on the symptoms of pain and nausea and the feeling of relaxation.

The sample consisted of 87 patients (52 women and 35 men) ranging in age from 18–88. Primary cancer diagnoses of participants were breast and lung cancer and non-Hodgkin's lymphoma. Participants received the massage intervention twice and acted as their own control at a third session. The participants were assigned randomly to one of three factor control groups. The dependent variables of heart rate, pain, nausea, and relaxation were measured before the massage and 10–20 minutes after the intervention.

The foot massage lasted 10 minutes and consisted of slow, firm, or gentle strokes toward the heart from the base of the toes up the foot and lower leg to the knee. The intervention was completed at the same time on three consecutive nights to control for the influence of regular medications for pain and nausea.

A monitor measured the variable of heart rate. The subjective data of pain, nausea, and relaxation were measured using a visual analog scale ranging from 0 mm (e.g., no pain, no nausea, at peace) to 100 mm (e.g., worst possible pain, vomiting or dry retching, very tense).

Patients' reported pain levels decreased significantly after the first and second massages. The findings for a reduction in nausea and an increase in relaxation were equally significant. No change occurred in these variables for the pre- and post-tests for the control sessions. The effects on heart rate were small and significant for the control and massage sessions, respectively. A repeated measures analysis of variance was performed to determine if the massages had different effects on men and women. The findings found no gender differences.

### Application to Patient Care

• **Complementary therapies are playing a growing role in contemporary nursing practice. As described in this study, foot massage for patients diagnosed with cancer may help to ameliorate symptoms of pain and nausea and provide a valuable means for relaxation.**

Implementation of foot massage in the clinical setting can demonstrate a willingness on the part of oncology nurses to use nontraditional methods to alleviate symptoms of pain and nausea and enhance relaxation. The use of medications for pain and nausea is costly and coupled with negative side effects. Performing foot massage over a 10–15 minute period as a complementary practice could be used as an adjunct to decrease the use of medications. Foot massage also may be beneficial for nurses, as it can provide valuable time for additional assessment of patients' symptoms of pain and nausea and the need for added interventions. Furthermore, it allows for additional personal interaction between nurses and their patients, which may enhance the relaxation effect for patients and provide a sense of satisfaction for oncology nurses. With further research studies to validate their effective-

ness, complementary therapies may become part of the standard of cancer care practice in acute and homecare settings.

• **The findings of this study may be rewarding particularly for nurses who are interested in the healing effects of touch on their patients.**

Oncology nurses can convey feelings of caring and comfort through the method of touch with a 10-minute foot massage. Foot massage enables nurses at the bedside to touch patients in a nonintrusive and non-threatening manner. The use of foot massage as an intervention for healing can provide therapeutic psychophysiologic effects in a relatively short period of time. It also may give nurses the opportunity to teach foot massage to patients and their families as a way of encouraging family participation and support in healing and reassurance. Therapists from other disciplines, such as physical/occupational and massage therapy, also could offer this intervention with family education.

The researchers state that "participants made anecdotal comments indicating the satisfaction with massage as a nursing intervention" (p. 241). The suggestion for qualitative analysis of massage is offered to better inform nursing practice. This study did not control for pain medications or antiemetics; therefore, this could have had some effect on the results. Further investigation of the medication effect is needed. This complementary therapy, as well as others, warrants further study as a viable and cost-effective nursing intervention for patients with cancer.

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