



INE | INSTITUTE OF
NUTRITIONAL
ENDOCRINOLOGY

Sleep: Supporting Clients to Achieve Restful Sleep - Part 2

Dr. Ritamarie Loscalzo



Medical Disclaimer: The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, drritamarie.com, and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional. This presentation is provided for informational purposes only and no guarantees, promises, representations or warranties of any kind regarding specific or general benefits, have been or will be made by Dr. Ritamarie Loscalzo, her affiliates or their officers, principals, representatives, agents or employees. Dr. Ritamarie Loscalzo is not responsible for, and shall have no liability for any success or failure, acts and/or omissions, the appropriateness of the participant's decisions, or the use of or reliance on this information.



Melatonin and Sleep

- ✓ Hormone produced by the pineal gland
- ✓ The master clock – inducing sleepiness or alertness at proper times
- ✓ Produced in higher amounts in the dark, lesser with more light
- ✓ Helps maintain sleep and wake cycle by causing drowsiness
- ✓ Lowers body temperature
- ✓ Supplementation can help sleep and mood problems – can be tricky
 - Excess can cause nightmares
 - In some people, it can cause insomnia and even depression
- ✓ If taken in the evening or when it's dark, melatonin can speed up sleep preparation, and it can tell the body clock to shift its sleep cycle to an earlier time
- ✓ Dosage: 3 mg - 5 mg
- ✓ Evidence that adult males only need 150 micrograms; females need only 100 micrograms
- ✓ Evidence of higher doses (15 mg) prevent dementia
- ✓ Excess may increase ferritin production



Melatonin-Boosting Foods

- ✓ Tart cherries (sweet cherries have 50 times less; dried cherries appear to have none)
- ✓ Orange bell peppers
- ✓ Walnuts
- ✓ Flax seeds
- ✓ Tomato
- ✓ Goji berries
- ✓ Fenugreek
- ✓ Mustard seeds
- ✓ Almonds
- ✓ Raspberries



<http://www.drritamarie.com/go/TartCherriesInsomnia>



Sedative Herbs

- ✓ Passionflower (*Passiflora incarnata*)
- ✓ Lemon balm (*Melissa officinalis*)
- ✓ Chamomile (*Matricaria recutita*)
- ✓ Milky oat (*Avena sativa*)
- ✓ Lavender (*Lavandula angustifolia*)
- ✓ Skullcap (*Scutellaria lateriflora*)
- ✓ Wild lettuce (*Lactuca virosa*)
- ✓ Hops (*Humulus lupulus*)
- ✓ Valerian (*Valeriana officinalis*)
- ✓ California poppy (*Eschscholzia californica*)
- ✓ Kava kava (*Piper methysticum*)
- ✓ Magnolia (*Magnolia officinalis*)
- ✓ St. John's wort (*Hypericum perforatum*)
- ✓ Catnip (*Nepeta cataria*)



According David Hoffmann, NIMH, author of *Medical Herbalism* and other books, the most effective sleep inducers are California poppy, hops, passion flower, and valerian.



Passion Flower

✓ Actions:

- Soothes the racing mind
- Flavonoids “chrysin” and “benzoflavone” increase GABA

✓ Dosage:

- **Anxiety:** Throughout the day
- **Insomnia:** An hour before bed and again during night if awakened
 - **Tincture:** 10 to 90 drops
 - **Capsules:** 90 mg
 - **Tea:** 1 teaspoon, steeped 10 minutes, 1 hour before bed

✓ Contraindications:

- Pregnancy, before surgery, with other sedatives



45 drops per day of passion flower extract found to be as effective as 30 mg per day of oxazepam over a period of four weeks.

Akhondzadeh, Shahin, et al. [Passionflower in the treatment of generalized anxiety: a pilot double-blind randomized controlled trial with oxazepam](#). *Journal of Clinical Pharmacy and Therapeutics* 26.5 (2001): 363-367.

Miyasaka, L. S., A. N. Atallah, and B. G. Soares. [Passiflora for anxiety disorder](#). *Cochrane Database Syst Rev* 1 (2007).



