How magnolia bark affects sleep and health

February 27, 2018 By: Dr. Michael Breus

From sleep to memory to anxiety relief, magnolia can soothe, calm, and de-stress

If you're not yet familiar with magnolia bark, you're

not alone. My patients are often unaware of this potent-with-health-benefits plant supplement. Despite its somewhat under-the-radar status, magnolia bark has been a powerhouse in traditional medicine for centuries. Filled with bioactive compounds that can address conditions from anxiety to inflammation, the extract of magnolia bark may play a beneficial role in healthy sleep, as well as stress-reduction, weight management, memory protection, and brain health.

What is magnolia bark?

Magnolia is a flowering tree (Latin name: *magnolia officinalis*) that is native to China. The magnolia plant has an ancient history as a therapeutic compound in traditional Chinese, Japanese, and Korean medicine, used to promote sleep and relaxation, to ease anxiety, and to treat allergies and asthma, among other conditions. Both the bark of the magnolia tree and its flowers are used therapeutically. Magnolia bark extract is found in supplements, tea, toothpaste, and topical oils and cream.

I have a number of patients who use magnolia bark in supplement form to help with their sleep, stress, and anxiety.

How does magnolia bark work?

The bark of the magnolia tree contains several natural, bioactive compounds that function as anti-inflammatory, anti-bacterial, and anti-allergic agents. Among most well-known and well-studied of these compounds are honokiol and magnolol. Magnolia bark works as an *anxiolytic*, helping to **lower anxiety** and depression and reduce stress. Magnolia bark can also act as a sedative, directly helping to facilitate sleep. (Of course, it's anti-stress capabilities also help sleep, indirectly.)

Scientists have identified several other ways magnolia bark functions beneficially in the body. Magnolia is...

A GABA booster. GABA is a neurotransmitter that exerts a calming effect. Increased **GABA activity** quiets excitatory neurons in the brain, helps reduce anxiety, and promotes sleep.

A powerful antioxidant. Compounds in magnolia bark act as **antioxidants**, lowering levels of inflammation and oxidative stress in the brain and throughout the body.

An activator of cannabinoid receptors. The bioactive compounds in **magnolia bark** activate cannabinoid receptors. These receptors, located throughout the body, are part of the endocannabinoid system—which is getting a lot of attention from scientists these days for its role in immune health, pain relief, and disease-prevention.

Activation of these receptors helps to **relieve pain**, reduce inflammation, and elevate mood, among many other benefits.

An adrenaline inhibitor. Research suggests that bioactive compounds in magnolia bark can **reduce adrenaline**, a hormone strongly associated with stress, which stimulates vigilance and alertness. Other research indicates magnolia bark may suppress unhealthful levels of cortisol, another significant stress-related hormone.

Benefits of magnolia

Sleep. I've seen magnolia bark work effectively as a sleep promoter. That's thanks to its ability to relax the mind and body, and to ease anxiety. It's also thanks to magnolia bark's power to increase GABA activity. **GABA is important for sleep**, and people with reduced GABA activity are prone to insomnia and other sleep problems. Research shows at least one bioactive compound in magnolia bark can increase the amount of time you spend in both REM sleep and NREM sleep, and reduce the time it takes you to **fall asleep**. Magnolia's ability to lower levels of the alertness-producing hormone adrenaline may also make it an effective natural sleep aid for people who tend to be wired or stressed.

Stress and anxiety. Magnolia bark has a centuries-long history in traditional medicine as a

stress-reliever and anxiety-soother. Magnolia's GABA-boosting ability is one reason why. (GABA isn't only important to sleep—healthy GABA activity is also important for mood.) Another reason is magnolia's ability to activate cannabinoid receptors. I **wrote recently** about the calming, mood-elevating power of cannabinoid compounds, and the body's own endocannabinoid system. Studies show magnolia bark's effectiveness as an anxiolytic. One study indicates that one of the active compounds in magnolia bark—honokiol—works as effectively as the drug diazepam to **treat anxiety**, without the same risks of dependency or side effects.

Low mood. Magnolia bark affects the activity of both serotonin and dopamine, two neurotransmitters that are important to mood. Research indicates that magnolia on its own and in combination with ginger can **help with depression**.

Brain health. Along with help for sleep, my patients often want to know how they can take good care of their brains and protect their cognitive abilities with age. The first thing I tell them: healthy **sleep is essential to brain health** and to keeping memory and cognitive powers sharp. Magnolia bark's GABA-activating effects and its power as an antioxidant mean it may deliver natural protection for a healthy brain. Research in mice suggests bioactive compounds in **magnolia**

bark may help reduce a form of brain cell death that is associated with Alzheimer's disease. Other research in mice shows magnolia bark's bioactive compounds can help maintain levels of **acetylcholine**, a neurotransmitter that helps the brain process **memory and learning**. Reduced levels of acetylcholine are typically present in people with Alzheimer's disease. In a study of mice with Alzheimer's, the mice that were treated with **magnolia bark extract** experienced rebounds to memory and reductions in the type of brain plaque linked to Alzheimer's disease.

