



# ***SUPER BRAIN***

Neurotransmitter Strengthening Protocols

# Neurotransmitter Strengthening Protocols

Many individuals spend their lives with less than adequate neurotransmitter production, causing them to settle for mediocrity in their lives. They may have mood swings, feel overly emotional, deal with brain fog and poor memory or lack motivation to do the things they need to do.

These problems can be corrected and improved with natural health strategies and specific supplementation. This document will help you with that.

If you haven't taken the full neurotransmitter quiz than that would be best to do before you begin in order to discover which neurotransmitter deficiencies, you may be dealing with.

In some cases, you will notice you are scoring out high in multiple areas. If this is the case, focus on the areas where you are weakest first and see how you respond. Often times you will notice that all the major symptoms will begin to improve as you focus on one major area.

## Give Yourself a Score:

Before starting, it would be a good idea to rate your symptoms on a scale of 1-10 with one being minor and 10 being the worst possible so you can gauge how you are responding over time.

If you have trouble with anxiety, it may be a 6/10 in the beginning and after 30 days, you notice a 20% improvement so you rank it at a 4/10. This sort of assessment will help you understand and appreciate your improvement.

## Table of Contents:

Section	Page Number:
<b>Introduction:</b>	1
<b>Serotonin Strengthening Program</b>	2-5
<b>Acetylcholine Strengthening Program</b>	6-8
<b>Dopamine Strengthening Program</b>	9-11
<b>GABA Strengthening Program</b>	12-15
<b>Endorphin Strengthening Program</b>	16-19

**\*\*\*You can find all supplement recommendations at our [Store Page here](#)**

\*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease. If you are pregnant, nursing, taking medication, or have a medical condition, consult your physician before doing any of these health strategies.

**\*This information is based on Peer Reviewed published studies and all references can be found on DrJockers.com**

## **Serotonin Strengthening Program**

It is all too common in our society to deal with a serotonin deficiency. Serotonin helps us to feel good. It has been called by many the “happy molecule” for its role in helping to create a positive mood.

Serotonin is also an inhibitory neurotransmitter that helps us with impulse control and pain relief. It also is a precursor to the sleep hormone melatonin and plays a very important role in good sleep. Although serotonin plays a very important role in the brain, 95% of the serotonin in the body is produced in the intestines, which are called the second brain.

Many experts consider serotonin more of a hormone than a neurotransmitter because its effects impact the entire body.

### **Major Symptoms:**

Frequent worry or anxiety

Seasonal Affective Disorder (SAD)

Trouble falling asleep

Light Sleeper that is frequently and easily awoken

Frequent moodiness

Strongly self-critical or frequent feelings of guilt

Craving sweet or salty foods (especially later in the day)

Lacking confidence more than you should

Craving wine or alcohol later in the day

Obsessive behavior – perfectionist, neat freak or controlling

Easily addicted to sugar, alcohol, TV, games, sex or anything else you enjoy

Fibromyalgia or unexplained muscle pains

Irritable bowel type of symptoms

**Women:** More twice as likely to experience anxiety, depression or other mood disorders than men. Women may also experience more carb cravings, binge eating and weight gain.

**Men:** More likely to experience problems with ADHD, addictions (such as alcoholism, sex and pornography, smoking, or food addictions) and trouble with impulse control that can express itself with uncontrollable anger, rudeness or other socially unacceptable behaviors.

**Response to Anti-Depressants:** The response to anti-depressants is often good as most of these are SSRI's which act to increase serotonin activity in the brain. This NEVER gets to the cause of the low serotonin, but can improve symptoms for a period of time.