Lemon Balm

✓ Actions:

- Turns off mind
- Counteracts jittery nerves, stress, and anxiety
- Improves memory

✓ Dosage:

- **Anxiety:** Throughout the day
- **Insomnia:** An hour before bed and during night if awakened
 - **Plant:** Pinch leaves and sniff
 - **Aromatherapy:** Essential oil in diffuser
 - **Tincture:** 30 to 40 drops
 - **Capsules:** 80 to 150 mg of lemon balm leaf extract combined with 160 to 320 mg of valerian root extract
 - **Tea:** 1 to 3 teaspoons, steeped 5 minutes, 1 hour before bed

✓ Contraindications:

- Severe hypothyroidism; too high of a dosage (1800 milligrams) actually increases anxiety



Pilot trial of Melissa officinalis L. leaf extract in the treatment of volunteers suffering from mild-to-moderate anxiety disorders and sleep disturbances. Med J Nutrition Metab. 2011 December; 4(3): 211–218.

<http://www.drritamarie.com/go/LemonBalm>



Chamomile

✓ Actions:

- Contains 28 terpenoids and 36 flavonoids, including apigenin, which binds to benzodiazepine receptors in the brain
- Relaxes blood vessels and smooth muscle fibers
- Reduces ACTH and thus cortisol

✓ Dosage:

- An hour before bed and during night if awakened
 - **Tincture:** 30 to 40 drops
 - **Capsules:** 250 mg extract
 - **Essential Oil:** 5 to 10 drops in a tub of lukewarm water
 - **Tea:** 2 to 3 teaspoons, steeped 10 -15 minutes, 1 hour before bed

✓ Contraindications:

- Coumarin, alcohol, benzodiazepines, ragweed allergy



Double-blind, placebo-controlled study at University of Pennsylvania in 2012 - 220 mgs of chamomile extract daily for 8 weeks given to subjects with mild to moderate anxiety and depression. 57 percent of the group using the chamomile had a significant reduction in their symptoms.

<http://www.drritamarie.com/go/PMID15863883>

<http://www.drritamarie.com/go/PMC2995283>

<http://www.drritamarie.com/go/PMID7617761>



Milky Oats



✓ Actions:

- Nourish the nervous system - neither stimulating nor directly sedative
- Rich in silica, magnesium, phosphorus, chromium, iron, calcium, alkaloids, protein, vitamins B, A, and C
- For anxiety and stress-induced insomnia
- Combines well with ashwagandha

✓ Dosage:

- **Tincture:** 40 drops 3 times a day
- **Tea:** 1 to 3 teaspoons, steeped 5-15 minutes, 3-4 times a day, including 30 minutes to an hour before bed

✓ Contraindications:

- Celiac, oat allergy

Berger, Judith. (1998). [Herbal Rituals](#). New York, NY: St. Martin's Press.

Hoffman, David. (2003). [Medical Herbalism](#). Rochester, VT: Healing Arts Press.

Holmes, Peter. (1997). [The Energetics of Western Herbs](#). Boulder, CO: Snow Lotus Press, Inc.

<http://www.drritamarie.com/MedicineOfMilkyOats>

<http://www.drritamarie.com/go/MilkyOatSeed>



Lavendar

✓ Actions:

- Calming and spasmolytic
- Active constituent linalool mediated through cAMP

✓ Dosage:

- **Anxiety:** Throughout the day
- **Insomnia:** An hour before bed and again during night if awakened
 - **Aromatherapy:** Oil in diffuser, on pillow
 - **Topical:** 1 to 2 drops essential oil on feet, neck, head, in bath
 - **Tea:** 1 to 2 teaspoons, steeped 10 minutes, 1 hour before bed

✓ Contraindications:

- Internal use in children, pregnancy, before surgery, with other sedatives



Studies on the mode of action of the essential oil of Lavender (*Lavandula angustifolia*) P. Miller -
Phytotherapy Research, Volume 13, Issue 6, pages 540–542, September 1999

<http://www.drritamarie.com/go/NIHLavender>
<http://www.drritamarie.com/go/LavenderSleepAid>
<http://www.drritamarie.com/go/WebMDLavender>



Skullcap

✓ Actions:

- Relax the nerves, body, and mind
- Constituents: Essential oil, scutellarin, scutellonin, scutellaine, essential fatty acids, calcium, potassium, magnesium, and B vitamins
- Works well combined with valerian and hops

✓ Dosage:

- Three times a day, including 30 minutes to an hour before bed
 - **Tincture:** 60 to 100 drops (start with less)
 - **Capsules:** 2000 mg
 - **Tea:** 1 to 3 teaspoons, steeped 15 minutes, 1 hour before bed

✓ Contraindications:

- Pregnancy, breastfeeding, close to surgery (2 weeks), anti-anxiety medications, alcohol, blood sugar meds, liver toxicity



According to herbalist David Hoffman: "It effectively soothes nervous tension while renewing and revivifying the central nervous system." Hoffman, David. *Medical Herbalism*, Healing Arts Press, 2003, pp. 582.

