

## Review Article

---

Submission: April 27, 2020 | Published: May 29, 2020

---

# Meditation - Worth a Try as a Mind-Body Complementary Medicine?

Yugandhar Vudhya Gowrisankar\*

Department of Cosmeceutics, China Medical University, Taiwan

\*Corresponding author: Yugandhar Vudhya Gowrisankar, Department of Cosmeceutics, College of Pharmaceutical Sciences, China Medical University, Taichung 40402, Tell: (+886) 905264280, Taiwan.

---

## Abstract

Complementary/alternative medicine (CAM) is getting increasingly popular, with many practices existing within the ambit of that term. Meditation is one of the oldest and most commonly adopted CAM methods, which has been gaining a lot of recognition and practice all over the world. Meditation and alternative medicine can be considered as viable options for relieving any toxic implications of pharmaceutical medication. Meditation is not a cure-all. However, with growing evidence, it is believed that it may do good for those who practice it regularly. Therefore, in recent years, research on meditation is steadily growing and moving towards the scientific validation as a 'worth to try' mind-body complementary medicine.

---

## Introduction

In 1995, E Ernst described the CAM as "diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, satisfying a demand not met by orthodoxy, or diversifying the conceptual frameworks of medicine" [1]. Therefore, from the view of the CAM users, it is a group of theories, practices, and products with the healing effects of medicine; but its effectiveness is neither established using scientific methods [2-6] nor from the theory and practice of biomedicine [3,6,7]. The terms - alternative medicine (AM), complementary medicine (CM), complementary and alternative medicine (CAM), integrated medicine or integrative medicine (IM), holistic medicine, and natural medicine are the synonymous terms of the same phenomenon that are used interchangeably in most contexts [8-10]. Since there is no proper scientific explanation and evidence, sometimes, traditional practices become "alternative," based on a belief that alternative medicine, along with functional medical treatment, could improve the effectiveness of the treatments. Therefore, complementary medicine is also known as integrative medicine (IM) [7,11,12]. A well-known example, acupuncture (the body can be pierced with needles to influence the flow of supernatural energy), might be believed to increase the effectiveness or "complement" sciencebased medicine when used at the same time [13].

Ayurveda, acupuncture, aromatherapy, Chinese medicine, chiropractic, herbology, homeopathy, massage therapy, meditation, naturopathy, reflexology, reiki are the most common types of CAM methods, though the list is quite long. A previous report listed the percentage of people from the USA who practices various most common CAM therapies - prayer (45%), herbalism (19%), breathing meditation (12%), meditation (8%), chiropractic medicine (8%), yoga (5-6%), bodywork (5%), diet-based therapy (4%), progressive relaxation (3%), mega-vitamin therapy (3%), and visualization (guided imagery) (2%) [14,15]. Although the report shows that 8% of the people practice meditation as a CAM therapy, this number has dramatically increased in the USA and the rest of the world [16]. This is not only suggested by the clinicians, but people started noticing its beneficial effects from others who are already practicing it. Therefore, the popularity of meditation as a CAM practice is growing tremendously [16].

## Meditation as CAM

Meditation is one of the most known mind-body complementary medicine which is being practiced by mankind from the time immemorial in various religious traditions, often as part of the path towards enlightenment and self-realization. There are many types of meditation, for example, Vipassana meditation [17], Sahaja yoga

meditation [18], Kundalini yoga meditation [19], Transcendental meditation (TM) [20], and Heartfulness (HFN) meditation [21], etc. Four basic elements are generally associated with most of the meditative practices: a quiet place, (with few to no distractions); a comfortable or a specific posture (sitting or in other positions); attention towards a specially chosen word/set of words/an object/the sensations of the breath; and an open attitude (non-resistance to any distractions that come and go naturally without judging them). This helps to train the attention and awareness to achieve a mentally clear and emotionally calm and stable state [22-24]. The process of meditation may result in enhanced physical, emotional well-being, and overall health. One should keep this in mind that meditation is not a substitute for regular medical treatment. However, it may be a useful addition to other treatments.