## **Biggest Factors Involved In Reducing Serotonin Levels**

Chronic Mental/Emotional Stress

Inadequate or Ineffective Sleep

Poor Blood Sugar Stability

Vitamin B1, B2, B6, and/or folate deficiency

Magnesium deficiency

Vitamin D deficiency

Spinal Subluxation

Sedentary Lifestyle

Omega 3 Fatty Acid Deficiency

Chronic Brain Inflammation

Poor Digestive Health

## **Natural Strategies to Boost Serotonin Levels:**

1. **Healthy Sun Exposure:** The sunlight stimulates serotonin production. The best time for this is in the morning and around the middle of the day.
2. **Get in the Dirt:** Microbes in the soil have been shown to increase serotonin levels. This is why gardening is one of the best hobbies for your mood. Going to the beach and getting in the sand works great too!
3. **Regular Exercise:** Get moving! Walking, running and resistance training all help to boost up serotonin levels. Exercise beats anti-depressant meds in every clinical trial.

4. **Cultivate Gratitude:** Focusing on positive thoughts has been shown to increase the brain's serotonin levels. Decide to stay upbeat in spite of your circumstances.
  
5. **Prayer and Meditation:** Focused breathing, empathy and the ability to control your thoughts through meditation and prayer will help you make life so much more enjoyable.



## Best Serotonin Boosting Foods:

There is a lot of information on the web about foods that boost serotonin, however, we want to avoid foods that are high in carbohydrates that throw off our blood sugar. The best foods for optimizing serotonin levels include:

1. Wild caught, cold-water, fatty fish like salmon
2. Organic green tea
3. Turmeric
4. Fermented foods like sauerkraut, pickles and kimchi
5. Dark chocolate

## Best Supplements For Boosting Serotonin Levels:

There are many herbs that naturally boost serotonin, but

1. **5-HTP:** This is the best molecule for boosting serotonin levels naturally. It is easy for the body to convert 5-HTP into serotonin.
2. **Omega 3 Fatty Acids:** These are anti-inflammatory and have a positive effect on boosting serotonin levels. The best choice is a purified fish oil that is high in the fatty acids EPA and DHA.
3. **Magnesium:** This helps to modulate stress hormone levels in the brain, which can have a direct impact on serotonin levels. The best choice is a magnesium that crosses the blood barrier. The best is magnesium malate, glycinate and threonate. We recommend [brain calm magnesium](#)
4. **B Complex:** Getting a pre-activated form of B vitamins can be extremely effective. We recommend [B Strong](#).
5. **L-Theanine:** L-Theanine is a naturally occurring, biologically active, free-form amino acid that provides relaxation support by supporting serotonin levels.
6. **Rhodiola:** This adaptogenic herb acts as a monoamine oxidase inhibitor in that it blocks the enzymes in the body that break down serotonin. This keeps

more serotonin acting in the brain and body. Begin with 100 mg – 1x per day and if you feel good than go up to 100-200 mg – 2x per day.

7. **SAM-e**: The supplement (S-adenosyl methionine) is commonly purchased at health food stores as a means to treat depression. This can be dangerous! Before taking SAM-e, you

should know whether you have unique single nucleotide polymorphisms leading to under or overmethylation. Undermethylators will have lower SAM-e levels and will benefit from supplementing while overmethylators can cause more harm. Be sure you are working with a physician trained in proper SAM-e supplementation if you plan on using.

8. **St Johns Wort:** St John's wort acts to block the reuptake of serotonin and increases the amount of serotonin receptors. Proper dosage: 300 mg – 3x daily

## **Dr Jockers Recommendations For Serotonin Production:**

The most common neurotransmitter deficiency I find is a lack of serotonin production. I think this has to do with the level of stress we are under and the epidemic of leaky gut syndrome.

I follow a number of the strategies, including healing the gut, balancing blood sugar and reducing stress. My main supplement I use to improve Serotonin levels is

**Brain Calm Magnesium:** This is a specific form of magnesium is the only form of magnesium proven in animal studies to cross the blood-brain barrier. Boosting the brain's magnesium level is vital to healthy cognition, which includes long- and short-term memory, learning, stress management and sleep.

Normal Dosage: 1 scoop – 1x daily  
3x daily

Advanced Dosage: 2 scoop – 2-

**Adapt-Strong:** This formula provides clinical dosages of vitamin B6, rhodiola and cordyceps. This formula provides useful support for both hyper and hypofunction of the adrenals. Hyperfunction is when the adrenals are overproducing hormones, such as cortisol, and hypofunction is the opposite, when the adrenals are under producing.

