



# Research on Acupuncture as Complementary Therapy for Cancer Symptoms & Side Effects of Treatment

In 1997, the National Institutes of Health (NIH) began evaluating the safety and effectiveness of acupuncture as a complementary therapy for relieving cancer-related symptoms and side effects of cancer treatments.

Studies of acupuncture in cancer care also have been done in China and other countries, including England, France, Australia, Japan, and Sweden.

## 1. Cancer-related symptoms

Victorson D, Beaumont JL, Mahadevan R, et al. Acupuncture-Related Quality of Life Changes Using PROMIS Computer Adaptive Tests in a Pragmatic Trial with Oncology and General Integrative Medicine Patients: The Role of Baseline Acupuncture Expectations. *The Journal of Alternative and Complementary Medicine*. July 2016, ahead of print. doi:10.1089/acm.2015.0121.

This study examined longitudinal changes in quality of life (QOL) in patients receiving acupuncture treatment using PROs from the NIH Patient Reported Outcomes Measurement Information System (PROMIS). It showed the positive effects of acupuncture over time on anxiety, depression, pain interference, and sleep disturbance regardless of pre-treatment expectations.

Molassiotis, A, J. Bardy, J. Finnegan-John, et al. Acupuncture for cancer-related fatigue in patients with breast cancer: A pragmatic randomized controlled trial. *Journal of Clinical Oncology*. 30(36):4470-4476, 2012.

Three hundred two outpatients with breast cancer were randomly assigned to usual care and 227 patients to acupuncture plus usual care. Treatment was delivered by acupuncturists once a week for 6 weeks through needling three pairs of acupoints. The usual care group received a booklet with information about fatigue and its management. The intervention improved general fatigue as well as mental and physical fatigue, anxiety and depression, quality of life and well-being. Acupuncture was an effective intervention for managing the symptom of cancer-related fatigue and improving patients' quality of life.

## 2. Cancer Pain Relief

Alimi D, Rubino C et al. Analgesic effect of auricular acupuncture for cancer pain: a randomized, blinded, controlled trial. *Journal of Clinical Oncology*. 21(22):4120-6, 2003.

This study examined the efficacy of auricular acupuncture in decreasing pain intensity in cancer patients. Ninety patients were randomly divided into three groups: one group received two courses of auricular acupuncture and two placebo groups received auricular acupuncture at placebo points. Pain intensity decreased by 36% at 2 months from baseline in the group receiving acupuncture; there was little change for patients receiving placebo (2%). The difference between groups was statistically significant. The observed



reduction in pain intensity represents a clear benefit from auricular acupuncture for these cancer patients who were in pain, despite stable analgesic treatment.

He JP, Friedrich M, Ertan AK, Muller K, Schmidt, W. Pain-relief and movement improvement by acupuncture after ablation and axillary lymphadenectomy in patients with mammary cancer. *Clinical & Experimental Obstetrics & Gynecology*. 26(2):81-4, 1999.

Forty-eight patients with mammary cancer treated with acupuncture after ablation and axillary lymphadenectomy were compared with 32 patients with the same operation who did not receive acupuncture. Statistically significant differences were found in pain relief and arm movements in the group that received acupuncture on the 5th and 7th post-operative days and up to discharge.

### **3. Chemotherapy-induced nerve pain**

Schroeder S, Meyer-Hamme G, Epplee S. Acupuncture for chemotherapy-induced peripheral neuropathy (CIPN): a pilot study using neurography. *Acupuncture in Medicine*. 30(1):4-7, 2012.

Chemotherapy-induced peripheral neuropathy (CIPN) can produce severe nerve pain and is a potential reason for terminating or suspending chemotherapy treatments. A pilot study evaluated the therapeutic effect of acupuncture on CIPN as measured by changes in nerve conduction studies (NCS) in six patients treated with acupuncture for 10 weeks in addition to best medical care and five control patients who received the best medical care but no specific treatment for CIPN. In five of the six patients treated with acupuncture, NCS improved after treatment. The data suggest that acupuncture has a positive effect on CIPN. The encouraging results of this pilot study justify a randomized controlled trial of acupuncture in CIPN on the basis of NCS.

### **4. Chemotherapy-related Nausea and Vomiting**

Yeh CH, Chien LC, Chiang YC, et al. Reduction in nausea and vomiting in children undergoing cancer chemotherapy by either appropriate or sham auricular acupuncture points with standard care. *Journal of Alternative & Complementary Medicine*. 18(4):334-40, 2012 Apr.

Chemotherapy-induced nausea and vomiting (CINV) symptoms were assessed in 10 patients just prior to and for 7 days following three rounds of chemotherapy drugs (CTX). Patients received standard care (SC) and just prior to receiving the second round of CTX, patients were randomized into one of two treatment conditions: ear acupressure in addition to standard care (AAP) or auricular acupressure using sham auricular points (SAP) in addition to standard care. For the third round of CTX, they were switched to the other treatment group. Patients in the AAP group reported significantly lower occurrence and severity of nausea and vomiting than patients in the SC group. There were no significant differences of nausea and vomiting for patients between the AAP and SAP groups. These early findings showed evidence that AAP was acceptable to the children and their parents to prevent/treat CINV.



## 5. Lung Cancer

Kasymjanova G, Grossman M, Tran T, et al. The potential role for acupuncture in treating symptoms in patients with lung cancer: an observational longitudinal study. *Curr Oncol.* 20(3):152-7, 2013.

Most lung cancer patients experience multiple symptoms related either to the disease or its treatment including pain, depression, anxiety, nausea, and poor well-being. This study evaluated the effect of acupuncture as a potential treatment modality in 33 symptomatic lung cancer patients. All patients received 45-minute sessions of acupuncture, 1-2 times weekly for a minimum of 4 sessions. Statistically significant improvements in pain, appetite, nausea, nervousness, and well-being were seen. A clinically important improvement was reported by 61% of patients for pain and by 33% for well-being. A significant positive correlation between improved well-being and the number of acupuncture sessions was observed. This is the first study to demonstrate that acupuncture may be an effective approach for improving symptoms — in particular pain and well-being-in lung cancer patients. Acupuncture is a safe and minimally invasive procedure, and it is potentially useful even in patients undergoing anticancer treatment.

## 6. Dry Mouth

Garcia MK, Chiang JS, Cohen L, et al. Acupuncture for radiation-induced xerostomia in patients with cancer: A pilot study. *Head Neck.* 31(10):1360-8, 2009.

This pilot study evaluated if acupuncture can alleviate radiation-induced dry mouth (xerostomia) in patients with cancer treated with radiation. Nineteen patients received acupuncture twice a week for 4 weeks. Xerostomia inventory and patient benefit questionnaire scores were significantly better after acupuncture on weeks 4 and 8 than at baseline. At week 8, there was a significant difference in physical well-being. At weeks 5 and 8, there were significant differences in the total score. Acupuncture was effective for radiation-induced xerostomia in this small pilot study.

## 7. Palliative Cancer Care

Lim JT, Wong ET, Aung SK. Is there a role for acupuncture in the symptom management of patients receiving palliative care for cancer? A pilot study of 20 patients comparing acupuncture with nurse-led supportive care. *Acupuncture in Medicine.* 29(3):173-9, 2011.

A pilot study documented changes in symptoms after acupuncture or nurse-led supportive care in patients with incurable cancer. Total symptom scores were reduced by an average of 22% after each acupuncture visit and by 14% after each supportive care visit. Acupuncture was well tolerated with no significant or unexpected side effects. Acupuncture had an immediate effect on all symptoms, whereas nurse-led supportive care had a larger impact 6 weeks after the final session