These days, meditation is commonly used for relaxation and stress reduction. Some of the well-known emotional benefits-associated with meditation include - building skills to manage stress and develop a new perspective on stressful situations, increasing self-awareness, to focus on the present, reducing negative emotions, increasing imagination and creativity, increasing patience and tolerance, etc. Regular and long-term meditation practice with a teacher (or) a guide would translate the psychological well-being [25] benefits into physical well-being as well. These include - reducing high blood pressure [26], irritable bowel syndrome [27], ulcerative colitis [28], anxiety [29], acute respiratory infection [30], cancer [31], chronic pain [32,33], depression [18], heart disease, insomnia [34], smoking cessation [35,36], tension headaches, and other conditions. Besides this, meditation is also aimed at increasing peace, perception, self-concept, and well-being [37-39]. Hundreds of research studies on meditation were conducted since the 1950s to study the scientific validation of meditation as a CAM practice. However, many of the early studies were inaccurate, thus yielded unreliable results [40].

### Research on meditation

The concept of meditation, and its effects, is a growing subfield of neurological research [41,42]. Data from the research studies showed a shred of moderate evidence that meditation reduces depression and pain, anxiety, but not more effective than active treatments (drugs, exercise, other behavioral therapies) [37]. However, in the last few years, ' research studies have shown that meditation does produce measurable changes in the 'brain' [43]. However, there is a debate as to what good are a few brain changes, if the psychological effects are not simultaneously being illustrated. Luckily, there is some positive evidence that meditation helps to improve concentrations, attention, relieve our subjective levels of anxiety and depression, and overall psychological well-being [44]. These include - preserving the aging brain, reduced usage of antidepressants, volume changes in critical areas of the brain, improved concentrations and attention, help in coping with addiction, and short meditation breaks have been found to be helpful for kids in school too [45].

### Limitations

There are certain potential adverse effects that have been reported due to meditation [46] and may, in some cases, they could be the result of "improper use of meditation" [47]. In this regard, the US government-run national center for complementary and integrative health issued an official statement - "Meditation is considered to be safe for healthy people. There have been rare reports that meditation could cause or worsen symptoms in people who have certain psychiatric problems, but this question has not been fully researched. People with physical limitations may not be able to participate in certain meditative practices involving physical movement. Individuals with existing mental or physical health conditions should speak with their health care providers prior to starting a meditative practice and make their meditation instructor aware of their condition" [48].

### Discussion

The world has come to a stage where it does recognize the beneficial impact of meditation on human health. However, there is also a strong acceptance of the fact that more research needs to be done to understand in detail about its full potential. Therefore, advanced analytical techniques in the field of neuroscience [49] and other biomedical and clinical disciplines could help to study the effect of meditation on an individual's psychological and physiological changes [42], which will help the current research to move forward into more fruitful path [50].

### References

1. Ernst E, Mills S, Hill R, Mitchell A, M Willoughby, et al. (1995) Complementary medicine - a definition. *British Journal of General Practice* 45(398): 506.
2. Goldrosen MH, Straus SE (2004) Complementary and alternative medicine: assessing the evidence for immunological benefits. *Nat Rev Immunol* 4(11): 912-921.
3. Sampson W (1996) Antiscience trends in the rise of the "alternative medicine" movement. *Ann N Y Acad Sci* 775: 188-197.
4. Kent H (1997) Ignore growing patient interest in alternative medicine at your peril, MDs warned. *CMAJ* 157(10): 1427-1428.
5. Angell M, Kassirer JP (1998) Alternative medicine-the risks of untested and unregulated remedies. *N Engl J Med* 339(12): 839-841.
6. Sampson W (2001) The need for educational reform in teaching about alternative therapies. *Acad Med* 76(3): 248-250.
7. Beyerstein BL (2001) Alternative medicine and common errors of reasoning. *Acad Med* 76(3): 230-237.
8. Shapir R, Suckers Random House.
9. Bombardieri DE (2000) E Convergence between Orthodox and Alternative Medicine: A Theoretical Elaboration and Empirical Test. *Health* 4 (4): 479-494.
10. Shuval JTA (2012) Emma Complementary and Alternative Healthcare in Israel. *Israel Journal of Health Policy Research*: 1: 7.
11. May J (2011) What is integrative health? *BMJ* 343: d4372.
12. Ernst E (1995) Complementary medicine: common misconceptions. *J R Soc Med* 88(5): 244-247.

