



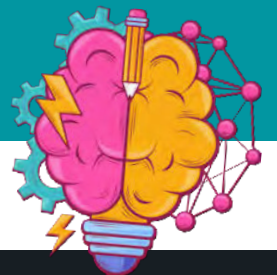
FLCCC
ALLIANCE

Brain and Mental Health Guide

Enhance Your
Memory and Focus,
and Improve Your Mood

Table of Contents

About This Guide	1
Global Impact of Mental Health	2
Brain Health 101	3
The Gut-Brain Axis	4
What are Psychobiotics	5-6
Brain and Mental Health	7-10
Covid and Cognitive Impairment	11-13
Building Neuroplasticity	14
Recharging Your Brain	15
Eating for Brain Health	16-17
Brain Health Supplements	18-23
Other Considerations	24-25
Mindfulness Mindset	26-28
Conclusion	29



About this Guide

Maintaining a healthy brain is crucial for overall health and well-being. Chronic brain diseases like Alzheimer's and mental health disorders such as depression have a significant impact on global health.

This guide aims to provide readers with a better understanding of brain and mental health and offers guidance on how to prevent and treat these and other chronic brain disorders. Additionally, this guide provides a summary of information found in the two FLCCC treatment strategies below on depression and brain health:

- [Managing Depression](#)
- [Brain Health: A Guide to Treating Cognitive Impairment](#)

A note to the reader:

- If you're experiencing feelings of hopelessness or thoughts of suicide, please call 911. You can find suicide crisis centers here: [Suicide and Crisis Hotline](#) (if in the USA).
- To find an FLCCC provider, please go to flccc.net, select "Resources", and "Find a Provider" or click [here](#).
- For more information on healthy lifestyle choices, nutraceuticals, intermittent fasting, and other infographics and guides, please visit flccc.net, select "Resources," and then "Tools and Guides," or click [here](#).
- Always inform your healthcare provider about any supplements you're taking, and if you're scheduled for surgery, let your anesthesia team know, as some can interfere with anesthetics. See [this guide](#) for more information or go to Tools and Guides and read [Anesthesia in the COVID Era](#).
- Supplement suggestions are provided as a way for the reader to explore and begin with some trusted options and are not a brand endorsement by the FLCCC.



Global Impact of Mental Health

- According to the World Health Organization (WHO), mental disorders affect a quarter of the global population at some point in their lives, with depression ranking as a top cause of disability worldwide.
- Mental health issues contribute to 16% of the global burden of disease and injury among individuals aged 10-19, with half of these conditions emerging by age 14, often going untreated.
- Annually, close to 800,000 people die by suicide, making it the second leading cause of death for those aged 15-29 worldwide.
- Stigma and discrimination are significant barriers for individuals with mental health problems seeking help.
- The economic impact of mental health conditions is substantial, amounting to trillions of dollars globally due to productivity loss, healthcare costs, and disability support.
- Despite its prevalence, around two-thirds of individuals with diagnosed mental disorders do not seek professional help, citing reasons such as stigma, discrimination, and limited access to care.
- The COVID-19 pandemic has worsened global mental health by increasing stress, anxiety, depression, and feelings of isolation.
- Early intervention can lessen the severe long-term effects of most mental health conditions.
- Access to therapy, medications, and support can greatly improve outcomes.
- Digital mental health resources, such as online therapy and mobile applications, have expanded accessibility to mental health support for many.
- Adopting a healthy lifestyle, including regular exercise, a balanced diet, sufficient sleep, and strong social connections, can promote mental well-being and help prevent and manage mental health conditions.



Brain Health 101

Why it matters

The brain is an incredible multitasker! It controls our thoughts, emotions, memories, and even our heartbeat. Taking care of it is a wise decision for optimal health and overall well-being!

You have the power to guide your brain's journey. Each decision you make is akin to planting seeds for your brain's future growth. Adopt brain-boosting practices today and witness your mind thrive in the long run!



- Enhance your memory and focus
- Improve your mood
- Reduce the chances of brain-related illnesses such as Alzheimer's and Parkinson's



BRAIN FACTS

- Did you know that an adult's brain weighs around 3 pounds and has a wobbly, jelly-like consistency?
- Surprisingly, about 60% of the brain's weight is made up of fat.
- Brain signals zoom at an astonishing speed of 268 miles per hour, faster than a race car!
- The brain operates with about 23 watts of power, enough to illuminate a small lightbulb!

