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Review

Mind-body therapies for menopausal symptoms: A systematic review

Kim E. Innes[a,b,*], Terry Kit Selfe[a,b], Abhishek Vishnu[a]

[a] Department of Community Medicine, West Virginia University School of Medicine, PO Box 9190, Morgantown, WV 26506-9190, United States
[b] Center for the Study of Complementary and Alternative Therapies, University of Virginia Health System, PO Box 800782, McLeod Hall, Charlottesville, VA 22908-0782, United States

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ABSTRACT

Objective: To systematically review the peer-reviewed literature regarding the effects of self-administered mind-body therapies on menopausal symptoms.
Methods: To identify qualifying studies, we searched 10 scientific databases and scanned bibliographies of relevant review papers and all identified articles. The methodological quality of all studies was assessed systematically using predefined criteria.
Results: Twenty-one papers representing 18 clinical trials from 6 countries met our inclusion criteria, including 12 randomized controlled trials ($N = 719$), 1 non-randomized controlled trial ($N = 58$), and 5 uncontrolled trials ($N = 105$). Interventions included yoga and/or meditation-based programs, tai chi, and other relaxation practices, including muscle relaxation and breath-based techniques, relaxation response training, and low-frequency sound-wave therapy. Eight of the nine studies of yoga, tai chi, and meditation-based programs reported improvement in overall menopausal and vasomotor symptoms; six of seven trials indicated improvement in mood and sleep with yoga-based programs, and four studies reported reduced musculoskeletal pain. Results from the remaining nine trials suggest that breath-based and other relaxation therapies also show promise for alleviating vasomotor and other menopausal symptoms, although intergroup findings were mixed. Most studies reviewed suffered methodological or other limitations, complicating interpretation of findings.
Conclusions: Collectively, findings of these studies suggest that yoga-based and certain other mind-body therapies may be beneficial for alleviating specific menopausal symptoms. However, the limitations characterizing most studies hinder interpretation of findings and preclude firm conclusions regarding efficacy. Additional large, methodologically sound trials are needed to determine the effects of specific mind-body therapies on menopausal symptoms, examine long-term outcomes, and investigate underlying mechanisms.

Contents

* Corresponding author at: Dept. of Community Medicine, WVU School of Medicine, PO Box 9190, Morgantown, WV 26506, United States. Tel.: +1 304 293 5206; fax: +1 304 293 2700.
E-mail address: KInnes@hsc.wvu.edu (K.E. Innes).

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1. Introduction

An estimated 75–85% of women experience some or all symptoms of menopause [1,2], including vasomotor disturbances (hot flashes/night sweats), fatigue, sleep impairment, mood disturbances, cognitive difficulties, musculoskeletal pain, and headaches [3–5]. Symptoms typically begin at least 1 year prior to menstrual period cessation and persist for several years post-menopause; for example, findings from a recent meta-analysis indicate that approximately 50% of women continue to experience vasomotor symptoms 4 years after their final menstrual period [6] with reported average duration of vasomotor symptoms ranging from 3.8 [7] to over 7 years [6]. Approximately 10–30% of post-menopausal women will continue to experience symptoms throughout their lives; in breast cancer survivors, symptoms are often more frequent or severe due to endocrine therapy and chemotherapy-induced menopause [8,9]. Symptoms can result in significantly reduced quality of life that for some can be debilitating [10], prompting an estimated 60% of women to seek medical treatment [11]. Given that there are over 50 million women in the US aged 50 or older [12], with at least 1.5 million reaching menopause every year, the financial, social, and psychological burden of menopause is considerable [13,14].

