

Table: Yoga for sleep /insomnia in cancer

Source: CAM Cancer Collaboration. Yoga. [Yoga | CAM Cancer](#), June 2026.

Review characteristics	PICO of included studies Population, intervention, control, outcome	Results and conclusions	Assessment
Han J, Shi M, Bi L-N, Wang, L.-I, & Cai Y-x. (2023). <i>Efficacy of mind–body therapies for sleep disturbance in patients with early-stage cancer: A systematic review and network meta-analysis</i> . Psycho-Oncology, 32(9), 1315–1338. https://doi.org/10.1002/pon.6187.pdf (Han 2023a)			
Type of review Systematic review with network meta-analysis. Included studies, n and design 47 RCTs Search strategy Databases CINAHL (via EBSCO Host), Cochrane Library, Embase, MEDLINE, PsycINFO, PubMed, and Scopus Dates From inception to October 2022 Data Synthesis Network meta-analysis Risk of bias assessment Cochrane Risk of Bias tool RoB2	Participants 4,325 participants Adults (≥18 years) with early-stage cancer (during or after treatment) Interventions Mind-body techniques: • Mindfulness (19 RCTs) • Yoga (16 RCTs) • Hypnosis (2 RCTs) • Relaxation techniques (5 RCTs) • Qigong (incl. tai chi) (5 RCTs) Control UC & WLC (30 RCTs), CBT, exercise, active control (11 RCTs), two control groups (6 RCTs). Outcome measures Primary: Subjective sleep disturbance PSQI, ISI, EORTC QLQ-C30 sleep items, PROMIS, other scales such as MSQ, VAS, GSDS, AIS, MOS-Sleep. Measure of treatment effect SMD 95% CI. Treatment ranking using SUCRA.	Results for risk of bias assessment of primary studies included in the review Overall 19 high-risk studies, 15 with “some concerns”. The majority of studies showed low risk of bias in the randomization process, outcome measurement, and missing outcome data. About half of the studies had some concerns with selection, reported results, and deviations from intended interventions. GRADE: Overall, the certainty of evidence ranged from very low to moderate, with most comparisons rated as low or very low due to limitations such as study bias. Moderate-quality evidence was mainly found for comparisons involving mindfulness, yoga, and hypnosis versus usual care. Results for outcome measures Subjective sleep disturbance (receiving active treatment) Yoga did not demonstrate statistically significant improvements compared with usual care or other controls. Subjective sleep disturbance (completed active treatment): Yoga was inferior to several treatments, including CBT, qigong, hypnosis, and mindfulness and not consistently better than usual care or other controls. Objective sleep outcomes (sleep efficiency) Yoga did not show meaningful improvement in objective sleep efficiency (e.g., actigraphy outcomes). Other interventions (especially qigong and CBT) performed better. Adverse events	Quality assessment of the SR Moderate to high quality with low-moderate risk according to ROB-MNA checklist. Critical domains fulfilled and appropriate NMA methods; no significant inconsistency detected, SUCRA ranking applied, certainty assessed with GRADE. However, interpretation emphasized rankings/SUCRA and recommendations more than explicit integration of trial bias into conclusions. Comments Certainty of evidence is limited despite appropriate methods of the SR. Conclusions consistent with evidence: acknowledge low–moderate certainty, emphasize CBT remains superior. High heterogeneity (different cancers, interventions, durations), sparse networks for some comparisons (e.g., hypnosis, qigong), some key estimates based on very few studies or indirect evidence, evidence often low or very low certainty, limiting confidence in the findings.

		The article did not assess the report of adverse events from the included studies. Conclusions <i>"There is no evidence supporting the use of MBTs to replace or be comparable to CBT. [...]. The NMA showed that mindfulness may ameliorate sleep disturbance (SD) in patients with cancer having either treatment status [*receiving or completed active treatment, Ed]. Yoga has no significant effect on reducing SD for cancer patients. Qigong and hypnosis ameliorate SD in patients with cancer who completed active treatment."</i>	
Han, J., Cheng, H.-L., Bi, L.-N., & Molasiotis, A. (2023). Mind-body therapies for sleep disturbance among patients with cancer: A systematic review and meta-analysis. Complementary Therapies in Medicine, 75, 102954. https://doi.org/10.1016/j.ctim.2023.102954 (Han 2023b)			
Type of review Systematic review with meta-analysis. Included studies, n and design 68 RCTs; thereof 20 of yoga for sleep, thereof 13 pilot studies. Search strategy Databases MEDLINE, Embase, CINAHL (via EBSCOhost), Cochrane Library, Scopus, PubMed, PsycINFO Dates From inception to September 2022 Data Synthesis Meta-analysis Risk of bias assessment Cochrane Risk of Bias tool RoB2	Participants 6,339 participants (5,051 included) in meta-analysis) Adults ≥18 years with cancer, any type, at any stage receiving mind-body therapies. Interventions Mindfulness/meditation (24 RCTs), Yoga (20 RCTs) Qigong/Tai chi (11 RCTs) Relaxation (9 RCTs) Hypnosis (2 RCTs) Guided imagery (1 RCT) Mixed MBT (1 RCT) Control UC, WL, active control (education, exercise, etc) Outcome measures Subjective sleep disturbance: PSQI, ISI, PROMIS, EORTC-QLQ-C30, other sleep questionnaires Objective sleep outcomes: Actigraphy, polysomnography, sleep diary, and armband (Sleep disturbance, sleep quality, insomnia, sleep efficiency (SE), sleep onset latency (SOL), total sleep time (TST), wake after sleep onset (WASO))	Results for risk of bias assessment of primary studies included in the review Most studies demonstrated low risk of bias for randomization process, and measurement of the outcome.* The reporting of the selection of the reported result and deviations from intended interventions in most studies was unclear, leading to some concerns. For missing outcome data several studies were assessed as high risk of bias. GRADE: No assessment was conducted. Results for outcome measures Subjective sleep disturbance A significant immediate effect of yoga on subjective sleep disturbance compared with usual care or wait list control was reported. Immediate: SMD = -0.21 (-0.35, -0.08), p = 0.001. Compared with active control (n=9): results showed no significant immediate, short-, mid- or long-term effects. Objective sleep outcomes Significant immediate effects of yoga on wake after sleep onset were reported. WASO Immediate: SMD = -4.87 (-8.57, -1.17), p = 0.01 Compared with active control interventions, yoga had no significant effect on sleep disturbance. Adverse events	Quality assessment of the SR: Low-moderate quality according to AMSTAR 2 checklist. Lacks adequate integration of risk of bias in the interpretation of results and conclusion. Publication bias was acknowledged, but there was limited exploration of consequences or adjustment methods. Authors acknowledge “unclear methodological weaknesses” but conclusions remain relatively strong despite high heterogeneity and many trials with unclear/high risk. * Overly optimistic judgments (major issue). Bias is likely underestimated. All studies rated low risk for outcome measurement, despite heavy reliance on self-reported sleep outcomes (PSQI etc.). In RoB 2 self-reported outcomes in unblinded trials are rated as high risk or at least some concerns. Comments No assessment of adverse events. No GRADE assessment of evidence certainty. The included studies had high heterogeneity in interventions, populations, and outcome measures.