13. Borkan J (2012) Complementary alternative health care in Israel and the western world. *Isr J Health Policy Res* 1(1): 8.
14. Barnes PM, Bloom B, Nahin RL (2007) Complementary and alternative medicine use among adults and children: United States, 2007. *Natl Health Stat Report* 12: 1-23.
15. Barnes PM, Eve G, Kim McF, Richard LN (2004) Complementary and alternative medicine use among adults: United States, 2002. *Adv Data* 343: 1-19.
16. Rakicevic M (2020) 27 Meditation Statistics That You Should Be Aware Of.
17. Szekeres RA, Wertheim EH (2015) Evaluation of Vipassana Meditation Course Effects on Subjective Stress, Well-being, Self-kindness and Mindfulness in a Community Sample: Post-course and 6-month Outcomes. *Stress Health* 31(5): 373-381.
18. Hendriks T (2018) The effects of Sahaja Yoga meditation on mental health: a systematic review. *J Complement Integr Med* 15(3).
19. Watts V (2016) Kundalini Yoga Found to Enhance Cognitive Functioning in Older Adults. *Psychiatric News* 51(1).
20. Krisanaprakornkit T, Krisanaprakornkit W, Piyavhatkul N, Laopaiboon M (2006) Meditation therapy for anxiety disorders. *Cochrane Database Syst Rev* 2006(1): CD004998.
21. Arya NK, Kamlesh S, Anushree M, Rahul M (2018) Effect of Heartfulness cleaning and meditation on heart rate variability. *Indian Heart J* 70 Suppl 3: S50-S55.
22. Walsh R, Shapiro SL (2006) The meeting of meditative disciplines and Western psychology: a mutually enriching dialogue. *Am Psychol* 61(3): 227-239.
23. Cahn BR, Polich J (2006) Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychol Bull* 132(2): 180-211.
24. Jevning R, Wallace RK, Beidebach (1992) The physiology of meditation: a review. A wakeful hypometabolic integrated response. *Neurosci Biobehav Rev* 16(3): 415-424.
25. Fang CY, Diane KR, Margaret LL, Steven R, Donald EC, et al. (2010) Enhanced psychosocial well-being following participation in a mindfulness-based stress reduction program is associated with increased natural killer cell activity. *J Altern Complement Med* 16(5): 531-538.
26. Goldstein CM, Richard J, Susan Xie, Joel WH (2012) Current perspectives on the use of meditation to reduce blood pressure. *Int J Hypertens* 2012: 578397.
27. Gaylord SA, Olafur SP, Eric LG, Keturah RF, Rebecca SC (2011) Mindfulness training reduces the severity of irritable bowel syndrome in women: results of a randomized controlled trial. *Am J Gastroenterol* 106(9): 1678-188.
28. Jedel S, Hoffman A, Merriman P, Swanson B, Voigt R, et al. (2014) A randomized controlled trial of mindfulness-based stress reduction to prevent flare-up in patients with inactive ulcerative colitis. *Digestion* 89(2): 142-155.
29. Chen KW, Christine CB, Eric M, Darlene F, Jessica M, et al. (2012) Meditative therapies for reducing anxiety: a systematic review and meta-analysis of randomized controlled trials. *Depress Anxiety* 29(7): 545-62.
30. Barrett B, Mary S H, Daniel M, David R, Roger B et al. (2012) Meditation or exercise for preventing acute respiratory infection: a randomized controlled trial. *Ann Fam Med* 10(4): 337-346.
31. Deng GE, Sarah MR, Lee W J, Amitabh G, Nagi B Kumar et al. (2013) Complementary therapies and integrative medicine in lung cancer: Diagnosis and management of lung cancer (3<sup>rd</sup> edn): American College of Chest Physicians evidence-based clinical practice guidelines. *Chest* 143(5 Suppl): e420S-e436S.