The Gut-Brain Axis

Why it matters

Communication Pathways

- The gut and brain communicate through various pathways, which include the vagus nerve (a long nerve connecting the brain stem to the gut), neuroactive compounds from gut bacteria, and the immune system.
- This two-way communication system ensures that changes in one area can impact the other.

Neurotransmitter Production

- A significant amount of the body's serotonin, a key neurotransmitter for mood regulation, is produced in the gut.
- Gut bacteria also influence other neurotransmitters like GABA, dopamine, and norepinephrine, which affect mood and anxiety levels.

Inflammation

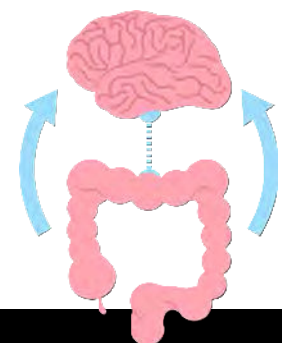
- Chronic inflammation from gut problems is linked to a higher risk of depression and anxiety.
- The gut microbiome plays a vital role in regulating the body's immune response and inflammation.

Stress Response

- The gut-brain axis is involved in the body's stress response.
- Stress can compromise gut barrier integrity, leading to gaps in the gut lining allowing harmful substances into the bloodstream that may trigger inflammation affecting mental health.

Gut Microbiota and Mental Health

- The gut microbiota composition can impact the likelihood of developing psychiatric and neurological disorders.
- Specific probiotics, referred to as "psychobiotics," have shown promise in managing anxiety and depression, suggesting that modifying gut flora could be beneficial for mental well-being.



What are Psychobiotics

Why it matters

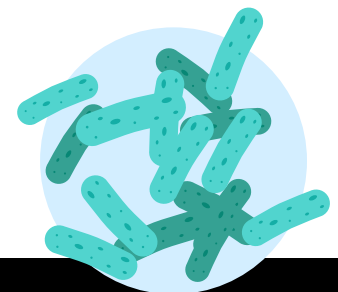
Psychobiotics are probiotics specially designed to improve mental health by influencing communication between the gut and the brain, known as the gut-brain axis. Unlike regular probiotics, which are live microorganisms offering health benefits, psychobiotics specifically target those probiotics that positively impact mental well-being.

Strains of Psychobiotics

- **Lactobacillus species** such as *L. helveticus*, *L. rhamnosus*, *L. plantarum*, and *L. casei*. These strains have been studied for their potential effects on reducing anxiety, depression, and stress.
- **Bifidobacterium species** such as *B. longum*, *B. breve*, and *B. infantis*. These strains are also researched for their potential in alleviating symptoms of stress and depression.

Mechanism of Action

- **Neurotransmitter Production:** Certain psychobiotics can produce neurotransmitters such as GABA and serotonin, which play crucial roles in regulating mood and anxiety.
- **Modulation of the Stress Response:** They can influence the body's response to stress by affecting the hypothalamic-pituitary-adrenal (HPA) axis, which is often dysregulated in mental health disorders.
- **Anti-inflammatory Effects:** By reducing inflammation, which is linked to several mental health conditions, psychobiotics can potentially mitigate the effects of depression and anxiety.
- **Enhancing the Intestinal Barrier:** They can improve the integrity of the gut barrier, reducing the likelihood of systemic inflammation that may impact the brain.
- **Neural Communication:** Psychobiotics may affect the vagus nerve, which serves as a major communication pathway between the gut and the brain.



What are Psychobiotics

They Differ from General Probiotics Because:

- **They have targeted benefits:** Psychobiotics and regular probiotics are quite similar, but they have one significant difference: their purpose. While all psychobiotics are probiotics, not every probiotic is a psychobiotic. Psychobiotics are unique because they're specifically designed to support mental health. They're the ones that have been shown to improve your emotional well-being.
- **Mechanism of Action:** Regular probiotics are great for your gut and can improve how you feel overall, but psychobiotics are special because they can directly change how your brain works. They do this by affecting the link between your gut and your brain, which can really affect how you feel emotionally.
- **Research and Application:** The study of psychobiotics is a relatively new field in neurogastroenterology and psychiatry, but it's growing quickly. It focuses on how specific probiotics can aid with mental health problems. In contrast, general probiotic research explores a broader range of health benefits, such as improving digestion, strengthening the immune system, and preventing antibiotic-related diarrhea.