Normal Dosage: Take 1 cap – 2x daily  
– 2x daily

Advanced Dosage: Take 2 caps

**B Strong:** A combination blend of methylated B vitamins to help support energy production and blood sugar regulation within the body.

Normal Dosage: Take 1 cap – 2x daily  
– 2x daily

Advanced Dosage: Take 2 caps

**Mood Protect:** Combination of herbs, nutrients and compounds that promote serotonin and GABA production to ease anxiety and improve overall mood and sleep. This product has clinical dosages of GABA, taurine, L-theanine and 5-HTP. This also contains small amounts of zinc, B6 and magnesium to improve natural serotonin production.

Normal Dosage: Take 1 cap – 2 times daily (away from meals)

Advanced Dosage: Take 2 caps – 2 times daily (away from meals)

## **Acetylcholine Strengthening Program:**

If you are having trouble with your memory, you may very well have weak acetylcholine production. This neurotransmitter is found throughout the brain, but in particular, it is in the hippocampus and temporal lobes of the brain where memories are stored. Additionally, it is an important activator of gut motility.

Often times, low acetylcholine levels will manifest in both memory issues and sluggish digestive function. Here are the major symptoms and helpful strategies to naturally boost up your acetylcholine levels.

### **Major Symptoms:**

- Forgetting common facts
- Trouble understanding written or spoken language
- Forgetting where you put things (like your car keys)
- Difficulty remembering lists, instructions or directions
- Forgetting people's names and faces after meeting them
- Disorientation
- Lack of Passion, creativity and imagination
- Difficulty finding the right words before you speak
- Slowed or confused thinking process
- Making simple mistakes at work
- Dry mouth
- Constipation

### **Biggest Factors Involved In Reducing Acetylcholine Levels:**

- Chronic Stress
- Inadequate or Ineffective Sleep
- Poor Blood Sugar Stability

Toxicity (Heavy metals, pesticides, EMF exposure)

Vitamin B1, B5 and choline deficiencies

Medication Usage

## **Lifestyle Strategies to Improve Acetylcholine:**

- 1. Adapt to Stress Better:** Follow the 25 lifestyle strategies in the Adrenal Health guide to heal adrenal fatigue.
- 2. Sleep Better:** It is key for you to prioritize sleep if you are going to improve your acetylcholine levels. Follow the advanced strategies in the sleep hack PDF for more effective sleep.
- 3. Balance Your Blood Sugar Levels:** Follow the Super Brain diet and take blood sugar regulating supplements such as High Energy Support and Brain Supercharge and overtime you will maintain healthy blood sugar levels that will improve overall neurotransmitter production and utilization.
- 4. Cleanse Your Body:** Drink clean, filtered water and follow our super hydrating principles to flush your body of toxic debris. Practice intermittent fasting and liquid nutrition throughout the day for more effective cleansing.

Consider using as many of the 20 Advanced Healing and Cleansing Strategies E-booklet.

- 5. Avoid Anticholinergic Drugs:** These drugs destroy acetylcholine levels. This includes the majority of the medications that begin with “anti” such as antibiotics, antihistamines and anti-depressants. In addition, NSAID’s like Tylenol and acid reflux medications deplete acetylcholine levels as well.
- 6. Reduce Caffeine Intake:** Caffeine increases the amount of acetylcholine usage. Best to use caffeine strategically for high performance, but not as an everyday tool.
- 7. Best Foods to Eat For Choline:** These foods are rich in choline, which is the major precursor to acetylcholine. Additionally, they contain

omega 3 fatty acids, saturated fats, zinc and B12, which are all essential nutrients for healthy acetylcholine levels.