	Measure of treatment effect SMD, WMD, 95% CI.	The article did not assess the report of adverse events from the included studies. Conclusions <i>"Among mind-body therapies, mindfulness, yoga, relaxation, and hypnosis were effective in reducing the severity of subjective sleep disturbance among patients with cancer at post-intervention, and the effect of mindfulness lasted at least 6 months. MBTs were not superior to active control interventions in improving sleep. However, there were high heterogeneity, many pilot studies, and insufficient data in some sub-analyses in this review."</i>	Most evidence is rated low or very low certainty, limiting confidence in the findings. Several of the included studies had a small sample size and were pilot studies.
Liu W, Li W, Wu B, Chen H, Zhao X, Wangwan H. (2026) Optimal yoga dose for improving cancer-related fatigue, quality of life, and sleep quality in breast cancer survivors: a Bayesian dose-response meta-analysis. J Cancer Surviv.;20(3):954–966. doi:10.1007/s11764-024-01699-9.			
Type of review and data synthesis Systematic review with Bayesian pairwise meta-analysis Bayesian dose–response meta-analysis Included studies: n and design 32 RCTs, thereof 12 assessing sleep outcomes. Search strategy Databases: PubMed, MEDLINE, Embase, Cochrane Library, Web of Science Date: From database inception to March 2024 Restrictions: No language restrictions, no geographic restrictions. Data Synthesis Meta-analysis RoB/Quality assessment Cochrane risk of bias tool RoB 2 Exclusion criteria*	Participants: n and diagnosis n: 2,423 breast cancer survivors Diagnosis: Yoga: 1,252, Control: 1,171 Intervention Hatha yoga, Iyengar yoga, Mindfulness yoga, Viniyoga, general yoga. Control Wait-list control, usual care, health education, other inactive controls. Outcome measures and measurement tools Cancer-related fatigue, QoL, Sleep. Sleep quality measured with PSQI, Insomnia Rating Scale, Profile of Mood States Measure of treatment effect SMD; Hedges' g; 95% credible interval CrI	Results for risk of bias assessment of primary studies included in review: Many studies rated “some concerns” or “high risk”. Overall: Risk of bias contributed to downgrading evidence. Grade: Rated as low for all outcomes due to RoB, inconsistency, imprecision. Results for main outcome measures: Yoga significantly improved sleep quality but the effect size was minimal, and the heterogeneity was very large. SMD: – 0.29; 95% CrI, – 0.43 to – 0.15. SD: 0.56; 95% CrI, 0.35 to 0.88. RSRF ≤ 1.01. Dose-response: Sleep quality significantly improved when the dose exceeded 160 METs-min/week (*metabolic-equivalent of tasks). SMD = – 0.39; 95% CrI, – 0.78 to – 0.01 Subgroup analyses According to age, treatment stage and intervention type. With increasing age, yoga may become less effective for CRF and poor sleep quality. Adverse events Not assessed. Conclusions	Quality of SR Moderate-high according to AMSTAR2**: all critical domains fulfilled, however two only partial. Changes were introduced to the protocol after registration. Changes to subgroup analyses are explained (based on effect modifiers) while changes to search strategy are rather not transparently explained. Authors acknowledge low certainty and downgraded evidence. However, they did not clearly show how high-risk studies altered pooled estimates or conclusions beyond narrative acknowledgment. Comments Moderate quality SR with all critical domains fulfilled. However, the evidence is of low certainty of evidence due to RoB, inconsistency imprecision which reduces confidence in the reported small improvements of sleep quality. First study to: analyze dose–response relationship for yoga in BCS using advanced modelling with Bayesian meta-analysis (advanced modelling) and exploring age and treatment stage as effect moderators.

		<i>“Our analyses found moderate benefits of yoga exercise in improving CRF and quality of life, with lower improvements in sleep quality. Furthermore, ... the optimal yoga dose to improve fatigue and quality of life in BCS was 510 METs-min/week, and quality of sleep was significantly improved when the dose exceeded 160 METs-min/week. However, the quality of the evidence in this study was low, so the results should be interpreted cautiously</i>	Authors acknowledge that sleep quality was likely to have a significant publication bias. Sensitivity analyses showed that the results stabilized whether we excluded positive yoga forms or small-study.
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