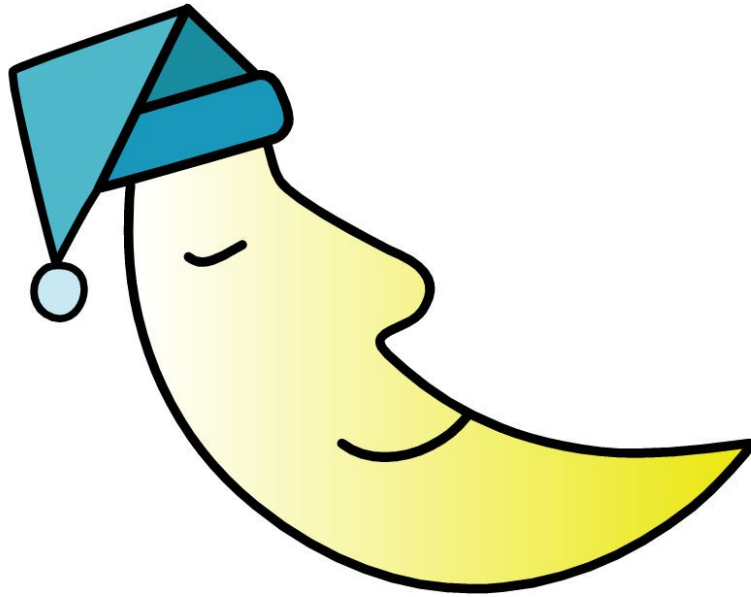


# Dr. Hedberg's Guide to Deep & Rejuvenating Sleep



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**Rejuvenating sleep is an extremely important and fundamental part of feeling great again. Your body releases a large amount of growth hormone while you sleep to repair all the damage that has been done that day. A great deal of rejuvenation occurs in the brain and the rest of the body while you sleep.**

**In order to get good sleep you should avoid the following stimulants:**

- **Caffeine**
- **Chocolate**
- **Teas that contain caffeine**
- **Yerba Mate**
- **Guarana**
- **Alcohol**

**It is very important to stabilize your blood sugar from the time you eat dinner until you go to bed. Make sure you eat a balanced meal of protein, carbohydrates and fat. Bed-time snacks are ok but they must be balanced and not contain sugar or processed carbohydrates.**

**Exercise can significantly improve your sleep quality. The earlier in the day the better if you are going to exercise, but some exercise is better than none so do it late if you have to.**

**Avoid watching television before you go to bed as this can disrupt your sleep. Avoid intense movies or reading material as this can stimulate your adrenals which will keep you awake.**

**Turn off all electric devices in your room to reduce electromagnetic radiation and do not sleep in the same room with your cell phone unless it is completely powered off.**

**Try and follow a regular sleep schedule. Go to bed and wake up at the same times every day.**

**Begin a regular meditation practice. Meditation can calm the mind, reduce stress and help you get clear on what is important so your mind is not racing.**

**Practice deep belly breathing like a baby breathes for 5 minutes every day. This will help to alkalize your body and reduce stress.**

**Your bedroom should be completely pitch-black. No clock radio, lights or outside light of any kind should be in your sleep space. Even though your eyes are closed, your brain is still receiving light stimuli which can reduce melatonin levels.**

**Take 400-600mg of magnesium before you go to bed to alkalize and calm your muscles and nervous system.**

# Supplements That Help You Sleep

## Melatonin

Melatonin is a hormone produced by the pineal gland in the brain with many functions. Your body works with natural circadian rhythms related to night and day. Melatonin's job is to regulate your body's response to changes in light as well as changes in seasons such as winter and summer. When it becomes dark, your brain responds by producing melatonin to put you to sleep. Melatonin enhances REM sleep which is your deepest and most restorative sleep time.

Melatonin is manufactured through this process:

**Tryptophan (amino acid) → 5-HTP → Serotonin → Melatonin**

Nutrients required for this process are vitamin B6, SAMe, iron and a folate-derived compound known as THB (tetrahydrobiopterin).

Melatonin levels decline with age due to calcification of the pineal gland and many other unknown factors.

