

# Systematic Review of Nonpharmacologic Approaches for the Management of Gastrointestinal Symptoms

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**PROBLEM IDENTIFICATION:** To summarize and critique the literature for nonpharmacologic complementary approaches to manage gastrointestinal (GI) symptoms attributed to chemotherapy.

**LITERATURE SEARCH:** A literature search was conducted using CINAHL®, MEDLINE®, and PsycINFO® from database inception through January 2018.

**DATA EVALUATION:** Studies were independently appraised by each author regarding inclusion eligibility and summary of GI symptom outcomes and the nonpharmacologic complementary intervention.

**SYNTHESIS:** 57 studies met inclusion criteria. GI symptoms most commonly evaluated as a chemotherapy outcome were nausea and vomiting and nausea alone. GI symptoms infrequently evaluated as outcomes included diarrhea, anticipatory nausea, and dysgeusia. Ten GI symptoms associated with chemotherapy were not evaluated by any study. Nonpharmacologic interventions included 15 different interventions.

**IMPLICATIONS FOR RESEARCH:** Studies evaluating nonpharmacologic interventions for managing chemotherapy-related GI symptoms have been growing but tend to focus on nausea and vomiting to the exclusion of other relevant GI symptoms. Studies evaluating nonpharmacologic effects on other GI symptoms may make great strides in reducing patient symptom burden.

**KEYWORDS** gastrointestinal symptoms; chemotherapy; nonpharmacologic therapies; symptom burden  
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Patients with cancer receiving chemotherapy experience as many as 14 treatment-related symptoms, with each additional symptom resulting in an increase in symptom distress (Spichiger et al., 2011; Thiagarajan et al., 2016). Symptom management studies tend to focus on the more prevalent symptoms related to cancer chemotherapy, which include pain, fatigue, and sleep disturbance, but gastrointestinal (GI) symptoms have been shown to contribute to high symptom burden in this population. Although 19 GI symptoms are related to chemotherapy (i.e., oral mucositis, xerostomia, dysphagia, dysgeusia, anticipatory nausea, anticipatory vomiting, nausea, vomiting, anorexia, early satiety, pyrosis, bloating, eructation, flatulence, retching, diarrhea, constipation, rectal burning, and rectal itching) (see Table 1), symptom management literature predominantly focuses on nausea and vomiting. A study by Cherwin and Kwekkeboom (2016) demonstrated that, despite pharmacologic intervention, people with a hematologic cancer receiving chemotherapy experience as many as five concurrent GI symptoms, and 11 of 19 GI symptoms assessed met criteria to be considered clinically relevant (i.e., greater than 15% prevalence and moderate to severe duration, severity, or distress). Unrelieved GI symptoms contribute to depression, shortened survival, and poor quality of life (QOL) in people with cancer (Goodell & Nail, 2005). High symptom burden from GI symptoms, despite pharmacologic intervention, may indicate the need for novel methods of symptom management.

Modern health care is increasingly merging mainstream medicine with scientifically evaluated complementary therapies in a way that treats a person's mind, body, and spirit (National Center for Complementary and Integrative Health, 2017). The National Institutes of Health Office of Cancer Complementary and Alternative Medicine has assigned classifications to the different forms of