Brain and Mental Health

Depression

Worldwide, an estimated 10-15% of adults suffer from depression, with women being affected more often than men. Depression appears to be more common in Western nations as opposed to low-income countries. Factors like chronic neuroinflammation and hormonal imbalances can further complicate matters like elevated proinflammatory cytokines, elevated plasma homocysteine, elevated cortisol, and endothelial dysfunction (lining of blood vessels). An imbalance between the immune system, the brain, and the gut microbiome causes signalling in the brain to backfire. Together, these factors contribute to the shrinkage of the brain and neuronal loss seen in patients with chronic depression and anxiety disorders.

Therapy and Lifestyle Adjustments

- Check your blood levels of vitamin D and magnesium
- Check your hormones, cortisol, and thyroid function
- Rebalance vitamin deficiencies
- Eat a healthy and varied diet
- Eliminate processed foods and excessive sugar
- Begin a regular movement or exercise routine
- Yoga, mindfulness, breath work, and Tai-chi have been shown to help reduce depression
- Prioritize regular sleep
- Therapy sessions
- Sunshine
- Photobiomodulation
- Whole body hyperthermia
- Non-invasive brain stimulation
- L-Methylfolate
- Vitamin D3/ K2
- Ashwagandha (for control of stress and anxiety)
- Omega-3 fatty acids
- Magnesium L-threonate
- Zinc
- Melatonin
- Curcumin
- St. John's wort
- Saffron
- Pre and probiotics



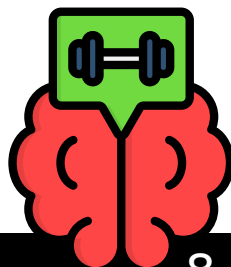
Brain and Mental Health

Post-Traumatic Stress Disorder (PTSD) and Trauma: Its Impact on the Brain

When PTSD and tough times come together, they can affect important parts of the brain like the amygdala (the center for emotions), the hippocampus (which handles memory), and the prefrontal cortex (involved in decision-making). This can raise stress and fear levels and make it harder to manage distressing memories. More stress can even trigger a PTSD episode. Having a history of depression and anxiety can increase your chances of developing PTSD. Traumatic events like fires, natural disasters, crimes, accidents, and life-threatening situations can lead to PTSD.

Therapy and Lifestyle Adjustments

- Be mindful of flashbacks, heightened anxiety, recurrent negative thoughts, and feelings of restlessness, and seek support from family, friends, or a healthcare provider.
- Seek support through therapy sessions like cognitive-behavioral therapy (CBT).
- Check your vitamin D and magnesium levels.
- Check your hormones, thyroids, and your cortisol levels.
- Find an outlet, hobby, or support group and develop healthy coping strategies to reduce stress.
- HBOT has been shown to help with depression, PTSD, and TBI (traumatic brain injury) because it increases neuroplasticity in the brain.
- Vagal retraining with mindfulness, breathing, yoga, humming, and listening to music has been shown to help reduce the stress response and rebalance the body.
- Neuroplasticity can be enhanced through activities such as golf, hiking, handwriting, traveling, having a pet, and learning new activities.



Brain and Mental Health

Anxiety

Individuals dealing with anxiety might find themselves trapped in a cycle of continuous worry, whether it's related to specific situations or daily occurrences. These worries can linger for extended periods, leading individuals to steer clear of anxiety-triggering situations. Other signs may include increased restlessness, mental haziness, or a constant feeling of nervousness. Moreover, digestive issues may also accompany these emotional struggles.

It's important to recognize that managing these intense emotions is common for many people, and there is support available for those facing this difficult path.

Therapy and Lifestyle Adjustments

- To alleviate anxiety, it is recommended to restrict alcohol consumption and refrain from using illicit drugs.
- Consider seeking assistance through therapy sessions like cognitive-behavioral therapy (CBT).
- Regularly monitor your levels of vitamin D and magnesium.
- Have your hormone, thyroid, and cortisol levels evaluated.
- Keep active with consistent exercise - even a short walk can be beneficial.
- Participate in hobbies or join a support group to develop healthy coping mechanisms for reducing stress.
- Vagal retraining, which involves mindfulness, breathing exercises, yoga, humming, and listening to music, has been shown to help reduce stress responses and restore balance in the body.



