

Peppermint and Cancer

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605047/>

The Effect of Peppermint (*Mentha piperita*) Extract on the Severity of Nausea, Vomiting and Anorexia in Patients with Breast Cancer Undergoing Chemotherapy: A Randomized Controlled Trial. 2020

as a significant difference between the 2 groups at 24 and 48 hours after the chemotherapy ($P < .05$), so that the mean score of the severity of nausea, vomiting, and anorexia in the experimental group was lower than in the control group ($P < .05$). Conclusion: **The use of peppermint as a method in complementary medicine may improve nausea, vomiting, and anorexia in patients with breast cancer undergoing chemotherapy.** Further studies with greater sample size and longer follow-up period are needed to confirm the current findings.

<https://pubmed.ncbi.nlm.nih.gov/16767798/>

A review of the bioactivity and potential health benefits of peppermint tea (*Mentha piperita* L.). 2006

The phenolic constituents of the leaves include rosmarinic acid and several flavonoids, primarily eriocitrin, luteolin and hesperidin. The main volatile components of the essential oil are menthol and menthone. In vitro, **peppermint has significant antimicrobial and antiviral activities, strong antioxidant and antitumor actions, and some antiallergenic potential.** Animal model studies demonstrate a relaxation effect on gastrointestinal (GI) tissue, analgesic and anesthetic effects in the central and peripheral nervous system, immunomodulating actions and chemopreventive potential. Human studies on the GI, respiratory tract and analgesic effects of peppermint oil and its constituents have been reported. Several clinical trials examining the effects of peppermint oil on irritable bowel syndrome (IBS) symptoms have been conducted. However, human studies of peppermint leaf are limited and clinical trials of peppermint tea are absent. Adverse reactions to peppermint tea have not been reported, although caution has been urged for peppermint oil therapy in patients with GI reflux, hiatal hernia or kidney stones.

<https://pubmed.ncbi.nlm.nih.gov/33197662/>

The Effects of Peppermint Oil on Nausea, Vomiting and Retching in Cancer Patients Undergoing Chemotherapy: An Open Label Quasi-Randomized Controlled Pilot Study. 2020

Objectives: The current study **evaluated the effects of peppermint oil on the frequency of nausea, vomiting, retching, and the severity of nausea in cancer patients undergoing chemotherapy.**

Design: A quasi-randomized controlled study.

Setting: Patients were recruited from the ambulatory chemotherapy unit of a public hospital located (Batman, Turkey) between September 2017 and September 2018.

Interventions: The participants in the intervention group applied one drop the aromatic mixture on the spot between their upper lip and their nose, three times a day for the five days following chemotherapy administration, in addition to the routine antiemetic treatment. Participants in the control group underwent only the routine antiemetic treatment. Main outcome measures VAS-the severity of nausea and the Index of Nausea, Vomiting, and Retching.

Results: **The VAS nausea score was significantly lower after peppermint oil applying in the patients receiving Folfirinox** (treatment effect (mean dif.): 4.00 ± 2.28 ; $P < 0.001$), Paclitaxel-Trastuzumab (treatment effect (mean dif.): 1.70 ± 0.90 ; $P = 0.014$), Carboplatin-Paclitaxel (treatment effect (mean dif.): 3.71 ± 1.41 ; $P < 0.001$), and Cyclophosphamide-Adriamycin (treatment effect (mean dif.): 1.41 ± 0.73 ; $P = 0.005$) excluding cisplatin schedule (treatment effect (mean dif.): 0.56 ± 2.18 ; $P = 0.642$). We detected a statistical significant difference in the change in frequency of nausea, vomiting, retching in the other all schedules excluding cisplatin schedule ($P < 0.05$).

Conclusions: **The peppermint oil was significantly reduced the frequency of nausea, vomiting, retching and the severity of nausea in cancer patients undergoing chemotherapy.** Therefore, usage of peppermint oil together with antiemetics after chemotherapy with moderate and low emetic risk may be recommended to cope with CINV.

<https://pubmed.ncbi.nlm.nih.gov/32196008/>

Peppermint Oil: Evaluating Efficacy on Nausea in Patients Receiving Chemotherapy in the Ambulatory Setting. 2020

Background: Nausea is one of the most commonly reported side effects in patients receiving chemotherapy. Patients who experience nausea during chemotherapy may also experience depression, metabolic imbalances, dehydration, decreased ability to function, and treatment delays, which can ultimately affect outcomes.

Objectives: This study aimed to determine the efficacy of a cool damp washcloth with peppermint essential oil versus a cool damp washcloth alone on the self-reported intensity of nausea in patients receiving chemotherapy in the outpatient ambulatory setting.

Methods: 79 adult patients receiving chemotherapy were recruited from an outpatient ambulatory infusion center in the southeastern United States. Patients were separated into two groups (no scent and peppermint) and asked to rate the intensity of their chemotherapy-induced nausea at pre- and postintervention using the Baxter Retching Faces pictorial scale.

Findings: The results demonstrated that the **use of peppermint oil was effective in decreasing the intensity of nausea experienced by patients compared to a cool washcloth alone.**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10138439/>

Efficacy of Essential Oils in Relieving Cancer Pain: A Systematic Review and Meta-Analysis. 2023

Twelve studies are included and six are eligible for meta-analysis. The present study **demonstrates significant efficacy of the use of essential oils in the reduction of the intensity of pain associated with cancer** ($p < 0.00001$), highlighting the need for earlier, more homogeneous, and appropriately designed clinical trials. Good certainty body of evidence is needed for effective and safe management of cancer-related pain using essential oils by establishment of a step-by-step preclinical-to-clinical pathway to provide a rational basis for clinical use in integrative oncology.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7132346/>

Effects of Aromatherapy with Lavender and Peppermint Essential Oils on the Sleep Quality of Cancer Patients: A Randomized Controlled Trial. 2020

One of the problems of cancer patients is sleep disorder. Given the absence of studies on comparing the effect of inhalation aromatherapy with lavender and peppermint on the sleep quality of the cancer patients, this study was performed to compare the effect of inhalation aromatherapy with lavender and peppermint essential oils on the sleep quality of cancer patients. For this purpose, 120 patients were randomly allocated to three groups of lavender, peppermint, and control. The intervention groups received three drops of the essential oil for 7 days. In the control group, aromatic distilled water was used instead. Pittsburgh Sleep Quality Inventory (PSQI) was used. Before the intervention, no significant difference was observed between the mean PSQI scores of three groups, while the difference was statistically significant after the intervention. **The mean PSQI scores were lower in lavender and peppermint groups than in the control group. Aromatherapy can improve the sleep quality of cancer patients.**

