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Melatonin, Hops, Valerian, Oh My!

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Introduction

This case report reviews the evidence for **complementary and alternative medicine (CAM) options for insomnia.**

Fourth-year pharmacy students conducted a comprehensive literature search to determine which CAMs have evidence for efficacy and safety in insomnia.

Case

Patient: 61-year-old white female

Chief complaint: Insomnia

HPI: Ongoing insomnia with sleep maintenance problems for the past 5 years with no other underlying sleep disorders despite sleep hygiene practices. Patient believes her insomnia may be related to postmenopausal hormonal changes. Patient has failed magnesium, melatonin, and diphenhydramine. Patient is uninterested in prescription sleep medications, and requests a recommendation for a natural product that has evidence to support its use, with an interest in hops.

Past medical history: Vertigo, allergic rhinitis, hypertension, insomnia, and partial hysterectomy-induced menopause.

Social history: Full-time aide in an elementary school, married, no biological children; denies tobacco, alcohol or caffeine use.

Figure 1 (right). Complementary and Alternative Approaches to Insomnia based on strength of evidence; rankings derived from ACP, AASM, and VA/DoD insomnia guidelines at the top (in green), to NaturalMedicines.com ranking of "insufficient reliable evidence to rate" at the bottom (in red).

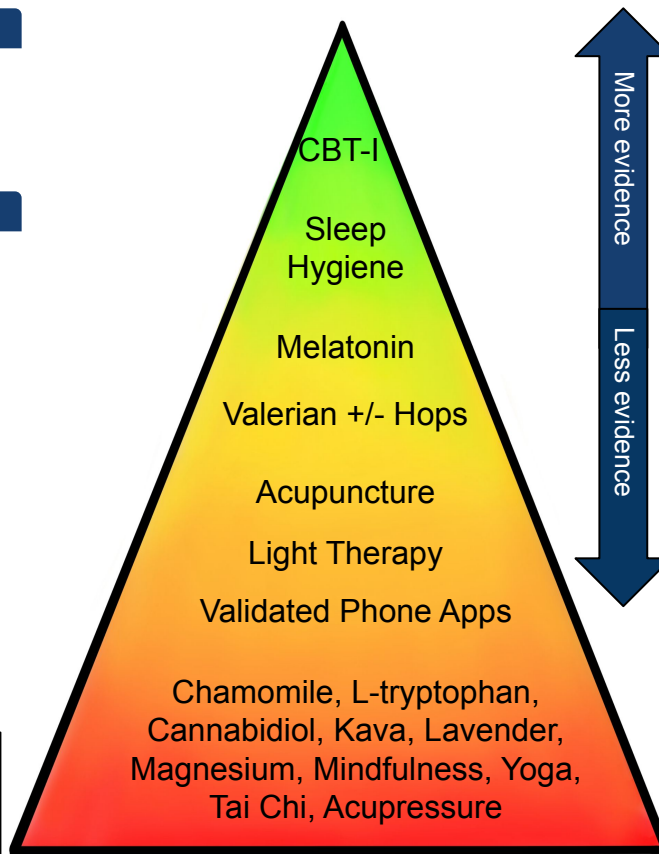


Figure 1. Complementary and Alternative Approaches to Insomnia

Recommendation

- Cognitive behavioral therapy for insomnia (CBT-I)
- Continue sleep hygiene practices
- Optional: Valerian or valerian/hops combination product at a dose of 300 to 600 mg per day taken in the evening

Rationale

CBT-I: CBT-I is recommended as the first line in ACP, AASM, and VA/DoD clinical practice guidelines and is both safe and effective. Can be done either in-person, online, over the phone, through self-help books, or apps.

Melatonin: Evidence is strongest for melatonin; however, we do not recommend melatonin for this specific patient, both because she has already tried and failed it, and because evidence supports its use for reducing latency of sleep onset rather than for sleep maintenance. Melatonin is particularly effective in shift work and jet lag.

Valerian +/- Hops: We suggest valerian instead of melatonin for this case; however, we would advise that evidence is limited and conflicting, and that it may take up to 4 weeks before seeing results. Valerian is likely safe at the recommended dosage (above) and seems to show improvement in subjective sleep quality compared to placebo. Be cautious of drug interactions with other CNS depressants such as alcohol or benzodiazepines.

References



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References

Acupuncture monograph. Natural Medicines online database. Updated August 19, 2021. Accessed May 24, 2021.

Aji M, Gordon C, Stratton E, et al. Framework for the design engineering and clinical implementation and evaluation of mHealth apps for sleep disturbance: a systematic review. *J Med Internet Res*. 2021;23(2):e24607. doi:10.2196/24607.