Brain and Mental Health

Common Themes and Treatment Approaches

Neuroplasticity

- Despite the changes seen in the brain with these conditions, the brain's plasticity allows for significant healing and adaptation, particularly with appropriate treatment

Psychotherapy

- Various forms of psychotherapy, including CBT, exposure therapy (particularly for PTSD), and others, can be effective by helping individuals reframe their thoughts and develop coping mechanisms

Nutraceuticals

- Balance nutrient deficiencies

Diet and hydration

- A balanced and varied diet and adequate hydration are important for the body to help maintain a balanced immune system

Lifestyle Changes

- Regular exercise, a healthy diet, sufficient sleep, and mindfulness practices like meditation can support brain health and mitigate symptoms of mental health conditions

Social Support and Community

- Engaging with supportive friends, family, and sometimes support groups can provide a buffer against the severity of symptoms



Covid and Cognitive Impairment

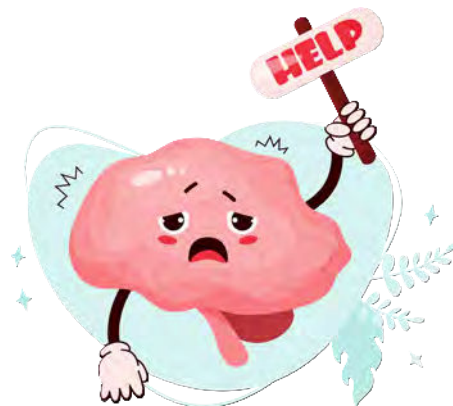
Cognitive Impairment Trends

The growing body of evidence suggests that both the COVID-19 virus and the COVID-19 vaccines may have lasting effects on cognitive function. This raises concerns about a potential increased risk of conditions like Alzheimer's disease and other neurodegenerative disorders due to persistent inflammation caused by spike protein fragments. This phenomenon, known as cognitive COVID, has been observed in a significant percentage of individuals, with studies indicating a prevalence ranging from 12% to 80%.

The persistence of cognitive issues post-COVID is alarming, with common symptoms including **fatigue, headaches, and brain fog**.

Research from the University of California, San Diego, found that a substantial portion of participants reported memory problems and reduced concentration six months after their initial infection. Similarly, data from React19 revealed that a majority of patients experienced cognitive impairment and brain fog, with a significant portion continuing to face these challenges even a year later.

These symptoms can significantly impact a person's quality of life, their ability to perform daily activities, and sometimes even their ability to work.



Covid and Cognitive Impairment

Lifestyle Adjustments

Here is a list of adjustments that one can make in their routine to reduce symptoms:

- Dietary changes
- Intermittent fasting
- Optimize gut healing
- Exercise
- Outdoor activities
- Sleep
- Address hearing loss
- Early morning light
- Stress reduction
- Social connections

Key Nutraceuticals to Improve Brain Function

Here is a list of nutrients that one can add to their routine to improve brain function:

- Multivitamins
- B vitamins
- Resveratrol
- Omega-3
- Melatonin
- Berberine
- Green Tea/EGCG
- Luteolin
- N-acetyl cysteine (NAC)
- CDP Choline
- Fisetin
- NAD
- Vitamin D3/K2
- Taurine
- Magnesium L-threonate
- Acetyl-L-carnitine
- Ashwagandha
- Lion's Mane

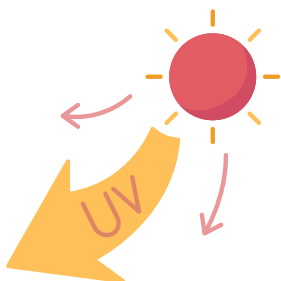
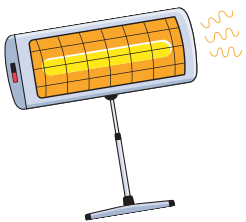


Covid and Cognitive Impairment

Other Key Interventions to Support and Heal the Brain:

Here are more interventions to try:

- Methylene Blue
- Low dose Naltrexone (LDN)
- Address vascular issues
- Optimize detox pathways
- Vagal nerve retraining
- Neuroplasticity training
- Meditation
- Breath work
- Photobiomodulation for brain health
- Hyperbaric Oxygen Therapy (HBOT)



