



# THE INTERNATIONAL ASSOCIATION OF YOGA THERAPISTS

## Research Summary for Yoga Therapists: Yoga Therapy for Cancer Survivors

By Pam Jeter and Timothy McCall

*Research Summaries for Yoga Therapists are a service provided by IAYT to help yoga therapists navigate the twists and turns of the research landscape. The full reference can be found here:*

Culos-Reed, S. N., Long, R., Walter, A. A., & Van Puymbroeck, M. (2016). Yoga therapy for cancer survivors. In: S. B. S. Khalsa, L. Cohen, T. McCall, & S. Telles (Eds.), *The principles and practice of yoga in health care*, 375–398. Pencaitland, United Kingdom: Handspring Publishing.

### Definition of the disorder

Cancer is typically defined by the observance of abnormal cell growth, usually found within a specific organ (e.g., prostate, breast) or white blood cells (e.g., leukemia, lymphoma). The defining feature of cancer is the rapid creation and subsequent division of abnormal cells.

### Treatment options

The primary allopathic treatments are surgery, chemotherapy, radiation therapy, hormonal blockade, and other pharmacological treatments. Often, these treatments have adverse side-effects, including chemotherapy-induced vomiting and nausea, peripheral neuropathy, cognitive impairment, fatigue, pain, sleep disturbances, mood disorders, and chemotherapy-induced immunosuppression.

### Prevalence (How common is the condition?)

Cancer is the leading cause of death worldwide, accounting for approximately 13% of all deaths (8.2 million) in 2012. Given improvements in detection and treatment, cancer survivorship rates are also increasing, with an estimated 14.5 million cancer survivors in the United States in 2014.

### Rationale for yoga

Evidence supports yoga as a complementary approach that improves a variety of health-related outcomes. Chronic stress or stress-related changes in the body can lead to lowered immunity and increased inflammatory responses that can exacerbate cancer symptoms and potentially accelerate the course of the disease. Yoga may lead to reduced stress,

which may in turn reduce inflammation and boost immunity. Yoga may also alleviate symptoms that cause reduced quality of life and poor mental health.

### General methods

After searching Google Scholar and PubMed databases using the terms “yoga,” “cancer,” and “survivor,” the authors identified fifteen studies—seven randomized controlled trials (RCTs) and eight trials with other designs (pre–post, single-group pilot studies [five]; quasi-experimental studies [two]; and one cross-sectional study). Included studies used a yoga intervention for cancer survivors, and all of the survivors were posttreatment. Studies were excluded if they used a mix of survivors and patients undergoing care.

### Who was studied?

The studies included participants with a variety of cancer diagnoses, including alimentary tract, breast, colorectal, prostate, gynecologic, hematologic, lung, lymphoma, and other cancers. The mean age for participants was 61 years. In the fifteen studies, most participants were women (965 out



of 990 participants). Inclusion criteria for time posttreatment varied significantly for all studies.

### *How were the studies conducted?*

- All RCTs used a waitlist control except one, which used a health-education control.
- Yoga styles were grounded in the Iyengar system (six), Hatha-based programs (seven), or Viniyoga (two). Yoga Thrive is an established Hatha-based program for cancer survivors and was used in three studies. Two studies used the Yoga of Awareness and Yoga for Cancer Survivors. Most protocols involved asana, pranayama, and meditation.
- Class duration across all fifteen studies ranged from 45 to 120 minutes. Study duration ranged from 7 weeks to 6 months. Class frequency ranged from once per week to 4 times per week. Six studies encouraged home practice.
- Most common outcomes measured were feasibility, quality of life (QOL)/health-related quality of life (HRQL), fatigue, other patient-reported outcomes, and physical function. Most outcomes were validated questionnaires, such as the Fatigue Symptom Inventory (FSI), Medical Outcomes Survey SF-36 (an HRQL measure), sit-and-reach test, and the Functional Assessment of Cancer Therapy-Breast (FACT-B, another HRQL measure).
- Sample sizes ranged from 9 to 410, with a total of 990 participants across all studies.

### *What did the researchers find?*

- Four of the seven RCTs found significant results in fatigue scores in subjects who practiced yoga compared to the control groups.
- Two studies demonstrated decreased amounts of sleep disturbances after yoga participation compared to control groups.
- Two RCTs found significant improvements in vigor and vitality compared to control groups.
- One RCT found significant reductions in joint pain and hot flashes and improved sleep for the yoga group.
- Two RCTs measuring QOL found significant improvements in the yoga groups compared to control groups.
- One of the quasi-experimental studies (two groups, non-randomized) found significantly positive attitude toward body image compared to the control group.
- Several pilot studies found significant changes from baseline to postintervention for various physiological and psychological factors for the yoga groups.

### *Were adverse events reported?*

Adverse events were not reported in the chapter, presumably because they were not reported in the studies. Without adverse-event reporting, the safety of yoga cannot be evaluated.

### *What were the limitations of the studies?*

The studies differed substantially in outcomes measured, population, yoga interventions, frequency, and duration, making it difficult to compare across other studies and limiting the generalizability of findings. The RCTs almost all used waitlist control groups. Using active control groups would be a stronger design in the future.

### **What is the takeaway message from this review?**

The emerging evidence for yoga for cancer survivorship provides a preliminary understanding of the physiological and psychological benefits of yoga in this population. Yoga therapy is already being offered at cancer centers around the world, and building the evidence base will support future use of yoga therapy as a safe complementary therapy.

### **Clinical relevance**

Various Hatha Yoga approaches, including Iyengar Yoga and Viniyoga, appear to offer some benefits to cancer survivors. Among the symptoms that were diminished in at least some studies were fatigue and joint pain. The types of cancer involved varied between studies, adverse events were apparently not reported, and the methodology could be improved, yet the early evidence suggests a potential benefit for yoga in this population. As the research to date offers little indication of which approaches seem most effective and individual diagnoses and comorbidities can vary enormously, yoga therapists should continue to use their training, experience, and feedback from clients to guide their therapeutic approaches.