<http://www.drritamarie.com/go/WhelanSkullcap>

<http://www.drritamarie.com/Skullcap>



Wild Lettuce

✓ Actions:

- Strong, quick acting, short lasting sedative; opiate-like response without opiates
- Constituents: Flavonoids, iron, vitamins A, B1, B2, alkaloids, sesquiterpene lactones, lactucopicrin, lactucin, apigenin, luteolin, quercetin, coumarins, mannitol, and hyoscyamine

✓ Dosage:

- Three times a day, including 15-30 minutes before bed
 - **Tincture:** 20 to 40 drops (start with less)
 - **Tea:** 2 teaspoons, steeped 10-15 minutes, 15 minutes before bed

✓ Contraindications:

- Pregnancy, breastfeeding, close to surgery (2 weeks), enlarged prostate, allergy to ragweed, narrow-angle glaucoma, sedative medication



Hoffmann, David (2010-12-15). Medical Herbalism: The Science and Practice of Herbal Medicine (p. 352). Healing Arts Press.

Mabey, Richard. "The New Age Herbalist", (1988)

<http://www.drritamarie.com/go/WildLettuce>

<http://www.drritamarie.com/go/Herbs2000WildLettuce>

<http://www.drritamarie.com/go/AnniesRemedyWildLettuce>



Hops

✓ Actions:

- Act in a similar way to melatonin
- Works well with valerian, best results seen after 14-28 days
- Estrogenic effects

✓ Dosage:

- **Insomnia:** An hour before bed and during night if awakened, 2-3 x daily
 - **Tincture:** 30 to 40 drops, best with Valerian
 - **Capsules:** 80 to 150 mg of hops extract combined with 160 to 320 mg of valerian root extract
 - **Tea:** 1 to 3 teaspoons, steeped 5 minutes, 1 hour before bed

✓ Contraindications:

- Pregnancy and breast-feeding, depression, hormone sensitive cancers, pre-surgery



Studies relating to Hops and valerian for insomnia

<http://www.drritamarie.com/go/PMID17704989>

<http://www.drritamarie.com/go/PMID18559301>

<http://www.drritamarie.com/go/PMID17486686>

<http://www.drritamarie.com/go/ValerianHops>

Hops and Estrogen

<http://www.drritamarie.com/go/PMC1852439>



Valerian

✓ Actions:

- Synergy: hops, lemon balm, skullcap and kava
- GABA receptor agonist
- Causes paradoxical reaction in a small minority of people
- Root has the sedative action

✓ Dosage:

- An hour before bed and during night if awakened, 2-3 x daily for anxiety
 - **Tincture:** 30 to 40 drops, best with hops
 - **Capsules:** 400 to 900 mg, 160 to 320 mg combined with 80 to 150 mg of hops extract, or 120 mg combined with 80 mg lemon balm extract
 - **Tea:** Not pleasant, decoction

✓ Contraindications:

- Pregnancy and breast-feeding, pre-surgery, with sedative medications, alcohol



<http://www.drritamarie.com/go/NIHValerian>

<http://www.drritamarie.com/go/NeuropharmacologyGABA>

Studies of Hops and valerian for insomnia

<http://www.drritamarie.com/go/PMID17704989>

<http://www.drritamarie.com/go/PMID18559301>

<http://www.drritamarie.com/go/PMID17486686>

<http://www.drritamarie.com/go/ValerianHops>



California Poppy

✓ Actions:

- Synergy: hawthorn
- Antioxidants such as rutin and zeaxanthin; alkaloids berberine and sanguinarine; other alkaloids especially protopine and allocryptine which are known soporifics

✓ Dosage:

- An hour before bed and during night if awakened, 2-3 x daily for anxiety
 - **Tincture:** 30 to 40 drops, 2-3 x daily
 - **Tea:** 1 cup 2-3 x daily