Building Neuroplasticity

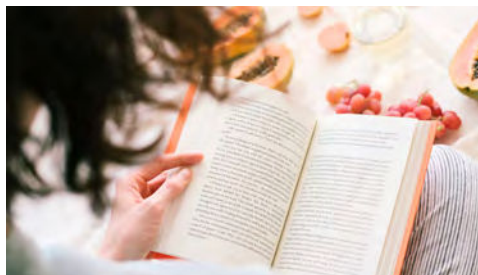
Increase Your Brain Function

Neuroplasticity refers to your brain's ability to adapt and respond to change. Your daily activities and experiences play a crucial role in shaping new neural connections in your brain. Here are five strategies to boost your brain's neuroplasticity:



Explore New Horizons

Engage in new activities to stimulate your brain and create fresh neural connections. Whether it's learning a new language, dancing salsa, or picking up a musical instrument, these experiences will benefit your brain in remarkable ways.



Engage in Reading

Reading is essential for maintaining a sharp and balanced mind. Fiction reading boosts creativity and imagination, whereas non-fiction reading challenges your brain to acquire valuable new skills.



Engage in Games

Games are not only entertaining, but also help your brain create new neural connections. Try board games, chess, crossword puzzles, card games, Sudoku, or even escape rooms. They all provide a mental workout for your brain!



Introducing Variety into Your Daily Routine

Even making small changes to your daily routine can improve neuroplasticity, the brain's ability to adapt and change. You can try switching up your routine by taking a different route to work or brushing your teeth using your non-dominant hand.



Exercise

Exercise offers a range of benefits, including reducing stress, improving sleep, and increasing blood flow to the brain. It also stimulates the production of chemicals that boost learning and mood. Aim to engage in at least 150 minutes of exercise per week.

Recharging Your Brain

Rest Is Important

While your brain needs activity to function well, it also needs rest. Here are four ways to help your brain unwind and get the cognitive rest it needs.



Ensure Sufficient Sleep

During sleep, your brain eliminates toxins that accumulate throughout the day, aiding in emotional processing and memory enhancement. Strive for 7-8 hours of sleep nightly. Enhance sleep quality by maintaining a consistent sleep routine and refraining from screens 1-2 hours before bedtime.



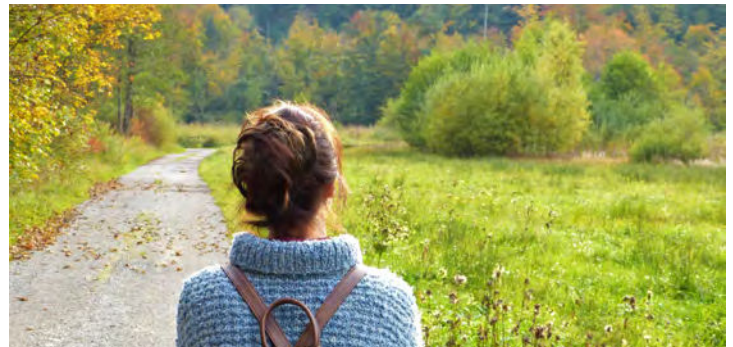
Maintain Social Connections

Reducing stress, easing feelings of depression and anxiety, and slowing down memory decline are all important for maintaining mental well-being. Studies show that staying socially connected can help slow down memory loss. Look for ways to connect with loved ones, like organizing a game night, sharing meals, going for a hike together, or scheduling a coffee date.



Engage in Meditation

Practice developing a sense of calmness while improving your attention, memory, and focus. This can help boost the production of serotonin, often called the "happiness chemical," while reducing cortisol, the stress hormone. Studies suggest that meditation might even slow down the aging process of the brain. For those new to meditation, apps like Insight Timer, Calm, and Headspace are great tools to help you get started.



Take a Break in Nature

Spending time in nature can be a great way to relax and unwind after a busy day. Being outdoors can improve your memory and concentration, lower your stress levels, and boost your mood. Try to make time for outdoor activities like walking your dog, gardening, going to the beach, eating meals outside, or camping. These simple activities can help you feel more refreshed and rejuvenated.

