

[IMAGE]

Massage Today

September, 2004, Vol. 04, Issue 09

Spotlight on Research

By Editorial Staff

Editor's note: This periodic column keeps you abreast of the latest research documenting the benefits of massage and bodywork. Published research is summarized, with references to the full study text provided; abstracts of research are reproduced with minimal edits.

If you would like your research abstract or summary published in **Spotlight on Research**, please contact us at editorial@massagetoday.com.

Breast Cancer Patients' Immunity Improves With Massage

Breast cancer is the most common form of cancer among American women. The National Cancer Institute estimates that today, one in every eight women will develop breast cancer in her lifetime - a threefold increase from 1964.¹

Although it is highly curable if detected early enough, breast cancer is also the second-leading cause of cancer death in women after lung cancer, and is the leading cause of cancer death among women ages 15 to 54.²

Previous studies have shown that women with breast cancer are more depressed than women without breast cancer, and are more likely to suffer from stress and anxiety. Stress has been linked with lowered rates of an immune cell called the "natural killer" (NK) cell in women with breast cancer, an important finding since NK cells help prevent the development of tumors, and destroy new and abnormal growths before they can proliferate.

A new study* conducted by a team of researchers at the Touch Research Institutes (TRI) examined the role massage therapy could play in strengthening the immune system, particularly in increasing the number of NK cells in the blood. The study, published in the July 2004 issue of the *Journal of Psychosomatic Research*, found that massage not only generated profound changes in the women's blood chemistry, it also

reduced their stress and anxiety levels dramatically.³

A total of 34 women diagnosed with stage 1 or stage 2 breast cancer were included in the study and assigned randomly to either a massage group or a control group. Women in the massage therapy group received a total of 15 massages over a five-week period. The massages were conducted in a private room on a massage table by a trained massage therapist.

The sessions consisted of three 30-minute massages per week, and employed Swedish massage, the Trager® method, and acupressure techniques over various body parts. Women in the control group received standard medical care alone, but were provided with massages at the end of the study period. Along with the massages, the researchers administered various psychological tests to the women at the beginning and end of the study session to determine changes in anxiety and mood.

In addition, all of the women provided urine samples to assess changes in hormone levels, and 27 women (15 in the massage group, 12 in the control group) gave blood samples to determine levels of NK cells and lymphocytes in the blood.

Results

Massage was associated with a significant reduction in anxiety levels and depression, and an overall increase in the number of immune cells in the blood. In the massage group, women reported a 46 percent reduction in depression levels from the first day of the study to the last day, along with a 25 percent reduction in anxiety.

In the control group, anxiety levels remained unchanged, while the depression scores actually increased 22 percent. The improvements in mood and depression in the massage group appeared to be the result of increases in certain hormone levels. Women who received massages experienced significant increases in the levels of a number of stress-fighting hormones, including dopamine and serotonin.

"These increases complement the massage group's self-reports of improved mood and decreased depression, as both serotonin and dopamine have been noted to increase in depressed individuals following massage therapy," the scientists noted. "These and other massage findings support that massage therapy is effective in reducing psychological distress, enhancing mood biochemicals, and boosting the immune system."³

In examining the blood samples, the researchers found higher amounts of NK cells and lymphocytes in the women given massage. Comparing blood samples taken on the first and last days of the study period, the researchers noted a 12 percent increase in NK cells and a 10 percent increase in lymphocytes in the blood. In the control group, the lymphocyte level remained the same, while the NK cell count decreased 7 percent.

"NK cells spontaneously destroy a wide variety of cancer and virus-infected cells and are involved in eliminating metastases," the authors wrote. "A boost in NK cell number would be beneficial given that some cancer patients have reduced NK cell numbers."³

The use of complementary and alternative medicine (CAM), and therapies like massage by the general population, has increased tremendously in the past decade. This is particularly true of cancer patients; by some estimates, up to 60 percent of all people with cancer use at least some form of CAM.⁴⁻⁶

The authors of the study acknowledged the need for more research on massage therapy and cancer, and recommended that future studies examine the cost of care, the use of massage to treat other conditions in addition to breast cancer, and the long-term effects of massage therapy on reducing the incidence of death and disease.

"In summary, the self-reports of reduced stress, anxiety/anger/hostility, and improved mood, and the corroborating findings of increased dopamine and serotonin levels and increased NK cell number (the primary outcome measure) and lymphocytes suggest that massage therapy has positive applications for breast cancer survivors. That women with breast cancer have lower NK cell number and that they might have higher stress hormone levels, which have been associated with tumor growth and metastases, suggest the need for further research on interventions like massage therapy that impact the neuroendocrine and immune systems while attenuating psychological stress symptoms."³

For more information on other TRI studies, visit www.miami.edu/touch-research.

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*Funding for the study provided by the following: USARMMC DAMD Grant 17-99-1-9292; Sylvester Comprehensive Cancer Center; and Johnson & Johnson.

Editor's note: The following abstract originally appeared in the Spring 2004 issue of the *Massage Therapy Journal* and was presented at the poster session during the 2003 AMTA National Convention in Richmond, Va. It appears here with permission from the authors.

The Effect of Chair Massage on Stress Perception of Hospital Bedside Nurses

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Context: Studies have shown that hospital bedside nursing is a stress-loaded occupation. Massage therapy has been shown to be an effective intervention in stress management.

Objective: The goal of this study was to determine if a 10-minute onsite chair massage was more effective at reducing stress perception of hospital bedside nurses than a 10-minute break.

Design: Randomized trial with a control group, who took a 10-minute break, and a study group, who received a 10-minute chair massage.

Setting: A small suburban hospital on the maternity, medical-surgical, telemetry, and critical care nursing units.

Participants: 82 bedside nurses.

Main Outcome Measure: Stress perception was assessed using the Perceived Stress Scale (PSS) in an experimental pretest/posttest design and analyzed using t-tests for independent samples.

Results: Stress perception was significantly lower in the study group after the chair massage ($P < .05$) and not significantly changed in the control group.

Conclusion: The results of this study support the effectiveness of chair massage in the reduction of stress perception for this population. Further research is warranted to study the feasibility of providing chair massage on a regularly scheduled basis on a nursing unit, as well as its impact on other aspects of a nursing position, such as job satisfaction, retention, absenteeism, injury and workers' compensation claims.

Additionally, it would be beneficial to study the effects of chair massage with individuals in other occupations that are identified as being high stress and burnout occupations.

For more information about this study, contact M.K. Brennan at 704-536-3446.



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