Cancer protection. Some bioactive compounds found in magnolia bark—notably the compound costunolide—are attracting a great deal of attention for their cancer-fighting capabilities. Studies show this compound in **magnolia bark** triggers the death of human cancer cells in several different types of cancer, including forms of leukemia, **ovarian**, and **breast cancers**. Recent research at John's Hopkins University indicates that a compound in magnolia bark may **reduce cancer cell growth** in breast cancer that's influenced by the hormone leptin, which regulates energy and appetite and plays a significant role in obesity.

Weight management. Studies suggest magnolia bark may deliver broad benefits for weight and metabolic health. Research shows compounds in magnolia bark extract may help guard against **weight gain** and decrease body fat. Studies also

indicate magnolia bark can improve **insulin resistance**, and contribute to reductions in triglycerides and cholesterol.

Inflammation and pain. Magnolia bark has long been recognized in traditional and natural medicine for as an anti-inflammatory and a source of pain relief, and has been used to help alleviate joint and muscle pain, as well as headache and menstrual cramps. Research in mice shows magnolia bark can be effective in **reducing pain** caused by inflammation.

Digestion. Magnolia bark has traditionally been used to treat **digestive problems**, including abdominal bloating and pain, nausea, diarrhea, and loss of appetite. For digestive problems, magnolia bark is often paired with ginger in traditional and natural therapies.

Magnolia: what to know

Always consult your doctor before you begin taking a supplement or make any changes to your existing medication and supplement routine. This is not medical advice, but it is information you can use as a conversation-starter with your physician at your next appointment.

Magnolia dosing

The following doses are based on amounts that

have been investigated in scientific studies. In general, it is recommended that users begin with the lowest suggested dose, and gradually increase as needed.

For general health, sleep, *stress*: Typical magnolia bark supplement doses are 200-400mg. Individual dosing will vary, and higher magnolia dosing levels may depend on an individual's body weight, as well as other individual health conditions and treatment needs.

Possible side effects of magnolia

Magnolia is generally well tolerated by healthy adults. Limited research has shown possible side effects might include heartburn, shaking hands, thyroid problems, sexual problems, tiredness and headache, as well as dizziness.

The following people should consult with a physician before using a magnolia supplement:

- **Women who are pregnant or breast feeding**. Women who are pregnant or breast feeding should not use magnolia.
- **Surgery patients**. Magnolia can affect the central nervous system. When used in combination with anesthesia and other medications used in surgery, magnolia may interfere with nervous system functioning.

> Magnolia also can slow the clotting of blood. It's recommended people stop using magnolia a minimum of two weeks before a planned surgery.

Magnolia interactions

These are commonly used medications and supplements that have scientifically-identified interactions with magnolia. People who take these or any other medications and supplements should consult with a physician before beginning to use magnolia as a supplement.

Interactions with medications

- **Alcohol**. The combination of magnolia and alcohol may cause excessive sleepiness. This is particularly likely with larger doses of magnolia.
- **Anticoagulant medications**
- **Sedative medications**, including:
- *Benzodiazepines*
- *Central nervous system (CNS) depressants*
- *Barbiturates*

Interactions with other herbs and supplements

Herbs and supplements that promote sleepiness, including:

- 5-HTP
- Calamus
- California poppy
- Catnip
- Hops
- Jamaican dogwood
- Kava
- John's Wort
- Skullcap
- Valerian
- Yerba mansa

Herbs and supplements that work to slow blood clotting, including:

- Angelica
- Clove
- Danshen
- Feverfew
- Garlic
- Ginger
- Ginkgo
- Panax ginseng
- Horse chestnut
- Red clover
- Turmeric

I like the broad benefits magnolia bark can offer to people struggling with sleep and anxiety or stress, as well as the potential protective benefits for mood and cognition. This supplement offers a

natural way to rest, relax and stay sharp and focused, all at the same time.