1. Pasture-Raised Eggs
2. Wild-Caught Salmon
3. Grass-fed Meats
4. Liver from grass-fed animals
5. Bone Broth Protein



## Best Supplements For Acetylcholine:

1. **Choline Bitartrate:** This is the most basic form of choline and it will boost up acetylcholine levels. Recommended dosage is 50-100 mg, 1-2x daily
2. **Huperzine A:** This molecule is made from the firmoss plant and quickly penetrates the blood barrier. It is most known for its inhibition of acetylcholinesterases, which increases acetylcholine at the synapse.

## Dr Jockers Tips:

I begin with all the basics and in particular, will focus on balancing blood sugar levels, improving stress adaptation and sleep patterns.

We will also focus on getting high quality nutrients from pasture-raised eggs, wild caught salmon and grass-fed meats. We will also use high quality fish oil supplements, which improve all around neurotransmitter production.

Pasture-raised eggs are by far the best source with over 500 mg per serving.

Here are the supplements I use:

**Gut Healing Protein:** Take 1-2 scoops of this daily for the 50-100 mg of choline bitartrate and it comes packed full of brain protecting anti-oxidants and gut healing nutrients.

Normal Protocol: Take 1-2 scoops in 1 shake daily

Advanced Protocol: Take 2 scoops in 2 shakes daily

**Memory Charge:** This is a supplement full of herbs and nutrients that enhance blood flow to the brain. It also contains 100 mg of high potency huperzine A to boost acetylcholine levels in the synapse and enhance memory and cognitive acceleration.

Normal Protocol: Take 1 cap – 2x daily with or without food

Advanced Protocol: Take 2 caps – 2x daily with or without food

## Common Question:

Q: Can I take the Gut Healing Protein and the Memory Charge together?

A: Yes, these can be taken together without any issues.

## **Dopamine Strengthening Program:**

Dopamine has been called the “motivation molecule,” as it helps provide the drive and focus needed to get stuff done. Dopamine is also involved with the “pleasure system” of the brain and functions to create a feeling of enjoyment and a sense of reward in order to motivate performance.

People that suffer with low dopamine often experience hopelessness, worthlessness and struggle to handle stress. These individuals will often isolate themselves from others and have self-destructive thoughts and behaviors ([1](#)).

Being easily distracted and having trouble focusing and finishing tasks can be signs of early dopamine deficiencies ([2](#)). Long-term, poor dopamine signaling can result in hand tremors, slowness of movement and pre-Parkinson’s symptoms.

### **Major Symptoms of Dopamine Deficiency:**

Lack of drive, motivation and enthusiasm

Depressed, bored or apathetic

Mental and physical fatigue regardless of how well you slept

Lack of focus and concentration

Cold hands or feet

Low sex drive

Struggling to finish projects or tasks

Restless Leg Syndrome

Parkinsonian tremor

Sugar and Carbohydrate Cravings

### **Biggest Factors Involved In Reducing Dopamine Levels:**

Chronic Stress and Adrenal Fatigue

Inadequate or Ineffective Sleep

Poor Blood Sugar Stability

Alcohol Withdrawal Syndrome

Overweight or Obesity

Hypothyroidism

Exposure to lead, arsenic and cadmium

Tyrosine deficiency

Low magnesium, zinc, iron, vitamin C and D, vitamins B3 (niacin) and B6

## **Best Foods For Boosting Dopamine Levels:**

1. Organic coffee
2. Raw cacao or minimally processed dark chocolate
3. Organic green tea
4. Avocado
5. Green Leafy Vegetables
6. Beets
7. Nuts & Seeds

## **Best Dopamine Boosting Supplements:**

**L-Tyrosine:** This amino acid is a precursor to dopamine. For boosting tyrosine, take dosages between 500-2500 mg on an empty stomach.

**DL-Phenylalanine:** This dosage can be between 1 – 2 grams on an empty stomach.

**Vitamin B6:** Best dosage is between 50-100 mg taken with or without meals.

**Rhodiola:** Best to be taken 1-2 times in a dosage of 100-200 mg each time.

**Cordyceps:** Best to be taken 1-2 times in a dosage of 400-800 mg each time.

## **Dr Jockers Strategy:**

For individuals with low dopamine, I focus on blood sugar stability, stress reduction and adaption strategies and look to improve thyroid if it is a problem.

