



Pain 2 Possibilities

sleep supplements

Healing Sleep For Chronic Pain 101

Important First Steps

Insomnia or sleep deprivation can be a complicated matter that involves many factors. That is why at Pain 2 Possibilities we like to address insomnia with a more wholistic approach for a whole person (that's you!). In this ebook we address just one component of the Pain 2 Possibilities sleep matrix which is supplementation for sleep.

This information is not meant to replace any advice your doctor has given you about insomnia or health in general. It is meant to work in tandem with your current protocol to help you learn more about sleep and sleep strategies. This book is simply meant to be a guide and an opportunity for expanding your sleep know-how.

I encourage you share this information with your physician or care team. Ask questions and seek clarification if these supplements are safe to use alongside any prescriptions you might be on.

Remember that if you do decide to support your sleep strategy with supplementation it will take time to see any improvements. It could feasibly take days or sometimes months to notice any change but that is a normal part of the process and should be expected.

Testing for deficiencies is always a good first start! Your family doctor and/or a Naturopath can do the testing required to determine what your unique nutritional needs are. Typically the testing is done through blood work so be sure to speak with your Doctor, care provider or Naturopath or Nutritionist/Dietician to schedule an appointment before you begin.

"Sleep is like the golden chain that binds our health and body together."

— *Thomas Dekker - Author*

Let's explore three important components of sleep supplementation

Minerals

Amino Acids

Hormones

Minerals - Magnesium Glycinate

Magnesium is one of the most common minerals on earth and is present in many foods. It's essential for human health and is used in over 600 cellular reactions throughout your body, including sleep.

Magnesium is considered a softening mineral. When your body is under stress (emotional or physical) you tend to burn through magnesium at a faster rate thereby depleting your reserves.

Magnesium helps activate the parasympathetic nervous system to make you feel calm and more relaxed.⁽¹⁾

In our workshop we discussed (in the explainer video) how our circadian systems help to regulate the release of certain hormones. Magnesium regulates the hormone melatonin (our sleepy hormone), and binds to GABA receptors. When your nervous system is calm and relaxed, it can be easier for you to fall and stay asleep.

How much magnesium?

According to The Institute of Medicine,⁵ a daily dietary intake of 310–360 mg of magnesium for adult women and 400–420 mg for adult men can help improve sleep. ⁽²⁾

The one that is most often prescribed by providers who specialize in nutrition is Magnesium Glycinate. This means that magnesium is combined with the amino acid glycine. Overall, the glycinate form absorbs better and is least likely to cause digestive distress



Why Supplements?

It is harder to get minerals such as magnesium from our food when the soil is depleted. To get the amount of magnesium necessary to positively impact your sleep would take a lot of food. That is why it is often recommended to supplement regularly with magnesium.

Amino Acids

There are 6 Amino Acids that we will review in this ebook. They include

- Glycine
- 5-HTP
- L-Theanine
- GABA
- Seriphos
- L-Glutamine

2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4455825/>

Glycine

Glycine is a powerhouse when it comes to cellular function within our bodies notably in the production of proteins for the growth and maintenance of tissues as well as in the production of enzymes and hormones.

Glycine is a neurotransmitter that is the precursor to melatonin.

Glycine also helps to regulate the body's immune response, to limit unhealthful inflammation and spur healing.⁽³⁾

Glycine also helps to reduce core body temperature. A slight drop in body temp is a key part of the body's physical progression into sleep. Note: If you remember in our workshop we discussed how temperature is one of the cues our bodies need to help regulate our circadian system.



How Much Glycine?

Research is showing that 3 grams of glycine before bed improves the time it takes to fall asleep, enhances sleep quality, lessens daytime sleepiness and improves cognition. (4)

Note: Those who take Clozapine (Clozaril) should not take glycine as it may make your medication less effective.

3. <https://thesleepdoctor.com/2018/07/23/understanding-glycine/>

4. <https://pubmed.ncbi.nlm.nih.gov/14669843/> 14

5-HTP

5-Hydroxytryptophan (5-HTP) is an amino acid that your body naturally produces.

Your body uses it to produce serotonin, a chemical messenger that helps regulate mood, appetite, and other important functions, including sleep.