Sweet Dreams,

Michael J. Breus, PhD, DABSM

The Sleep Doctor™

www.thesleepdoctor.com

References

Chen, CR et al. (2012). Magnolol, a major bioactive constituent of the bark of Magnolia Officialis, induces sleep in thebiodiazapenesite of GABA(A) receptor in mice. *Neuropharmacology*, 63(6): 1191-9. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/22771461**

Chen, YL et al. (2001). Magnolol, a potent antioxidant from Magnolia officinalis, attenuates intimal thickening and MCP-1 expression after balloon injury of the aorta in cholesterol-fed rabbits. *Basic research in cardiology*, 96(4): 353-63. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/11518191**

Choi, JH et al. (2002). Costunolide triggers apoptosis in human leukemia U937 cells by depleting intracellular thiols. *Japanese journal of cancer research: Gann,* 93(12): 1327-33. Retrieved

from: **https://www.ncbi.nlm.nih.gov/pubmed/12495472/**

Francis, PT. (2005). The interplay of neurotransmitters in Alzheimer's disease. *CNS Spectrums*, 10(11 Suppl 18):6-9. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/16273023**

Ham, Becky. (2016, July 6). Can magnolia bark help break the link between obesity and breast cancer? Retrieved from: **https://hub.jhu.edu/2016/07/06/magnolia-honokiol-breast-cancer-obesity/**

Ge, Lanlan et al. (2017). Nine phenylethanoid glycosides from *Magnolia officinalis* var. *biloba*fruits and their protective effects against free radical-induced oxidative damage. *Scientific Reports*, 7: 45342. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5368604/**

Gottesmann, C. (2002). GABA mechanisms and sleep. *Neuroscience*, 111(2): 231-9. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/11983310**

Han, H et al. (2011). Anxiolytic-like effects of 4-O-methylhonokiol isolated from Magnolia officinalis through enhancement of GABAergic transmission and chloride influx. *Journal of medicinal food*, 14(7-8): 724-31. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/21501091**

Hoi, Chu Peng, et al. (2010). Neuroprotective effect of honokiol and magnolol, compounds from *Magnolia officinalis*, on beta-amyloid-induced toxicity in PC12 cells. Phytotherapy Research, 24(10): 1538-42. Retrieved from: **http://onlinelibrary.wiley.com/doi/10.1002/ptr.3178/abstract**

Koetter, U et al. (2009). Interactions of Magnolia and Ziziphus extracts with selected central nervous system receptors. *Journal of ethnopharmacology*. 124(3): 421-5. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/19505549**

Kuribara, H et al. (1999). Honokiol, a putative anxiolytic agent extracted from magnolia bark, has no diazepam-like side-effects in mice. *Journal of pharmacy and pharmacology*, 51(1): 97-103. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/10197425**

Kuribara, H et al. (2000). The anxiolytic effect of two oriental herbal drugs in Japan attributed to honokiol from magnolia bark. *Journal of pharmacy and pharmacology,* 52(11): 1425-9. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/11186252**

Lee, Yong Kyung et al. (2009). Protective effect of the ethanol extract of *Magnolia officinalis* and 4-*O*-methylhonokiol on scopolamine-induced memory impairment and the inhibition of acetylcholinesterase activity. *Journal of natural*

medicines, 63(3): 274-82. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690856/**

Lee, Young-Jung et al. (2012). A Comparison between Extract Products of *Magnolia officinalis* on Memory Impairment and Amyloidogenesis in a Transgenic Mouse Model of Alzheimer's Disease. *Biometrics & Therapeutics*, 20(3): 332-339. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3794532/**

Lin, Yi-Ru (2009). Antinociceptive actions of honokiol and magnolol on glutamatergic and inflammatory pain. *Journal of Biomedical Science*, 16(10: 94. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2765942/**

Mackie, K. (2008). Cannabinoid receptors: where they are and what they do. *Journal of neuroendocrinology*, Suppl 1: 10-4. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/18426493**

Magnolia officinalis. Retrieved from: **https://examine.com/supplements/magnolia-officinalis/**

Natural Medicines Therapeutic Research. Magnolia officinalis. (2017, December 8). Retrieved from: https://naturalmedicines.therapeuticresearch.com

Pacher, Pál, et al. (2006). The Endocannabinoid System as an Emerging Target of Pharmacotherapy. *Pharmacological Reviews*, 58(3): 389-462. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/**

Qiang, LQ et al. (2009). Combined administration of the mixture of honokiol and magnolol and ginger oil evokes antidepressant-like synergism in rats. *Archives of pharmacal research,* 32(9): 1281-92. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/19784585#**

Rempel, Viktor et al (2013). Magnolia Extract, Magnolol, and Metabolites: Activation of Cannabinoid CB_2 Receptors and Blockade of the Related GPR55. *ACS Medicinal Chemistry Letters*, 4(1): 41-45. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4027495/#**

Roy, A, Manikkam R. (2015). Cytotoxic Impact of Costunolide Isolated from Costus speciosus on Breast Cancer via Differential Regulation of Cell Cycle-An In-vitro and In-silico Approach. *Phytotherapy Research: PTR*. 29(10): 1532-9. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/26178525**

