

## Yoga for Menopausal Symptoms: A Review

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**Abstract.** The purpose of this study was to review literature about the effectiveness of yoga as a treatment for menopausal symptoms. This study use 10 literature where published on International Journal from 2007-2016. Most of literature used perimenopausal and postmenopausal woman as treatment subjects. This data collect show the results compare between control group and yoga group. They assessed the effect of yoga as treatment for menopausal symptoms (psychological, vasomotor and somatic). This review found evidence to suggest that yoga effective as additional treatment for menopausal symptoms.

**Keyword:** yoga, menopausal symptoms, review

### BACKGROUND

Menopause is a term to describe when the menstrual period ended permanently. Menopause typically occurs between 40s and 50s of age, when menstruation permanently ends (Santrock, 2012). Normal menopause is considered one of the most physiologically important in women's life because of cessation of ovarium regular function and the end of reproductive capability (Nichols et al, 2012).

The decrease of estrogen hormone production in menopause has a quite detrimental effect to women's health, including the increase of the risk contracting several diseases, such as osteoporosis, cardiovascular-related disease and Alzheimer (Torre, 2015). *Hot flashes* is a most common symptom which happens to a woman in the early stage of menopause, which is increase in body temperature in 2-30 minutes in upper chest, there are several symptoms such as sudden perspiration during night time, palpitation or sudden increase of heartbeat frequency (Cooper et al, 2008), fear and anxiety of which contributed to the decrease of sexual drive, mood swing, unstable emotion (discomfort, anxiety, depression) and difficulty in memorizing and remembering (McVeigh, 2005) to a degree that some women will experience difficulty to sleep. This symptoms is categorized as *vasomotor symptoms* (VMS) and these symptoms will occur to 75% of the women who were experiencing menopause

Some women who were in menopause felt some discomfort due to the following symptoms and tried to treat the symptoms to a certain degree so that such treatment will lessens or even cure the symptoms, one of the treatment is Yoga (Cramer, Lauche, Langhorst, & Dobos, 2012). Yoga practice commonly done is posture (asana), breath control (pranayama) and meditation (dhyana). Women who practice Yoga regularly is shown to have some degree of improvement of their menopause symptoms, which is *hot flashes* and reduced perspiration during night time

(Innes, Bourguignon, & Taylor, 2005). Meditation is part of Yoga and meditation could increase melatonin and plasma melatonin level effectively, which could

increase the sleep quality for women with menopause (Cohen & Wameke, 2004). Yoga is effective in improving sleep cycle, reducing insomnia symptoms and other sleep difficulties for women with menopause (Khalsa, 2004).

### PROCEDURAL REVIEW

Information regarding the research is done by searching literature in the form of article and scientific journal, which are:

1. [www.eric.ed.gov](http://www.eric.ed.gov)
2. [www.scholar.google.com](http://www.scholar.google.com)
3. [www.menopause.org](http://www.menopause.org)
4. [www.libgen.org](http://www.libgen.org)

Keyword used in searching of literature in the form of scientific journal are *menopause*, *yoga* and *menopausal symptoms*. From these keyword then the information related to the research is retrieved in the form of 10 scientific journal.

### RESULTS OF REVIEW AND STUDY

After reviewing these 10 journal about menopausal symptoms and Yoga for women with menopause, presented below in the form of table are summary of the study. These summary is presented with the intention of providing comprehensive description about the content of the reviewed journal, and the next step is to discuss the conclusion of the research results.