The following are research-backed benefits of melatonin:

- **Supports Growth Hormone Production**
- **Stimulates the immune system**
- **Powerful antioxidant**
- **Increases lifespan in animal studies**
- **Improves sleep quality**
- **Reduces jet lag**
- **Helps night-shift workers regulate sleep patterns**
- **Relieves depression and SAD (seasonal affective disorder)**
- **Protects the brain**
- **Improves recovery from stroke**
- **Reduces migraines**
- **Reduces side-effects of chemotherapy**
- **Protects the liver from toxins**
- **Alleviates glaucoma**
- **Reduces stress hormones**
- **Reduces blood pressure**

These factors may reduce your natural melatonin production:

- **Poor sleeping habits such as going to bed too late**
- **Inadequate darkness during sleep: clock radios, night lights, street lights. Your room should be pitch black. You should be able to hold your hand in front of your face and not**

be able to see it at all.

- Not enough sunlight exposure during the day
- High stress levels
- Caffeine or alcohol consumption close to bed time
- High protein/low carbohydrate diet resulting in less tryptophan availability to the brain
- Inadequate cofactors for melatonin production as listed above
- Medications: Aspirin, diuretics, beta-blockers, benzodiazepines

The most effective general dose recommendation is 3 mg, 30 minutes before bed. Dosing ranges from .5mg to 20mg depending on how deficient you are and your unique health history. 5-HTP can be taken with melatonin to enhance sleep quality.

**Foods High in Melatonin (highest to lowest concentration)**

- Oats
- Sweet corn
- Rice
- Japanese radish
- Ginger
- Tomatoes
- Bananas
- Barley

**Potential Danger:** Melatonin may exacerbate autoimmune diseases such as Rheumatoid arthritis and Lupus. Immune related cancers such as leukemia and lymphoma are contraindicated. Melatonin is also not recommended during pregnancy, breast-feeding or if you are trying to get pregnant. Do not combine melatonin with corticosteroids or MAO inhibitors.

### **HTP (5-hydroxytryptophan)**

5-HTP is an amino acid that occurs in the human body and is the precursor to serotonin. 5-HTP is currently used to relieve mild to moderate depression, anxiety, insomnia and fatigue. It has been used in combination with lithium for bipolar (manic) depression at a dose of 200mg three times a day. It has also been shown to relieve migraine headaches at dosages of 200 to 600mg/day. Fibromyalgia sufferers took 300mg three times a day and showed improvement in sleep quality, depression, insomnia and muscle pain. Double-blind clinical trials have shown 5-HTP to improve sleep quality and the time it takes to fall asleep. Recommended dose on empty stomach before bed is approximately 150mg to as much as 300mg. 5-HTP should not be taken with antidepressants and selective serotonin reuptake inhibitors. 5-HTP may enhance the effects of St. John's wort. Vitamin B6, niacin and magnesium should be taken on the same day as 5-HTP as they are required for its metabolism.

## **GABA**

**GABA (gamma aminobutyric acid) is the main calming neurotransmitter in the body and central nervous system. Recommended dose approximately 100mg before bed.**

## **L-Theanine**

**L-Theanine is a non-protein amino acid found naturally in green tea (*Camellia sinensis*). It is clinically proven to reduce stress, balance mood and improve the quality of sleep. It's mechanism of action is through direct effect on GABA receptors. Recommended dose approximately 100mg before bed.**

## **Phosphatidylserine/Phosphorylated Serine**

**Phosphatidylserine's greatest benefit is its ability to lower cortisol levels by optimizing the brain's relationship with the adrenal glands. After only ten days of high doses of PS, research has shown that excessive cortisol levels can be decreased in healthy men. PS has also been shown to enhance brain function and memory, decrease anxiety and depression, improve mood, and enhance metabolism. It is also an antioxidant. It is very difficult for the body to make PS as it requires many nutrients for production. Supplementation is vital for optimizing adrenal function so cortisol cannot have its negative effects on the body and the thyroid.**

# **Herbal Medicines**

**Dosing for herbs is based on a variety of factors. Consult with your health care professional about recommended doses. Herbs can be taken in capsule form, liquid tincture or tea.**

## **Valerian (*Valeriana officinalis*)**

**Valerian root has been used for hundreds of years in Europe to relieve insomnia, anxiety, muscle spasms, stress-induced heart palpitations, digestive spasms, hysteria, nervous headaches and menstrual pain. Native Americans would boil the roots into a tea to calm nerves. Valerian root induces the release of GABA in the brain which has mild sedative effects. GABA basically calms the brain and nervous system. Valerian also influences serotonin and norepinephrine levels. Numerous studies have looked at the combination of Valerian and St. John's wort for depression and anxiety. This combination was shown to be as effective as the drug amitriptyline for depression and more effective than Valium for anxiety without any side effects..**

### **Passion Flower (*Passiflora incarnata*)**

Passion flower is traditionally used as a sedative, to calm nerves, insomnia, anxiety, nervousness and as an antispasmodic. Passion flower works well for those who “can't turn off his or her mind.”