Eating for Brain Health

Healthy Foods

The foods you eat play a big role in keeping your brain healthy. Make wise choices by steering clear of processed foods and those with added sugars. Instead, opt for brain-boosting options like:



Salmon & other fatty fish



Broccoli



Berries



Leafy greens



Dark chocolate



Eggs



Avocados



Extra virgin olive oil



Coffee



Green tea



Turmeric



Nuts



Seeds



Rosemary



Tomatoes



Beets

Foods That Support Brain Health

The Best Foods



Legumes



Dark Leafy Greens



Citrus Fruits



Fermented Foods

What Not to Eat

Toxic Foods

To keep your brain in top shape, it's best to avoid sugary drinks, salty snacks, processed meats, refined carbs, trans fats, artificial sweeteners, highly processed foods, and too much alcohol. These can all negatively affect your mood, thinking abilities, and overall mental well-being. They might cause inflammation, impact your blood sugar levels, and even harm your heart health.



Sugary Drinks



Processed Meats



High Sodium Snacks



Refined Carbohydrates



Trans-Fats



Processed Food



Food Additives & Dyes



Alcohol

Brain Health Supplements

Boost your brain

Certain supplements can help fill in nutritional gaps or provide extra support for your brain. Remember that hydration is very important for absorbing nutrients. Always communicate what supplements you are taking with your healthcare provider and if you are scheduled for surgery, notify your anesthesia team about which supplements you are taking as some can interfere with anesthetics. See [this guide](#) for more information.



Acetyl L-Carnitine

Acetyl-L-Carnitine is a form of L-Carnitine, which is an amino acid made by the body. It's known to enhance memory and cognitive abilities, provide support to the mitochondria (the energy powerhouses of cells), and can activate receptors for acetylcholine in the brain, a neurotransmitter important for learning and memory.

Food Sources: Red meat, poultry, fish, dairy.

Dose: Follow instructions on bottle, usual dose 500 mg 2-3 times per day.

Brands: [Thorne](#), [LifeExtension](#), [VitaNutrients](#)



Ashwaganda

In Ayurvedic medicine, also called *Withania somnifera* or ashwagandha, has been shown to be a safe and helpful adaptogen. It's been used for hundreds of years to treat various long-term illnesses such as high blood pressure, arthritis, diabetes, Alzheimer's disease, and depression. Additionally, it has properties that fight inflammation, reduce oxidative stress, lower the risk of cancer, and help manage diabetes.

Food Sources: Evergreen shrub, supplements and powders only.

Dose: 300- 600 mg twice daily for depression and 500-1000 mg per day for brain health promotion.

Brands: [Gaia Herbs](#), [Ancient Nutrition](#), [Vimergy](#)



B-vitamins

B-complex vitamins provide at least 100% of the daily value for essential B vitamins like niacin, folate, and riboflavin, which are crucial for fueling the mitochondria, the energy powerhouses of our cells. Riboflavin, in particular, helps reduce oxidative stress, mitochondrial problems, brain inflammation, and glutamate levels—all of which are involved in conditions like Parkinson's disease, migraines, and other neurological disorders. Depending on genetic factors, such as having a mutation in the MTHFR gene, opting for methylated forms of B vitamins can offer significant benefits.

Food Sources: Animal products, fish and shellfish, leafy greens, and vegetables.

Dose: follow dosage on bottle.

Brands: [Thorne](#), [Aceva](#), [BodyBio](#)



Berberine

Berberine is known to increase levels of important neurotransmitters in the brain, such as acetylcholine, norepinephrine, and serotonin. Additionally, it helps by reducing the activity of four enzymes—monoamine oxidase A, monoamine oxidase B, acetylcholinesterase, and butyryl cholinesterase—that are involved in the progression of Alzheimer's disease.

Food Sources: European barberry, golden seal, gold thread, Oregon grape, philodendron, and tree turmeric.

Dose: 500-1500 mg daily.

Brands: [Thorne](#), [Metagenics](#), [Enzymedica](#)

Brain Health Supplements

Boost your brain



CDP Choline

CDP choline is a natural source of choline that helps make acetylcholine, an important chemical in the brain. It also boosts the release of dopamine, norepinephrine, and serotonin, which are all vital for mood and brain function. CDP choline provides the building blocks needed for repairing neurons, ensuring that communication between them stays strong for memory, learning, and clear thinking. Research suggests that CDP choline might even protect the brain from damage.