We do a low-carb diet but will use a lot of dark chocolate, organic coffee, nuts and seeds so long as they aren't dealing with an autoimmune disease. I use one of both of the following supplements to help individuals with low dopamine.

**Adapt-Strong:** This formula provides clinical dosages of vitamin B6, rhodiola and cordyceps. This formula provides useful support for both hyper and hypofunction of the adrenals. Hyperfunction is when the adrenals are overproducing hormones, such as cortisol, and hypofunction is the opposite, when the adrenals are under producing.

Normal Dosage: Take 1 cap – 2x daily

Advanced Dosage: Take 2 caps – 2x daily

**Dopamine Plus:** This formula contains clinical dosages of L-tyrosine, DL Phenylalanine, vitamin C and B6 and it contains 5-HTP which helps keep the dopamine:serotonin balance in order. This product helps improve focus, concentration and reduces cravings for sugar or other addictive behaviors.

Normal Dosage: Take 2 caps – 2x daily away from meals

Advanced Dosage: Take 4 caps – 2x daily away from meals

## **Common Question:**

### **Can I Take the Adapt Strong with the Dopamine Plus?**

A: Yes, the only overlapping nutrient is B6 and based on my experience and research this water soluble nutrients is very low in most people with lower dopamine symptoms and if you were to get too much, your body would urinate it out.

### **What is the best dosage to begin with of these supplements?**

A: Begin with the normal dosage and if you don't notice anything or begin feeling good, you can experiment and go up to the advanced dosage. If you feel poorly on the normal dosage, take 3 days off and then take ½ of the normal dosage and see how you do.

## **GABA Strengthening Program**

GABA (Gamma-AminoButyric Acid) is an inhibitory neurotransmitter that has a calming and relaxing effect in the brain. It acts like the brakes in a car, to where it slows down and/or stops brain activity on an as-needed basis to help us function better.

When we are low in GABA, our brain continues to hit the gas, overstimulating us with activity. Our gut microbiome plays an important role with GABA production and helps to convert glutamine and glutamic acid into GABA. A disordered microbiome is a major cause of low GABA production.

### **Symptoms of Low GABA Levels:**

- Trouble relaxing or loosening up
- Easily agitated and frustrated
- Racing thoughts that keep you up at night
- Sensitivity to bright lights, chemicals or loud noises
- Anxiety and/or panic disorders
- Feeling overwhelmed
- Body feels stiff and tight
- Heart palpitations and shortness of breath
- Cold hands and feet
- Fibromyalgia
- Irritable bowel syndrome

People with low GABA will often see a worsening of these symptoms when they skip a meal or attempt to fast.

### **Biggest Factors Involved In Reducing GABA Levels:**



Chronic Stress and Adrenal Fatigue

Inadequate or Ineffective Sleep

Poor Blood Sugar Stability

Gut Microbiome Dysbiosis

Caffeine and Alcohol consumption

Zinc, Vitamin B6, Taurine and Glutamine deficiencies

## **Strategies to Raise GABA:**

In order for the body to manufacture GABA, there needs to be an abundant amount of the amino acid L-glutamine present. Glutamine is then converted into another amino acid called glutamic acid and then into GABA.

This whole process depends upon the activity of zinc, vitamin B6 and taurine. If we are deficient in these nutrients we will not be able to produce adequate amounts of GABA.