**Summary of Research Result Characteristic Table**

Author year	Number of subject	Subject description	Treatment group	Control group	Duration	Treatment purpose	Result	Author's conclusion
Afonso et al (2012)	= 44 → 3	50 – 65 years, Postmenopause, Not in a hormone therapy,	<b>Yoga →</b> Treatment in the form of Yoga in Yogasana and Tibetan (Yoga HT is for menopause )	<b>Control →</b> No treatment	4 months	Reducing insomnia, Improving climacteric symptoms (anxiety, stress, depression)	Yoga group scores better in posttreatment. Climacteric symptoms, insomnia, quality of life and stress resilience are improving. The decrease of insomnia severity in Yoga group is noticeably higher compared with control group and passive stretching group.	Yoga with specific and sequenced treatment are very effective in reducing insomnia caused by menopausal symptoms which also increases the quality of life.
Lee, Kim, & Kim (2012)	= 16 → 2 Yoga (8), control (8).	54,50 ± 2,75 years, postmenopause, body fat is more than 36%	<b>Yoga →</b> Treatment in the form of integrated coordination technique of breathing and movement	<b>Control →</b> No treatment	16 weeks	Increasing lipid concentration, adipose tissue and syndrome metabolic factor in obesity	Weight, body fat percentage, body mass index with no regard to muscle/fat ratio, body mass index, waist size and visceral fat region shows a significant decrease.	Yoga is effective in reducing the risk of contracting cardiovascular disease which caused by obesity in Korean woman in menopause.
Newton et al (2013)	= 355 → 2 group	45 – 65 years, postmenopause	<b>Yoga →</b> Breathing technique, pose (asanas), dan relaxation	<b>Control →</b> No treatment, just regular activity	12 weeks	Reducing the frequency of vasomotor symptoms	<b>Control Group →</b> VMS 8,0 per hari (95% CI, 7,3 ke 8,7) <b>Yoga Group →</b> VMS 7,4 per hari (95% CI, 6,6 ke 8,1) Gejala insomnia 1,3 (95% CI, -2,5 ke -0,1): <i>P</i> = 0,007	Practicing yoga for 12 weeks and personal training in home, when compared by regular activity shows no impact on reducing any vasomotor symptoms, the only improvement observed is in the decrease of prevalence of the insomnia
Afonso, Kozasa, Rodrigues, Leite, Tuffik, & Hachul (2016)	2	56 and 58 years, Postmenopause, follicle hormone level	<b>Yoga →</b> Breathing technique, relaxation dan yoga posture		4 month	To observe quality of life and estradiol (part of estrogen)	N <sub>1</sub> QOL <sub>pre</sub> → 136 QOL <sub>post</sub> → 110 E <sub>2 pre</sub> → <10 E <sub>2 post</sub> → 94 N <sub>2</sub> QOL <sub>pre</sub> → 106  QOL <sub>post</sub> → 80 E <sub>2 pre</sub> → 17 E <sub>2 post</sub> → 137	Yoga affects the neuroendocrine system in way that increase the amount of estrogen, which improves quality of life
Chattha, Raghuram, Venkatram, & Hongasandra (2008)	= 120 → 2 Yoga (59), control (61)	45 – 55 years, Perimenopause (women in menopause stage), FSH level ±15mIU/mL	<b>Yoga →</b> IAYT technique (breathing and meditation technique)	<b>Control →</b> Light physical exercise	8 weeks	To observe the impact of yoga to vasomotor stress symptom and personality	Perceived Stress Scale scores ( <i>P</i> < 0.001) in the yoga group compared with controls. Higher effect size in the yoga group (1.10) than the control (0.27). On the Eysenck's Personality Inventory, the decrease in neuroticism was greater ( <i>P</i> <0.05) in the yoga group (effect size = 0.43) than the control group (effect size = 0.21) with no change in extroversion in either the yoga or control group	Yoga is reducing vasomotor symptoms, stress and neuroticism in perimenopause women when compared with regular physical exercise