Food Sources: Meat, eggs, poultry, fish, and dairy products. Potatoes and cruciferous vegetables such as brussels sprouts, broccoli, and cauliflower.

Dose: 250-500 mg twice daily, but daily doses up to 2000 mg have been used.

Brands: [BodyBio](#), [Pure Encapsulation](#), [Jarrow](#)



Curcumin

For hundreds of years, curcumin has been a part of Ayurvedic medicine, used to help with different health issues like anxiety and depression. It's been found to work by changing the levels of certain chemicals in the brain called neurotransmitters and by reducing inflammation. Additionally, curcumin can block a receptor in the brain called the NMDA receptor, which may help with certain brain conditions.

Food Sources: Turmeric and curry powders.

Dose: 500-1000 mg daily.

Brands: [Aceva](#), [Life Extension](#), [EuroMedica](#)



Vitamin D3/K2

Deficiency of this special hormone, called a neurosteroid, could play a big part in causing depression. It is involved in many brain functions like changing and growing (neuroplasticity) and in how the brain develops. Not having high enough levels of vitamin D is also connected to a loss of brain volume.

Food and Environmental Sources: Eggs, liver, and fatty fish and sunlight.

Dose: 10,000 IU/day is recommended with 100 mcg/day of K2 and magnesium (250-500 mg/day) when doses of vitamin D > 8,000 IU/day are taken.

Brands: [Humann](#), [ACEVA](#), [Life Exentions](#)



Epigallocatechin Gallate EGCG/ Green Tea

A certain type of antioxidant called EGCG, found in different tea leaves like green tea, has been shown to slow down or stop the formation of amyloid proteins. These proteins are linked to diseases like Parkinson's, Alzheimer's, and Huntington's. EGCG works by stopping these proteins from clumping together in the brain. Additionally, EGCG can prevent tiny blood clots, which helps keep blood flowing smoothly.

Food Sources: Green tea (which has slightly higher amounts of catechins than black tea), black tea, white tea, oolong tea, smaller amounts in berries.

Dose: 500-1000 mg daily.

Brands: [Life Extension](#), [Designs for Health](#), [Thorne](#)

Brain Health Supplements

Boost your brain



Fisetin

Fisetin has demonstrated effectiveness in stopping the development or worsening of various neurological conditions such as Alzheimer's disease, Parkinson's disease, Huntington's disease, ALS, stroke (both ischemic and hemorrhagic), and traumatic brain injury. It's also shown to decrease age-related changes in the brain. Additionally, fisetin supports the aging brain by triggering a process called autophagy, which helps cells clean out damaged parts and stay healthy.

Food Sources: Strawberry, apple, persimmon, grape, onion, and cucumber.

Dose: 100-500 mg daily is often suggested.

Brands: [Life Extension](#), [Humanx](#), [Genuine Purity](#)



Lion's Mane

Lion's Mane is an old Chinese medicinal mushroom known for its ability to protect the brain. It can boost the production of a protein called nerve growth factor (NGF), which is crucial for brain health. This mushroom shows promise in improving cognitive function and easing feelings of depression and anxiety. NGF is important for brain flexibility, learning, and memory, and it may help lower levels of amyloid, which is linked to certain brain diseases.

Food Sources: The mushroom itself, supplements.

Dose: 500 to 3000 mg daily.

Brands: [Host Defense](#), [Real Mushrooms](#), [Ancient Nutrition](#)



Lithium Orotate

Lithium plays a role in controlling several important chemicals in the brain, including glutamate, dopamine, serotonin, gamma-aminobutyric acid (GABA), acetylcholine, and glycine. It also helps increase the production of substances that protect the brain, like brain-derived neurotrophic factor (BDNF) and its receptor. Additionally, lithium can help reset your body's internal clock, boost the growth of new brain cells, and shield the brain from damage caused by oxidative stress.

Food Sources: Cereals, potatoes, tomatoes, cabbage, and some mineral waters.

Dose: 5mg daily and the dosage can be increased to 10-15 mg per day.

Brands: [Life Extensions](#), [Global Healing](#), [Pure Encapsulations](#)



L-methylfolate

The biologically active form of folate, which can easily enter the brain, should be the main treatment for individuals with depression and bipolar disorder. When folic acid levels are low, there's a higher likelihood of experiencing depression, more severe symptoms, longer episodes of depression, and a greater risk of relapse.