- 1. Adapt to Stress Better:** Follow the 25 lifestyle strategies in the Adrenal Health guide to heal adrenal fatigue.
- 2. Anti-Inflammatory Diet:** Be sure to follow the Super Brain nutrition plan in order to provide the right nutrients to support healthy neurotransmitter function.
- 3. Sleep Better:** It is key for you to prioritize sleep if you are going to improve your acetylcholine levels. Follow the advanced strategies in the sleep hack PDF for more effective sleep.
- 4. Improve the Microbiome:** Consume fermented foods and anti-microbial herbs such as garlic, onions, oregano, basil, thyme, peppermint, ginger, etc. to help improve the overall constitution of the gut microbes.
- 5. Take Epsom Salt Baths with Essential Oils:** Epsom salt baths can provide magnesium into the blood stream that acts to relax the body. Adding in essential oils such as valerian, kava, chamomile, lavender, lemon balm and passionflower can be extremely supportive for healthy GABA levels.

- 6. Deep Breathing:** Taking time to focus on breathing can be very supportive for GABA levels. Try taking 3 minutes every hour and focus on doing deep breathing with a 5-10 second inhalation and a 5-10 second exhalation.
  
- 7. Regular Exercise:** Regular movement is good for all neurotransmitters. Individuals with low GABA should be doing low-intensity movement such as walking and doing lots of deep breathing. Practicing yoga can be extremely supportive of GABA levels.

## **Best Foods to Boost GABA Levels:**

Healthy microbes such as lactobacillus strains produce GABA naturally as a byproduct of metabolizing the amino acids L-glutamine and glutamic acid. Fermented foods that are rich in these lactobacillus microbes are rich in GABA. They are truly the only dietary source of GABA. You may see other lists online, but those are foods that are richer in

1. Sauerkraut
2. Kimchi
3. Grass-fed cow or goat kefir or yogurt
4. Coconut Water Kefir
5. Beet Kvass
6. Coconut milk yogurt
7. Kombucha
8. Pickles
9. Pickled Ginger
10. Miso, Natto or Tempeh

## **Supplements to Raise GABA Levels:**

**Magnesium:** Supplemental magnesium helps to raise GABA levels. By far, the most effective form for this is called Magnesium L-threonate. I recommend doing 1-2 grams – 1-2 times daily.

**B Complex:** B6 deficiencies can cause low levels of GABA. I will typically recommend a full B complex supplement with activated forms of B vitamins to maintain.

**Probiotics:** In particular, supplementing with probiotics that contain a variety of lactobacillus and Bifidobacterium strains help to raise up GABA levels. I recommend taking 30-100 billion CFU's daily.

**GABA:** Taking supplemental GABA can be very effective. It is thought to be too large to cross the blood brain barrier, however, most people with low GABA have a disrupted BBB and respond very well to supplemental GABA. I recommend doing 100-200 mg 1-2x daily.

**L-Glutamine:** Supplementing with L-glutamine can be very effective for supporting GABA levels. I recommend starting with 4-5 grams to see how your body is tolerating it and gradually going up to 10-12 grams for boosting GABA levels.

If you notice an increase in irritability, headaches or anxiety, you may be deficient in B6 and/or zinc. Try adding those in while reducing L-glutamine levels for a while and then try L-glutamine again.

**Taurine:** This is an amino acid precursor to GABA and has a similar structure but is smaller. In the brain, it helps to activate GABA receptors. I use 300-600mg, 1-2 times daily.

**L-Theanine:** is a naturally occurring, biologically active, free-form amino acid that provides relaxation support. L-theanine improves GABA production and induces a state of relaxation of the mind without inducing drowsiness. I recommend 50-100 mg, 1-2 times daily.

**Valerian, Kava, Chamomile, Lavender, Lemon Balm & PassionFlower:** These herbs help to improve GABA production and utilization in the brain. You can drink herbal teas with these or use the essential oils on your body, in an Epsom Salt bath and in a diffuser so you can breathe in these supportive compounds.

## **Dr Jockers Strategy:**

I follow a number of the strategies, including healing the gut, balancing blood sugar and reducing stress. My main supplements I use to improve GABA levels are Brain Calm magnesium and Mood protect. Yes, you can take these both together without any problems.

**Brain Calm Magnesium:** This is a specific form of magnesium is the only form of magnesium proven in animal studies to cross the blood-brain barrier. Boosting the brain's magnesium level is vital to healthy cognition, which includes long- and short-term memory, learning, stress management and sleep.