Low serotonin levels trigger sleep disorders. 5-HTP produces serotonin. This serotonin is then converted into the hormone melatonin, which has an important role in the body's sleep-wake cycle.⁽⁵⁾

Therefore, people take 5-HTP to increase their body's serotonin production and help maintain a healthy sleeping cycle.

Combine 5-HTP with GABA Studies also show that those people who take 5-HTP with GABA improve their sleep quality and increase their sleep duration. Therefore, you sleep faster and longer. ⁽⁶⁾



How much 5-HTP?

Studies have shown that taking 100–300 mg of 5-HTP 30–45 minutes before bed improves the time it takes for users to fall asleep.

5. <https://www.ncbi.nlm.nih.gov/pubmed/17984558>

6. <https://www.ncbi.nlm.nih.gov/pubmed/19417589>

L-Thianine

L-theanine is an amino acid that is found in tea leaves or can be consumed as a supplement.

L-theanine promotes relaxation and facilitates sleep by contributing to a number of changes in the brain:

- Boosts levels of GABA and other calming brain chemicals such as serotonin and dopamine.
- Lowers levels of “excitatory” brain chemicals - the ones that are responsible for waking you up.
- Enhances alpha brain waves - similar to when you are meditating.

L-theanine helps to promote relaxation and to reduce stress without sedating. L-theanine can help foster a state of calm, attentive wakefulness.

(7)



How Much L-Theanine?

It is recommended that users begin with the smallest suggested dose, and gradually increase until it has an effect.

For sleep, stress and other uses:

100 mg to 400 mg

In combination with caffeine: 12-100 mg L-theanine, 30-100 mg caffeine.

Speak with your Doctor or Naturopath for a dosage that works best for you.

If you are taking medications to treat high blood pressure or you are taking a stimulant, be sure to talk to your Dr. about contraindications.

7. <https://www.ncbi.nlm.nih.gov/pubmed/19417589>

GABA

Gamma-aminobutyric acid, also known as GABA, is a naturally-occurring amino acid produced in the brain. It works as a neurotransmitter, facilitating communication among brain cells.

However, low GABA activity is linked to disrupted sleep and insomnia.

When GABA attaches to the GABA receptor in the brain, it produces a calming effect. This process helps reduce feelings of anxiety, fear, and stress.

GABA is considered an inhibitory neurotransmitter (much like the brakes on a car GABA, is the brakes on the brain), which helps to calm the hyper vigilant nervous system, allowing you to feel more relaxed with less anxiety and better able to regulate your moods for a more restful sleep. GABA also plays an important role in regulating muscle tone.



How Much GABA?

In general, it is recommended that users begin with the lowest suggested dose, and gradually increase as needed. For sleep, stress and anxiety: 100-200 mg and higher doses, in scientific studies. Individual dosing and length of use will vary. Be sure to seek the advice of your physician or Naturopath for a clear understanding of dosage unique to your specific needs.⁽⁸⁾

8. <https://thesleepdoctor.com/2018/06/19/understanding-gaba/>

Seriphos

Seriphos, or phosphorylated serine, is another supplement that can help you fall asleep and stay asleep.

Cortisol (the excitatory hormone that helps to wake you up in the morning and decreases to help you feel more sleepy...also heightens when under stress) can negatively affect your sleep if it is elevated. Seriphos helps to reduce cortisol production to help with a better night's sleep. ⁽⁹⁾

Because cortisol is produced in the adrenal glands, if you are aware of any adrenal issues then you may be producing too much cortisol.



How Much Seriphos?

If you have trouble falling asleep and wake up periodically at night, you will want to try taking 1,000 mg just before dinner and another 2,000 mg by 10 pm. If you are able to fall asleep but wake up very early, start with 2,000 mg before 10 pm.

Warning: do not take seriphos for more than 90 days and always take at least 24 hours off each month.

9. <https://link.springer.com/article/10.1186/1476-511X-13-121>

L-Glutamine

Glutamine is an amino acid that offers many health benefits in the body, including improving your sleep quality.

If you are under a lot of stress, several studies have shown that during these times concentrations of glutamine in the body are diminished thereby making it harder to fall asleep or stay asleep.

Apart from its role in stabilizing the immune system, taking L-glutamine helps boost dopamine production in the body. Low levels of dopamine are associated with sleep disorders.