Cohen, Kanaya, Macer, Shen, Chang, & Grady (2007)	= 14	40-65 years, Postmenopausal	<b>Yoga</b> → Restorative	<b>Control</b> → No treatment	8 weeks	To find out about probability and intervention acquirement of restorative yoga in relation to hot flushes experienced by women in postmenopausal use	Most of the subject is satisfied with practicing Yoga. 75% are continuing the exercise after 3 months. The average decrease of hot flushes are 30.8% (95% CI 15,6-45,9%) and average hot flush score is decreasing by 34.2% (95% CI 16,0-52.5%) from the beginning until week 8, no adverse impact are found	Yoga is a perfectly acceptable intervention by the population
Joshi, Khandwe, Bapat, & Deshmukh (2011)	180 2 group Yoga (90), Control (90)	40-55 years, postmenopausal, No hormone therapy and no Yoga therapy	<b>Yoga</b> → Breathing technique, posture and meditation	<b>Control</b> → No treatment	90 days	To observe the effect of yoga on menopausal symptoms using a prospective, randomized, controlled and interventional study.	It was observed that on day 1 the scores in both the groups were comparable. On day 90, the scores in the yoga group showed a reduction in score on all the subscales, which was statistically significant. No significant difference in the control group.	Yoga is effective in reducing menopausal symptoms and should be considered as alternative therapy for the management of menopausal symptoms.
Manocha, Semmar, & Black (2007)	= 14	± 55 years Experience menopausal symptoms	<b>Yoga</b> → Meditation (Sahaja Yoga)		8 weeks	To observe the impact of SYM (Sahaja Yoga Meditation) in menopausal symptoms management strategy	Yoga changes In vasomotor symptoms, especially hot flashes, were most prominent as a significant decrease of 67% at post-treatment and 57% and Kupperman's Index score decreased by 58% at post-treatment	These findings tentatively suggest that menopausal symptoms (vasomotor symptoms, and hot flashes) might be substantially improved by meditation
Booth-LaForce, Thurston, & Taylor (2007)	= 12	Perimenopausal and postmenopausal women	<b>Yoga</b> → Breathing technique, warm-up pose, main pose, relaxation pose		0 weeks	To observe the effectiveness of yoga in improving menopausal symptoms (Physiology symptoms and self-measuring of hot flashes symptoms)	Eleven women completed the study and attended a mean of 7.45 (S.D. 1.63) classes. Significant pre- to post-treatment improvements were found for severity of questionnaire-rated total menopausal symptoms, hot-flash daily interference; and sleep efficiency, disturbances, and quality. Neither 24-h monitoring nor accompanying diaries yielded significant changes in hot flashes	Yoga is suitable to be implemented to midlife woman. Yoga may have a broad impact on coping with menopausal changes rather than specifically hot flashes
Tuzun, Aktas, Akarimak, Sipahi, & Tuzun (2010)	= 26 2 group Yoga (13), Control (13)	± 55 tahun Postmenopausal with osteoporotic	<b>Yoga</b> → 2 times in one week @1 hour	<b>Control</b> → classic osteoporotic exercises (strengthening and stretching exercise of the abdominal, back, quadriceps,	2 weeks	To evaluate the effect of yoga exercises in postmenopausal osteoporotic women on balance and life quality and to compare the	The result showed that yoga education has a positive effect on pain, physical functions, social function, general health perception and balance.	Yoga appears to be an alternative physical activity for the rehabilitation of osteoporotic subjects.

				and hamstring muscles, balance and posture exercise (2 time in one week @ 1 hour)		results with a classic osteoporosis exercise program.		
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.Based on the summary of journal characteristic above, a study will be done to acquire recommendation about several possible research that can be done in Indonesia. The study is categorized into several subtheme which are research subject, purpose of research and result of research.

**Research Subject, Purpose of Research, and Result of Research**

From 10 reviewed research, there are 8 research which subjects is postmenopause and 2 research using perimenopause as the subject. All of the research are involving subject with regular menopause cycle which happened according to the age limit of the corresponding woman, which is around 40-65 years of age and experiencing any menopausal symptoms. Some researcher are also states that subject was not in a therapy or any other treatment such as hormone therapy or any yoga therapy before.

The implemented treatment is Yoga with several techniques, which are breathing technique, posture, relaxation and meditation which are practiced and supervised by the Yoga expert. Measurement is done between 8 and 16 weeks with duration about 30-60 minutes. The purpose of the Yoga exercise in these 10 research is to decrease any showed symptoms during and after menopause which are psychological, vasomotor and somatic symptoms. Most of the research shows that there are connections between Yoga and hot flashes (vasomotor symptoms) because those symptoms will be mostly experienced by woman right before menopause. Routine Yoga exercise is shown to be effective in reducing the frequency of hot flashes. At most of the research are also included control group which receives no treatment. By comparing control group and Yoga group, it is evident that yoga are more effective in reducing menopausal symptoms.

Next researcher also states that yoga effectively reducing the severity of insomnia experienced by woman with menopausal symptoms because in yoga there are relaxation techniques which reduce the uneasiness during menopause. Not only improving insomnia condition, yoga also reduces anxiety, stress, depression and neuroticism by practicing relaxation and meditation techniques in yoga. Yoga also serves as one of the alternative therapy in helping woman in menopause in dealing with osteoporosis by reducing the pain, improving physical function, social function, general health perception and body balance. Research done by Afonso, Kozasa, Rodrigues, Leitern Tufgik & Hachul (2016) founds that yoga also affects neuroendocrine system which increases the amount of estrogen hormone which also increases the quality of life.

**CONCLUSION**

Yoga could serve as an alternative in reducing symptoms which caused by menopause cycle, such as psychological, vasomotor and somatic symptoms. Yoga exercise, if done and supervised properly in a systematic manner will have a positive impact for woman with menopause

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