Normal Dosage: 1 scoop – 1x daily  
3x daily

Advanced Dosage: 2 scoop – 2-

**Mood Protect:** Combination of herbs, nutrients and compounds that promote serotonin and GABA production to ease anxiety and improve overall mood and sleep. This product has clinical dosages of GABA, taurine, L-theanine and 5-HTP.

This also contains small amounts of zinc, B6 and magnesium to improve natural GABA production.

Normal Dosage: Take 1 cap – 2 times daily (away from meals)

Advanced Dosage: Take 2 caps – 2 times daily (away from meals)

## **Endorphin Strengthening Program**

Endorphins are feel good neurochemicals that give us a state of euphoria and provide a mechanism of pain relief. These molecules interact with the opioid receptors where they block pain receptors.

Endorphins are an amazing part of our bodies survival mechanisms. They are what allows human beings to perform at very high levels when they are in extreme situations. They allowed our ancestors to survive very hostile circumstances by blocking pain long-enough for them to escape whatever threat they were under.

In today's world, we think about how an athlete is able to play with a serious injury and not feel the effects until long after the game has finished. We also think about the classical runner's high or feeling of euphoria while running long distances. This is endorphins at work.

### **Symptoms of Endorphin Deficiency:**

Chronic pain, especially in the back or neck

Chronic headaches and migraines

Pain killing medications don't seem to help

Very emotionally sensitive

Very low pain threshold, light touch, loud sounds and bright lights can trigger it

Tendency to tear up very easily

Not having fun in life, depressed

Craving pleasure foods like chocolate, sugar and wine



## Diagnosed with Fibromyalgia

People with an endorphin deficiency will often also have GABA and serotonin deficiencies but will often not respond well to typical anti-depressant medications.

## **Biggest Factors Involved In Reducing Endorphin Levels:**

Chronic Stress and Adrenal Fatigue

Inadequate or Ineffective Sleep

Poor Blood Sugar Stability

Gut Microbiome Dysbiosis

Caffeine and Alcohol consumption

GABA deficiency

Spinal Subluxation

Physical or Emotional Trauma

## **Strategies to Improve Endorphin Levels:**

- 1. Anti-Inflammatory Diet:** Be sure to follow the Super Brain nutrition plan in order to provide the right nutrients to support healthy neurotransmitter function.
- 2. Regular Sun Exposure:** The sun's rays not only help to boost vitamin D levels, but also stimulates the production of these feel good endorphins. Look for opportunities to get in the sun more regularly. Additionally, going barefoot on grass, dirt, or sand will ground your body and stimulate a larger endorphin release!
- 3. See Your Chiropractor:** The upper cervical spine is very important for endorphin production. If you have a subluxation, where spinal misalignment is interfering with the nerve impulses in this region than it can lower your endorphins. A trained chiropractor can help reduce subluxation and improve endorphin production.
- 4. Listen to Your Favorite Music:** Listening to music can boost endorphins, which is why we often feel so good when we listen to music we enjoy. If you do have endorphin deficiency, I would caution against loud, aggressive

or highly stimulating music until you are healthier, as it could cause your adrenals to crash.

- 5. Eat Some Dark Chocolate:** Chocolate has a chemical called l-phenylalanine which prevents the breakdown of endorphins, so it's a bit like sustained release endorphins, except it doesn't last forever. Be sure to get organic and sugar and artificial sweetener free.

