

**FAST FACTS AND CONCEPTS #391**  
**YOGA FOR CANCER-RELATED SYMPTOMS**  
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**Background:** Yoga was developed over 5,000 years ago as a comprehensive system of health and wellbeing for the mind, body, and soul. The word is believed to derive from the Sanskrit root 'yuj' meaning to bind, yoke, union, and/or to concentrate one's attention (1). In healthcare, it often serves as a complementary mind-body practice, and it is increasingly being integrated into cancer care. It can be performed in the privacy of one's home via DVD or web-based programs or via group practices led by instructors who are often experienced working with students with medical issues. Most published evidence regarding yoga for seriously ill patients involves breast cancer survivors or breast cancer (stages I-IV) patients undergoing cancer treatment with a preserved functional capacity (ECOG <3). There is limited data examining its effectiveness or feasibility in children or for those with terminal cancer.

**Common types of yoga investigated for cancer-related symptoms:** While many styles of yoga exist, evidence-based studies tend to utilize a few common styles which incorporate specific physical postures, breathing practices, and meditation. Most studies do not investigate a specific yoga style to target a specific symptom, but rather a blend of the following three styles described below. Of note, while the definitions of yoga styles can be considered standard, the classes or instruction is not, which is a limitation in the evidence underlying most mind-body practices or physical exercise regimens.

- **Hatha** is a generic term that refers to any style of yoga where the focus is on basic physical postures. Classes are slow-paced and designed for newcomers.
- **Iyengar** represents a common modern Hatha yoga system, developed by BKS Iyengar, that emphasizes proper alignment of the body into postures via props (blocks, straps, and bolsters) (1).
- **Restorative yoga** aims to undo chronic stress through conscious relaxation. Classes involve guided meditations and long holds of seated or supine postures, with the body fully supported by props.

**Cancer related fatigue (CRF):** CRF is distinct from other common forms of fatigue (e.g. overexertion, lack of sleep, anemia) in that it does not improve with rest, significantly limits activities of daily living, may linger for years, and is often more difficult to treat (2).

- Of 16 randomized, non-blinded trials, 8 trials showed significant improvement in patient-reported CRF via validated fatigue scales or health related QOL scales at 1-, 3-, and 6-month follow-ups when yoga was practiced at low to moderate intensity, 60-120-minute sessions, 1-3x/week, over 4-12 weeks, compared to wait list control, standard care, health education, or support therapy (3).
- Two trials compared yoga to conventional strengthening exercises for early-stage breast cancer patients and survivors. Both interventions were found to significantly improve patient reported CRF; no significant differences were found between the two interventions (4,5).
- A randomized pilot study in patients with metastatic breast cancer showed moderate improvement in patient-reported CRF at post-intervention (8 weeks) and 6-month follow-up compared to a social support group intervention (6).

**Sleep disruption:** Of 10 clinical trials, 7 showed significant improvement in sleep disruption, improved subjective sleep quality, faster sleep latency, longer sleep duration, and less use of sleep medications, when practiced at low to moderate intensity, 60-120-minute sessions, 1-3x/week, over 4-10 weeks, compared to standard care, social support therapy, or stretching (3).

**Cognitive impairment:** Diminished memory, executive function, attention, and/or concentration is seen in ~75% of patients during cancer-directed therapies. These impairments last for months or years post-treatment in 20-35% of cancer survivors and can affect a patient's ability to return to previous employment or adhere to cancer treatment plans (see *Fast Fact # 342*) (2). Two randomized clinical trials showed post-intervention improvement in concentration, distraction, and memory via validated patient-reported outcome measures, when practiced at low to moderate intensity, 75-90-minute sessions, 2x/week, over 4-12 weeks, compared to a wait list control condition (7) and standard care (8).

**Psychological distress:** Anxiety, depression, and psychological distress (e.g. worry about illness) are associated with worse quality of life, poorer treatment adherence, slower recovery, and higher costs (2).

- Of 18 clinical trials, 12 showed improvement in patient-reported anxiety, depression, and psychological distress when practiced at low to moderate intensity, 60-90-minute sessions, 1-7x/week, over 3-12 weeks, compared to wait list control, exercise, or supportive therapy (3).
- A randomized pilot study in patients with metastatic breast cancer showed improvement at 8 weeks and 3- and 6-month follow-ups for patient-reported anxiety and depression when comparing a gentle Hatha yoga class with meditation and breathing techniques to a social support group (6).

**Musculoskeletal pain:** While multiple studies suggest a trend toward improved pain control, only one trial in breast cancer patients on aromatase inhibitors showed a significant reduction in musculoskeletal pain, muscle aches, and general discomfort when practiced at low to moderate intensity, 75-minute sessions, 2x/week, over 4 weeks (3,9). No studies have demonstrated an opioid-sparing effect.

**Cost:** Insurances may not cover the cost of yoga; therefore, it is often an out-of-pocket expense. Classes in the US range from \$10-\$20/session; DVDs cost as little as \$5 (10). Free classes may be offered at community centers, cancer support organizations, and medical centers.

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