Tachikawa, E et al. (2000). Effects of extract and ingredients isolated from Magnolia obovata

thunberg on catecholamine secretion from bovine adrenal chromaffin cells. *Biochemical pharmacology*, 60(3): 433-40. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/10856439**

Xu, Q et al. (2008). Antidepressant-like effects of the mixture of honokiol and magnolol from the barks of Magnolia officinalis in stressed rodents. *Progress in neuro-psychopharmacology & biological psychiatry*, 32(2): 715-25. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/18093712**

Woodbury, Anna et al. (2013). Neuro-Modulating Effects of Honokiol: A Review. *Frontiers in neurology*, 4: 130. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3769637/**

Yi, LT et al. (2009). Antidepressant-like synergism of extracts from magnolia bark and ginger rhizome alone and in combination in mice. *Progress in neuro-psychopharmacology & biological psychiatry*, 33(4): 616-24. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/19285110#**

Yang, YI et al. (2011). Costunolide induces apoptosis in platinum-resistant human ovarian cancer cells by generating reactive oxygen species. *Gynecologic oncology*, 123(3): 588-96. Retrieved from: **https://www.ncbi.nlm.nih.gov/pubmed/21945308**

Zhang, Zhiguo, et al. (2014). The *Magnolia* Bioactive

Constituent 4-O-Methylhonokiol Protects against High-Fat Diet-Induced Obesity and Systemic Insulin Resistance in Mice. *Oxidative medicine and cellular longevity*, 2014: 965954. Retrieved from: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4060163/**

Dr. Michael Breus

+ posts

Michael Breus, Ph.D - The Sleep Doctor is a Diplomate of the American Board of Sleep Medicine and a Fellow of The American Academy of Sleep Medicine and one of only 168 psychologists to pass the Sleep Medical Specialty Board without going to medical school. Dr. Breus is a sought after lecturer and his knowledge is shared daily in major national media worldwide including Today, Dr. Oz, Oprah, and for fourteen years as the sleep expert on WebMD. Dr. Breus is the bestselling author of The Power of When, The Sleep Doctor's Diet Plan and Good Night!

Previous: What is Autophagy & How To Sleep Better During Menopause

Next: Tips For Daylight Savings & How Bathroom Breaks Impact Your Relationship

One thought on "How magnolia bark affects sleep and health"

1. Pingback: How magnolia bark affects sleep and health - Tradewide Commercial

Leave a Reply

Your email address will not be published. Required fields are marked *

Comment

Name *

Email *

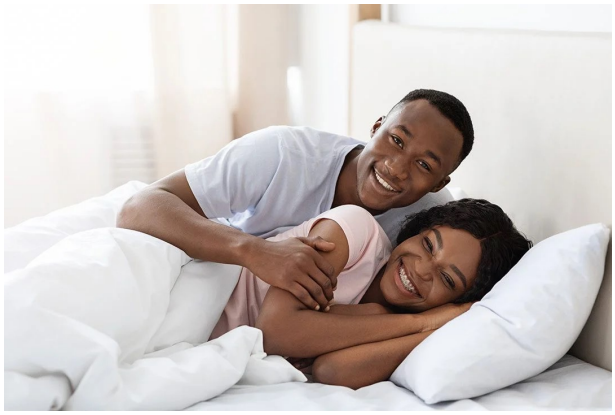
Website

Save my name, email, and website in this browser for the next time I comment.

POST COMMENT

SEARCH

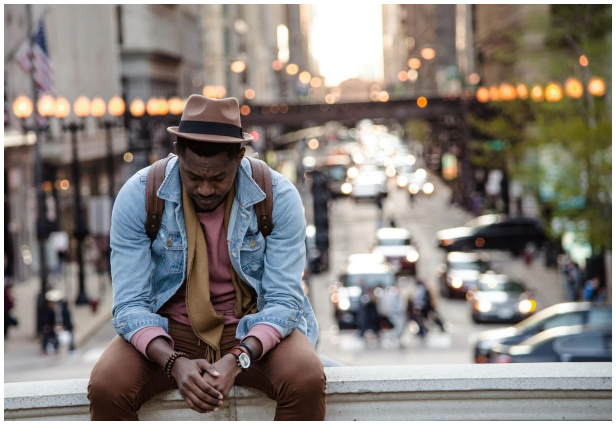
Search ... SEARCH



Sharing the Bed? 7 Ways to

Get Great Sleep with a Bed Partner

5 Subtle Signs That You Need More Sleep



Does Sleep Make us More (or Less) Moral?

JOIN OUR NEWSLETTER

Name Email Subscribe!

QUICK LINKS

Home Blog About
Media Snoring Sleep Resources
Privacy Policy Terms of Service