- 6. Consider Acupuncture:** Acupuncture has been shown to stimulate bursts of endorphins which is why the needles don't cause pain to the individual. The endorphin release from acupuncture is so good when done correctly that many people opt to use this instead of other anesthetics for surgeries.
- 7. Deep Breathing:** Taking time to focus on breathing stimulates endorphin production. Try taking 3 minutes every hour and focus on doing deep breathing with a 5-10 second inhalation and a 5-10 second exhalation.
- 8. Regular Exercise:** Regular movement is good for all neurotransmitters but especially for endorphin release. High intensity exercise, such as heavy weight training with short rest periods, circuit training, sprinting or interval training all stimulate abundant amounts of endorphins,
- 9. Practice Yoga:** Individuals with an endorphin deficiency will often not be able to adapt and recover from high intensity exercise. Fortunately, they can still move positions and apply deep breathing with a regular yoga practice.
- 10. Laugh and Play:** The average child laughs 300 times per day while adults laugh a paltry five times. Be like a child and find ways to laugh and add more play into your life.  
Both of these release endorphins and improve your body's ability to make endorphins.

## **Supplements to Raise Endorphin Levels:**

**DL Phenylalanine:** This amino acid acts to block enzymes that break down endorphins which allows them to stay in the circulation longer. This compound has been used to increase alertness, reduce addictive behaviors and suppress appetites. I recommend 1-2 grams, 1-2 times daily away from meals.

Phenylalanine should not be used by anyone with phenylketonuria, malignant melanoma, extremely high blood pressure, hyperthyroidism and chronic migraines.

When taking high doses of DL Phenylalanine it is important to provide a balance of amino acids to support GABA, dopamine and serotonin production.

## **Dr Jockers Recommendations:**

Most people with low endorphins are also low in all the other neurotransmitters. We focus on applying a healthy diet, stress management techniques and any necessary protocols for supporting other low neurotransmitters.

The major supplement I use for this is:

**Dopamine Plus:** This formula contains clinical dosages of L-tyrosine, DL Phenylalanine, vitamin C and B6 and it contains 5-HTP which helps keep the dopamine:serotonin balance in order.

Normal Dosage: Take 2 caps – 2x daily away from meals

Advanced Dosage: Take 4 caps – 2x daily away from meals

\*\*You can take the dopamine plus with other supplements we have discussed with various neurotransmitter deficiencies.

## **Additional Supplements to Use to Help Improve Endorphins:**

**Adapt-Strong:** This formula provides clinical dosages of vitamin B6, rhodiola and cordyceps. This formula provides useful support for both hyper and hypofunction of the adrenals. Hyperfunction is when the adrenals are overproducing hormones, such as cortisol, and hypofunction is the opposite, when the adrenals are under producing.

Normal Dosage: Take 1 cap – 2x daily

Advanced Dosage: Take 2 caps – 2x daily

**Brain Calm Magnesium:** This is a specific form of magnesium is the only form of magnesium proven in animal studies to cross the blood-brain barrier. Boosting the brain's magnesium level is vital to healthy cognition, which includes long- and short-term memory, learning, stress management and sleep.

Normal Dosage: 1 scoop – 1x daily  
3x daily

Advanced Dosage: 2 scoop – 2-

## About Dr David Jockers DC, MS, CSCS

**Dr. David Jockers** is a functional nutritionist, corrective care chiropractor, exercise physiologist and certified strength & conditioning specialist. He currently owns and operates Exodus Health Center in Kennesaw, Georgia and runs one of the hottest natural health websites in [DrJockers.com](http://DrJockers.com)

His experience working with thousands of individuals has given him a level of expertise in the field. He has had the privilege of traveling to London with the Maximized Living wellness advisory council to help the USA athletes win the gold in 2012.



He is the author of “**SuperCharge Your Brain: The Complete Guide to Radically Improve Your Mood, Memory and Mindset,**” and the **SuperCharged Recipe book** with over 180 full-color recipes to help you take back control of your health.

He has developed 6 revolutionary online programs with thousands of participants. These programs include E-guides, recipe guides, meal plans and video instructions including “The Sugar Detox,” “The Cancer Cleanse,” “Navigating the Ketogenic Diet,” and “The Digestive Health Restoration Program” and “The AutoImmune Elimination Program” and the “Super Brain program.”

He is a sought after speaker around the country on such topics as weight loss, brain health, functional medicine, natural detoxification and disease prevention. Dr Jockers does local and long-distance consultations to help customize specific lifestyle plans to improve performance and beat chronic disease.