Glutamine has a calming effect and counteracts symptoms of stress; it can be the key ingredient missing if you are feeling wired and can't relax while nodding off to sleep. Glutamine increases the production of GABA, an important inhibitory neurotransmitter that acts as a natural sedative in the brain.

If the body has enough glutamine available, the brain will release GABA, which helps promote sleepiness and allows a person to rest.



How Much L-Glutamine?

According to Regulatory Toxicology and Pharmacology, taking 14 grams per day of L-glutamine is a safe level for supplemental L-glutamine in healthy adults.

Children are generally given a dose of no more than 0.7 grams per kilogram of body weight per day (g/kg/day)

Plant Based Options

Cannabidiol, also known as **CBD**, is one of the main cannabinoids in the cannabis plant. Cannabinoids interact with your endocannabinoid system, which helps your body maintain homeostasis. Unlike tetrahydrocannabinol (THC), CBD isn't psychoactive, meaning it won't get you "high."

Instead, CBD has a range of amazing health benefits, including helping you sleep through the night.

Joseph Maroon, M.D., a clinical professor and neurosurgeon at the University of Pittsburgh Medical Center, says that CBD can help with pain and anxiety.

Another 2017 review published in the Current Psychiatry Reports also hints that CBD interacts with certain brain receptors, affecting your sleep and wake cycle. Overall, CBD can help you sleep through the night by improving your anxiety and pain levels.



How Much CBD?

The amount of CBD you should take depends on different factors including...

- **Your body weight**
- **Your body chemistry**
- **The concentration of CBD in each pill, capsule, drop, or gummy**

Speak with a CBD specialist or your Physician for appropriate types and dosages.

(10)

10. <https://www.consumerreports.org/cbd/can-cbd-help-you-sleep/#:~:text=Some%20other%20research%20hints%20that,the%20journal%20Current%20Psychiatry%20Reports.>

Ashwagandha is an herb that has been used in Ayurvedic medicine for thousands of years.* Its botanical name is *Withania somnifera*, meaning “sleep-inducing” in Latin.⁽¹¹⁾

Today, ashwagandha is a popular supplement to improve sleep quality. ⁽¹²⁾

People with insomnia also use the herb to help them sleep through the night.⁽¹³⁾

Ashwagandha leaves contain the triethylene glycol compound, which decreases sleep latency (the time it takes to fall asleep).

According to a study from the Department of Molecular Sleep in Japan, triethylene glycol compounds increase non-rapid eye movement (NREM) sleep. ⁽¹⁴⁾

Ashwagandha helps maintain healthy cortisol levels (our excitatory hormone) allowing our sleep cycle to flourish. ⁽¹⁵⁾

Ashwagandha also helps promote healthy cortisol and healthy inflammatory processes that help in stimulating the stress response. ⁽¹⁶⁾



How Much Ashwagandha?

Taking 500–600 mg of ashwagandha per day for 6–12 weeks can help you sleep through the night, as it can maintain healthy stress and anxiety levels.

11. <https://pubmed.ncbi.nlm.nih.gov/23439798/> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3252722/>

12. <https://www.ncbi.nlm.nih.gov/pubmed/23125505>

13. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6039614/>

14. <https://pubmed.ncbi.nlm.nih.gov/28207892>

15. <https://www.ncbi.nlm.nih.gov/pubmed/23439798>

16. <https://www.ncbi.nlm.nih.gov/pubmed/23439798>



About Pain 2 Possibilities.

After seeing both her parents struggling with either chronic health issues (many of them undiagnosed) and medical overwhelm Deana decided to become a certified Wellness coach. After being on her own journey of recovery from an accident in a wave while travelling abroad (the day *after* her insurance ran out) and supporting her husband along his rare chronic illness journey, Deana then began to specialize in chronic pain.

Pain 2 Possibilities came to be a few years back with the realization that a large gap exists between our current medical model with Acute pain (which it is really good at) and the kind of care that you receive with chronic pain (our model is not so good at). P2P exists to close that gap and to empower the chronic pain community to connect their current protocols from our medical system with the power of self management. That is why we have created The Change Pain Academy! For more information on what we do inside the Academy, [take a look here](#)