Baglioni C, Bostanova Z, Bacaro V, Benz F, Hertenstein E, Spiegelhalder K, Rücker G, Frase L, Riemann D, Feige B. A systematic review and network meta-analysis of randomized controlled trials evaluating the evidence base of melatonin, light exposure, exercise, and complementary and alternative medicine for patients with insomnia disorder. *J Clin Med*. 2020; 9(6):1949. <https://doi.org/10.3390/jcm9061949>

Bent S, Padula A, Moore D, Patterson M, Mehling W. Valerian for sleep: a systematic review and meta-analysis. *Am J Med*. 2006;119(12):1005-1012. doi:10.1016/j.amjmed.2006.02.026

Brzezinski A. Melatonin in humans. *N Engl J Med*. 1997;336(3):186-195. doi:10.1056/NEJM199701163360306

Cheng P, Casement MD, Kalmbach DA, Castelan AC, Drake CL. Digital cognitive behavioral therapy for insomnia promotes later health resilience during the coronavirus disease 19 (COVID-19) pandemic. *Sleep*. 2020;44(4). doi:10.1093/sleep/zsaa258

Cheuk DK, Yeung W, Chung K, Wong V, Cheuk DK. Acupuncture for insomnia. Cochrane Database of Systematic Reviews. (9). Accessed June 7, 2021.

Ferracioli-Oda E, Qawasmi A, Bloch MH. Meta-analysis: melatonin for the treatment of primary sleep disorders. *PLoS One*. 2013;8(5):e63773. Published 2013 May 17. doi:10.1371/journal.pone.0063773

Garland SN, Xie SX, DuHamel K, et al. Acupuncture versus cognitive behavioral therapy for insomnia in cancer survivors: A randomized clinical trial. *J Natl Cancer Inst*. 2019;111(12):1323-1331.

Hester L, Dang D, Barker CJ, et al. Evening wear of blue-blocking glasses for sleep and mood disorders: a systematic review. *Chronobiol Int*. 2021. doi:10.1080/07420528.2021.1930029.

Huberty JL, Green J, Puzia ME, et al. Testing a mindfulness meditation mobile app for the treatment of sleep-related symptoms in adults with sleep disturbance: a randomized controlled trial. *PLoS One*. 2021;16(1):e0244717. doi:10.1371/journal.pone.0244717.

Insomnia Comparative Effectiveness. Natural Medicines online database. Accessed May 24, 2021.

Jespersen KV, Koenig J, Jennum P, Vuust P. Music for insomnia in adults. *Cochrane Database Syst Rev*. 2015;(8):CD010459. Published 2015 Aug 13. doi:10.1002/14651858.CD010459.pub2

Lai HL, Good M. Music improves sleep quality in older adults. *J Adv Nurs*. 2005;49(3):234-244. doi:10.1111/j.1365-2648.2004.03281.x

Melatonin monograph. Natural Medicines online database. Updated May 25, 2021. Available from: <https://naturalmedicines-therapeuticresearch-com.une.idm.oclc.org/>

Mornhinweg GC, Voignier RR. Music for sleep disturbance in the elderly. *J Holist Nurs*. 1995;13(3):248-254. doi:10.1177/089801019501300306

Mysliwiec V, Martin JL, Ulmer CS, et al. The management of chronic insomnia disorder and obstructive sleep apnea: Synopsis of the 2019 U.S. Department of Veterans Affairs and U.S. Department of Defense Clinical Practice Guidelines. *Ann Intern Med*. 2020 Feb 18.

Qaseem A, Kansagara D, Forcica MA, Cooke M, Denberg TD. Management of chronic insomnia disorder in adults: A clinical practice guideline from the American College of Physicians. *Ann Intern Med*. 2016;165(2):125. doi:10.7326/m15-2175

Sateia MJ, Buysse DJ, Krystal AD, Neubauer DN, Heald JL. Clinical practice guideline for the pharmacologic treatment of chronic insomnia in adults: an American Academy of Sleep Medicine clinical practice guideline. *J Clin Sleep Med*. 2017;13(2):307-349.

Shechter A, Kim EW, St-Onge M, Westwood AJ. Blocking nocturnal blue light for insomnia: a randomized controlled trial. *J Psychiatr Res*. 2018;96:196-202. doi:10.1016/j.jpsychires.2017.10.015.

Soh HL, Ho RC, Ho CS, Tam WW. Efficacy of digital cognitive behavioural therapy for insomnia: a meta-analysis of randomised controlled trials. *Sleep Med.* 2020;75:315-325. doi:10.1016/j.sleep.2020.08.020

Valerian monograph. Natural Medicines online database. Updated October 24, 2021. Accessed May 24, 2021.

van Maanen A, Meijer AM, van der Heijden KB, Oort FJ. The effects of light therapy on sleep problems: A systematic review and meta-analysis. *Sleep Med Rev.* 2016;29:52-62.

Wilhelmsen-Langeland A, Saxvig IW, Pallesen S, et al. A randomized controlled trial with bright light and melatonin for the treatment of delayed sleep phase disorder: effects on subjective and objective sleepiness and cognitive function. *J Biol Rhythms.* 2013;28(5):306-321.