While hormone replacement therapy (HRT) has long been prescribed to alleviate hot flashes and other menopausal symptoms, HRT use has fallen dramatically in both the US and Europe due to evidence from recent large clinical trials that HRT increases risk for breast and endometrial cancer, coronary artery disease, stroke, and thromboembolism [14–18]. An increasing number of women are turning to complementary and alternative therapies to help manage menopausal symptoms [19], with current estimates ranging from 40% to over 70% of women in the peri- and post-menopausal period [19–21]. Among the more commonly chosen therapies are mind-body practices, including active disciplines such as yoga and tai chi, as well as specific relaxation and other stress management techniques [19,20]. Given that menopausal symptoms both contribute to and are exacerbated by psychosocial stress [22,23], and a growing body of literature suggests mind-body practices can reduce perceived stress and stress reactivity, enhance mood and well being, and improve sleep [24–27], mind-body therapies may have promise for the management of menopausal complaints. Moreover, several mind-body therapies (including yoga, meditation, qigong, tai chi, and several relaxation techniques) have been reported to decrease indices of sympathetic activation [25,28–30], factors that characterize and may in part underlie the development and exacerbation of vasomotor and other menopausal symptoms [7]. These factors may also play an important etiologic role in the development of insulin resistance, dyslipidemia, hypertension, and other atherogenic changes associated with menopause [25].

In this systematic review, we critically evaluate available evidence from the published scientific literature regarding the effects of self-administered mind-body therapies on common menopausal symptoms. We also briefly discuss possible mechanisms that may underlie observed benefits, outline major limitations in the current literature, and detail directions for future research.

2. Methods

Included in this review are original clinical trials published in the peer-reviewed scientific literature regarding the effects of any self-administered mind-body therapy (representing a broad range of relaxation and stress-reduction therapies, including, among others, biofeedback, imagery, yoga and meditation, breathing exercises, tai chi, qigong, pilates, mindfulness-based stress reduction programs, progressive muscle relaxation, and related programs) on menopausal symptoms. We excluded studies that evaluated only conventional exercise or cognitive behavioral therapy programs, did not specifically target menopausal symptoms, or were not available in English. Cross-sectional studies, case series, and case studies were excluded, as were trials published only in dissertation or abstract form or that did not report quantitative outcome data.

To identify potentially eligible studies, we searched 10 scientific databases from their inceptions through November 2009 for clinical trials regarding the effects of mind-body therapies on menopausal symptoms, including MEDLINE, CINAHL, Academic Search Complete, Cochrane Library (Cochrane Central Register of Controlled Trials), PsycINFO, PsycARTICLES, Alt HealthWatch, IndMED, Health Source: Nursing/Academic Edition, and SPORTDiscus with Full Text. Search terms included: [relaxation OR yog$ OR breathing OR pranayam$ OR mind body OR mind-body OR pilates OR qigong OR tai chi OR tai ji OR imagery OR meditation OR mindfulness OR progressive muscle OR dance OR stretch$ OR biofeedback OR complementary therap$ OR alternative therap$ OR health promotion OR physical activity] AND [menopaus$ OR peri-menopaus$ OR post-menopaus$ OR climacter$ OR vasomotor OR hot flash$ OR hot-flash$ OR hot flush$ OR hot-flush$ OR night sweat$ OR sleep OR depression OR anxiety OR mood OR pain OR ache OR fatigue]. Titles and abstracts of the citations were scanned to identify potential articles for the review. In addition, we manually searched our own files, the citation sections of all identified articles, and the reference sections of recent (2000–2010) review articles concerning treatment for menopausal symptoms. Potentially eligible papers were retrieved in hard copy form for more detailed review.

Data extraction for each eligible paper was performed by at least two of the three authors and information was recorded on standardized forms. Study quality was evaluated using predefined criteria based on those utilized in recent systematic reviews regarding the effects of mind-body therapies [31,32]. Criteria included (i) adequate sample size; (ii) explicit eligibility criteria and/or adequate description of study population; (iii) single, well-defined intervention; (iv) appropriate control group(s) or comparison condition(s); (v) randomization of treatment allocation, method used to generate the allocation sequence described and appropriate, random allocation sequence concealed until group assignment was made; (vi) blinding of outcome assessment; (vii) outcome measures appropriate, well-defined and validated; (viii) statistical methods well described and appropriate, with point estimates