Passion flower actually binds to benzodiazepine receptors in the brain which reduces anxiety thus helping you sleep. The nice thing about passion flower is that it does not have the side effects that medications do such as drowsiness upon awakening, impaired memory, decreased motor coordination.

### **German Chamomile (*Matricaria recutita*)**

Chamomile has been traditionally used to reduce tension and induce sleep, to relieve menstrual cramps, quiet upset stomach and relieve intestinal cramping. Chamomile is currently used for IBS, insomnia, indigestion, heartburn, PMS, inflamed bowel, peptic ulcers, intestinal cramping and as an ointment for eczema. Chamomile has the same action as passion flower by binding to benzodiazepine receptors.

### **Skullcap (*Scutellaria lateriflora*)**

Skullcap was traditionally used to calm nerves, reduce spasms, stress headaches and for nervous exhaustion. Skullcap is currently used with chamomile, lemon balm, oats and St. John's wort for insomnia, anxiety and mild obsessive-compulsive disorder. Skullcap can also help with restless-leg syndrome.

### **Lemon Balm (*Melissa officinalis*)**

Lemon balm was traditionally used for digestive disturbances. It is currently used for relieving nervousness, improving sleep, reducing over excitability and has a mild sedative effect. Lemon balm also work well as an antiviral topically on the herpes virus. Lemon can be combined with St. John's wort for seasonal effective disorder. Lemon balm works by enhancing GABA activity thus calming the brain and nervous system but without the side effects.

### **Lavender (*Lavendula angustifolia*)**

Lavender flowers and essential oils have been traditionally used with St. John's wort and lemon balm for depression. It has also been used for insomnia, irritability, headaches, digestive disturbances, pain and topically for burns.

## **Hops (*Humulus lupulus*)**

Hops has been traditionally used as a diuretic, placed in small pillows next to bed to induce sleep, digestive bitter for nervous stomach and digestive tract spasms, and as a sedative for insomnia, anxiety, nervousness, and tension headaches. Hops is currently used for insomnia-especially those with difficulty falling asleep, restlessness, anxiety, and stress-induced tension.

## **Kava Kava (*Piper methysticum*)**

Kava works by modifying GABA receptors in the brain, preventing adrenaline uptake and reducing anxiety. Kava was traditionally used to reduce anxiety, reduce spasms, sedative, diuretic and as a non-alcoholic calming drink. Kava is currently used to relieve anxiety, nervousness and tension. German studies have shown that kava is as effective a treatment for anxiety disorders as tricyclic antidepressants and benzodiazepines without the side effects. Kava enhances REM sleep without morning grogginess and relieves insomnia.

## **Ashwagandha (*Withania somnifera*)**

Ashwagandha also known as Indian Ginseng has been traditionally used as an adrenal adaptogen, sedative, anti-inflammatory, nervous system tonic, astringent, diuretic, antispasmodic and to raise low blood pressure. In Ayurvedic medicine it is used as an aphrodisiac, tonic for exhaustion, anxiety, depression, impaired memory and poor muscle tone. Ashwagandha is currently used to support the adrenal glands, for chronic fatigue syndrome, anxiety, insomnia, stress-induced ulcers and male impotence associated with exhaustion and anxiety.

Black Cohosh may help insomnia induced by menopausal symptoms such as hot flashes and mood swings.

Other calming herbs include Wild lettuce (*Lactuca virosa*), , Jamaican dogwood bark (*Piscidia erythrina*), jujube fruit (*Zizyphus spinosa*), California poppy (*Eschscholzia californica*).

If you follow all of these strategies and utilize supplementation, you should be able to achieve quality sleep. I recommend the products Sleep Aide from Vital Nutrients and Sleep Factors from Biogenesis. Both of these can be purchased at our office or through Moss Nutrition. Individual melatonin products are recommended as well in doses of .5 mg, 1.5mg, 3mg, 10mg and 20mg. Again, consult your health care practitioner for recommended dosing in your case.

Even if you do everything you can from a holistic perspective, you may need sleep medication. Remember that is very difficult to overcome any health problem without adequate sleep so don't hesitate to talk to your doctor for prescription sleep medication. The benefits of achieving restful sleep outweigh the potential side effects.

I hope this eBook has served you well and you are enjoying deep & rejuvenating sleep!

Yours in Health,  
Nikolas R. Hedberg, D.C., D.A.B.C.I.