✓ Contraindications:

- Sedative medications (Benzodiazepines) interacts with California poppy; stop using California poppy at least 2 weeks before a scheduled surgery



Rolland A, et al. Behavioural effects of the American traditional plant *Eschscholzia californica*: sedative and anxiolytic properties. *Planta Med.* (1991)
<http://www.drritamarie.com/go/PMID1680240>

Kleber E, et al Modulation of key reactions of the catecholamine metabolism by extracts from *Eschscholtzia californica* and *Corydalis cava*. *Arzneimittelforschung.* (1995)
<http://www.drritamarie.com/go/PMID7710432>

Rolland A, et al. Neurophysiological effects of an extract of *Eschscholzia californica* Cham. (*Papaveraceae*). *Phytother Res.* (2001)
<http://www.drritamarie.com/go/PMID11507727>



Kava Kava



Shinomiya, K, et al. Effects of kava-kava extract on the sleep-wake cycle in sleep-disturbed rats. *Psychopharmacology (Berl)*. 2005 Jul;180(3):564-9. Epub 2005 Feb 8.

<http://www.drritamarie.com/go/PMID15700178>

Kinzler, J., et al. Clinical efficacy of kava extract in patients with anxiety syndrome: double-blind placebo-controlled study over four weeks. *Arzneimittel-Forsch* 41: 584-88, 1991

<http://www.drritamarie.com/go/PMID1930344>

Baum SS, t al. Effect of kava extract and individual kavapyrones on neurotransmitter levels in the nucleus accumbens of rats . *Prog Neuropsychopharmacol Biol Psychiatry*. (1998)

<http://www.drritamarie.com/go/PMID9829291>

✓ Actions:

- Synergy: Cannabis, valerian, catmint, and chamomile will increase the sedative effects
- Active psychotropic constituents; kava lactones (kavapyrones) in fresh roots and rhizomes: kawain, dihydrokawain, and methysticum

✓ Dosage:

- Any product conferring 250 mg collective kavalactones; 300 mg daily in three divided doses for at most 4 weeks
 - **Tincture:** 1 teaspoon or five milliliters (30 to 35 drops from a standard eyedropper)
 - **Capsules:** 150 mg to 200 mg, approximately 20-30 minutes before retiring
 - **Tea:** 1 cup daily

✓ Contraindications:

- Liver issues, depression, Parkinson's, pregnant or breastfeeding women; don't take if you are having surgery, as it can prolong the effect of anesthesia; kava can be more toxic to people with Western genetics



Magnolia

✓ Actions:

- Synergy: Amur corktree, jujube seed, ginger
- Mechanism: Antioxidants honokiol and magnolol: primary anti-stress and cortisol-balancing effects; acts on GABA system

✓ Dosage:

- **Tincture:** 10 to 30 drops, 3x per day
- **Capsules:** 400 mg
- **Tea:** Fat-soluble, so drink with meals
- **Enema:** Enemas of magnolia bark appear to result in higher circulating levels of bioactives than oral ingestion

✓ Contraindications:

- Pregnancy, dehydration, alcohol, or sedative medications; the tubocurarine and related substances in magnolia bark may cause respiratory paralysis



Yi LT, et al. Antidepressant-like synergism of extracts from magnolia bark and ginger rhizome alone and in combination in mice . *Prog Neuropsychopharmacol Biol Psychiatry*. (2009)

<http://www.drritamarie.com/go/PMID19285110>

Watanabe K, et al. Pharmacological properties of magnolol and honokiol extracted from *Magnolia officinalis*: central depressant effects . *Planta Med*. (1983)

<http://www.drritamarie.com/go/PMID6657781>

Rickels K, Schweizer E. The clinical presentation of generalized anxiety in primary-care settings: practical concepts of classification and management . *J Clin Psychiatry*. (1997)

<http://www.drritamarie.com/go/PMID9363042>



St. John's Wort

✓ Actions:

- Synergy: Passion flower
- Mechanism: Hypericin thought to work by reuptake inhibition leading to increased melatonin; GABA receptors

✓ Dosage:

- Takes some time to build up in the blood; allow at least four weeks to see if it works
- Can be used long-term as needed
- Take with meals to reduce the risk of stomach irritation
 - **Tincture:** 1/2 to 1 teaspoon 2-3 x daily
 - **Capsules:** 1 to 2 tablets or capsules 2-3 x daily
 - **Tea:** 1 to 2 teaspoons in 1 to 2 cups of tea a day for at least four weeks is recommended