32. Reiner K, Tibi L, Lipsitz JD (2013) Do mindfulness-based interventions reduce pain intensity? A critical review of the literature. *Pain Med* 14(2): 230-242.
33. Zeidan F, Adrienne LA, Rebecca E W, Emily S, Lisa MM et al. (2016) Mindfulness-Meditation-Based Pain Relief Is Not Mediated by Endogenous Opioids. *J Neurosci* 36(11): 3391-3397.
34. Thimmapuram J, Deborah Y, Luminita T, Theodore B, Cristian D, et al. (2020) Heartfulness meditation improves sleep in chronic insomnia. *J Community Hosp Intern Med Perspect*, 020. 10(1): 10-15.
35. Brewer JA, Sarah M, Theresa AB, Charla N, Hayley EJ, et al. (2011) Mindfulness training for smoking cessation: results from a randomized controlled trial. *Drug Alcohol Depend* 119(1-2): 72-80.
36. Carim-TL, Mitchell SH, Oken BS (2013) Mind-body practices: an alternative, drug-free treatment for smoking cessation? A systematic review of the literature. *Drug Alcohol Depend* 132(3): 399-410.
37. Goyal M, Sonal S, Erica MSS, Neda FG, Anastasia RS, et al. (2014) Meditation programs for psychological stress and well-being: a systematic review and meta-analysis. *JAMA Intern Med* 174(3): 357-368.
38. Shaner LK, Lisa R, Donna C, Devorah (2016) Calm Abiding: The Lived Experience of the Practice of Long-Term Meditation. *Journal of Humanistic Psychology* 57(1)-98-121.
39. Campos DC, Ausiàs Q, Soledad BL, Juana B, Cristina S, et al. (2016) Meditation and happiness: Mindfulness and self-compassion may mediate the meditation- happiness relationship *Personality and Individual Differences* 93: 80-85.
40. Ospina MB, Kenneth B, Mohammad K, Lisa T, Ben V, et al. (2007) Meditation practices for health: state of the research. *Evid Rep Technol Assess (Full Rep)* 155: 1-263.
41. Sequeira S (2014) Foreword to *Advances in Meditation Research: neuroscience and clinical applications*. *Ann N Y Acad Sci* 1307: 5-6.
42. Tang, YY, Posner MI (2013) Special issue on mindfulness neuroscience. *Soc Cogn Affect Neurosci* 1: 1-3.
43. Luders E, Florian K, Emeran AM, Arthur WT, Katherine L Narr et al. (2012) The unique brain anatomy of meditation practitioners: alterations in cortical gyrification. *Front Hum Neurosci* 6: 34.
44. Rubia K (2009) The neurobiology of Meditation and its clinical effectiveness in psychiatric disorders. *Biol Psychol* 82(1): 1-11.
45. Iyer RB, Iyer BN (2019) The Impact of Heartfulness-based Elective on Middle School Students. *Am J Health Behav* 43(4): 812-823.
46. Perez DAHJ (2000) Meditation: Concepts, effects and uses in therapy. *International Journal of Psychotherapy* 5 (1): 49-58.
47. Turner RP, D Lukoff RT, Barnhouse FGLu (1995) Religious or spiritual problem. A culturally sensitive diagnostic category in the DSM-IV. *J Nerv Ment Dis* 183(7): 435-444.
48. (2016) NCCIH Meditation: In depth, USDo.a.H. Services Ed. USA.
49. Ganesana M, Scott T Lee, Ying Wang, B Jill V (2017) Analytical Techniques in Neuroscience: Recent Advances in Imaging, Separation, and Electrochemical Methods. *Anal Chem* 89(1): 314341.
50. Ospina MB, Kenneth B, Mohammad K, Nina B, Donna MD et al. (2008) Clinical trials of meditation practices in health care: characteristics and quality. *J Altern Complement Med* 14(10): 1199-1213.

-- \* \* \* --