✓ Contraindications:

- Can create sensitivity to light; be careful with MAOIs and others that increase serotonin



Fitoterapia. 2011 Apr;82(3):474-80. doi: 10.1016/j.fitote.2010.12.006. Epub 2010 Dec 24. Pharmacological studies in an herbal drug combination of St. John's Wort (*Hypericum perforatum*) and passion flower (*Passiflora incarnata*): in vitro and in vivo evidence of synergy between *Hypericum* and *Passiflora* in antidepressant pharmacological models. Fiebich BL1, Knörle R, Appel K, Kammler T, Weiss G. <http://www.drritamarie.com/go/PMID21185920>

Antidepressant Effect of St. John's Wort on Sleep P Roy-Byrne reviewing Sharpley AL et al. *Psychopharmacology* 1998. <http://www.drritamarie.com/go/NEJMStJohnsWort>



Catnip

✓ Actions:

- Synergy: Fennel, skullcap, lemon balm, milky oat
- Mechanism: Nepetalactone, terpenoid, makes people relaxed, drowsy, and ready for bed; mild central nervous system sedative

✓ Dosage:

- **Tincture:** 30 to 50 drops, 3x daily
- **Capsules:** 760 mg, 2 to 3 capsules, 3x daily, with food
- **Tea:** 1 to 2 teaspoons, 1-3 x daily; it's bitter, so add peppermint or lemon balm

✓ Contraindications:

- Risky to use in cases of kidney or liver issues; pregnant women should avoid, as it can prematurely induce labor



Harney JW, Barofsky IM, Leary JD. Behavioral and toxicological studies of cyclopentanoid monoterpenes from *Nepeta cataria*. *Lloydia*. 1978;41(4):367-374.

<http://www.drritamarie.com/go/PMID672466>

Sherry CJ, Hunter PS. The effect of an ethanol extract of catnip (*Nepeta cataria*) on the behavior of the young chick. *Experientia*. 1979;35(2):237-238.

<http://www.drritamarie.com/go/PMID421844>

Jackson B, Reed A. Catnip and the alteration of consciousness. *JAMA*. 1969;207(7):1349-1350.

<http://www.drritamarie.com/go/JAMACatnip>



Methods of Herb Administration

- ✓ **Sleep sachets of lavender** and or hops: Studies show improved mood and altered brain waves
 - Under pillow
 - On a bedside table
- ✓ Single herbs
- ✓ **Combination formulas**

Skullcap	25 grams
Lemon balm	25 grams
Chamomile	25 grams
Passionflower	15 grams
Lavender	10 grams



Herbal Reference Materials

✓ Conversion Chart:

- <http://www.drritamarie.com/go/ConversionChart>

✓ Education and Learning:

- <http://www.drritamarie.com/go/TheHerbalAcademy>
- <http://www.drritamarie.com/go/HerbMentor>
- <http://www.drritamarie.com/go/BeneficialBotanicals>
- <http://www.drritamarie.com/go/HerbWisdom>
- <http://www.drritamarie.com/go/MedHerb>
- <http://www.drritamarie.com/go/AmericanBotanicalCouncil>
- <http://www.drritamarie.com/go/AmericanHerbalistsGuild>



✓ Drug Interactions and Contraindications:

- <http://www.drritamarie.com/go/HerbalsDrugInteractions>
- <http://www.drritamarie.com/go/LiverTox>



Herbal Medicine Reference Books

- ✓ Kloss, Jethro. *Back to Eden*, original 1939, updated 2004.
- ✓ Hoffman, David. *Medical Herbalism*, 2003.
- ✓ Winston, David. *Herbal Therapeutics*, eighth edition 2003.
- ✓ Pederson, Mark. *Nutritional Herbology*, 1987, revised 1998.
- ✓ Weiss, Rudolf Fritz, MD. *Weiss's Herbal Medicine*, original 1960, revised 2001.
- ✓ Mills, Simon and Bone. Kerry. *Principles and Practice of Phytotherapy*, original 2000, revised 2013.
- ✓ ***Book List from Mountain Herbs***
<http://www.drRitamarie.com/go/HerbalMedicineBookList>