Methylenetetrahydrofolate reductase (MTHFR) is an important enzyme that regulates how the body uses folate and homocysteine. Some individuals might have difficulty with methylation, therefore methylated B vitamins are also important with these patients.

Food Sources: Raw or lightly cooked dark leafy greens, cruciferous vegetables such as broccoli.

Dose: 7.5-15 mg daily.

Brands: [Thorne](#), [Klaire Labs](#), [Designs For Health](#)

Brain Health Supplements

Boost your brain



Luteolin

Luteolin is a flavonoid, a type of naturally occurring plant compound, known for its antioxidant, anti-inflammatory, and neuroprotective properties.

Food Sources: Celery, parsley, chamomile, broccoli, peppers, olive oil, thyme.

Dose: 100 to 300 mg daily.

Brands: [Verso](#), [Swanson](#), [Double Wood](#)



Magnesium L-Threonate

Magnesium L-threonate is a special kind of magnesium that's made to help your brain work better and stay healthy. What's cool about it is that it's really good at getting into your brain because it can cross a barrier that normally keeps stuff out. Once it's in your brain, it boosts the levels of magnesium there, which is great for your brain cells.

Food Sources: Nuts and seeds, leafy greens.

Dose: 100 to 200 mg daily, increasing the dose as tolerated (up to 300 mg females, up to 400 mg males) daily.

Brands: [Metagenics](#), [Cymoiotika](#), [Designs for Health](#)



Melatonin

Melatonin is a hormone made by a gland in your brain called the pineal gland. Its main job is to control your body's internal clock, like when you sleep and wake up. But it's also really good at fighting off harmful molecules called free radicals, which can damage your brain cells. Melatonin can even get into your brain to protect it from these harmful molecules.

Food Sources: Tart cherries, walnuts, almonds, figs, oats, sweet potato.

Dose: 1-5 mg, ideally of a slow-release formulation, before bedtime.

Brands: [Herbatonin](#), [Thorne](#), [Renew by Science](#)



NAC

N-Acetylcysteine (NAC) is a type of supplement that contains cysteine, which is an amino acid your body needs. Cysteine is important because it helps make a substance called glutathione, which helps stop cells from getting damaged by things like stress and harmful molecules. Researchers are also studying NAC to see if it can help with mental and brain-related problems.

Food Sources: Turkey, chicken, eggs, lentils, chickpeas.

Dose: 600-1200 mg daily.

Brands: [Jarrow](#), [Designs for Health](#), [Life Extensions](#)

Brain Health Supplements

Boost your brain



NAD (Nicotinamide adenine dinucleotide)

NAD is crucial in every cell of our body and plays a role in important biological processes. As we get older, our levels of NAD decrease, and this decrease has been connected to conditions that come with aging. When NAD levels go down, it can contribute to various age-related health issues like metabolic problems, cancer, and diseases that affect the brain and nervous system.

Food Sources: Chicken breast, turkey, salmon, tuna, liver, peanuts, beans, eggs, seeds, whole grains.

Dose: Follow dosage on the bottle.

Brands: [Codeage](#), [Thorne](#), [Life Extensions](#)



Omega 3 EPA/DHA

Fish oil contains two types of omega-3 fatty acids, called DHA and EPA, which are both beneficial for health. They help reduce inflammation in your body and can even change the structure of your brain. This might be why they're helpful in preventing or treating depression, as they can affect the chemicals in your brain that help you feel good.

Food Sources: Fish, fish oil, flaxseeds, nuts and seeds.

Dose: 1,000 mg/day (of active EPA and DHA).

Brands: [Aceva](#), [Metagenics](#), [Nordic Naturals](#)



Pre/Probiotics

If our gut bacteria are out of balance, it could lead to problems with how we think and remember things. Conditions like anxiety, depression, and even autism might be connected to an unhealthy gut. Probiotics (good bacteria), and prebiotics (food for the good bacteria), help keep the gut in balance, along with a healthy diet and stress reduction.

Food Sources:

PreBiotic: Garlic, onions, leeks, asparagus, artichokes, beans, bananas, apples, tomatoes. **Probiotic:** Kefir, yogurt, tempeh, miso, kimchi, sauerkraut, fermented pickles.

Dose: Follow the dosage on the bottle or package.

Brands: [Microbiome labs](#), [Seed](#), [Renew Life](#)



Resveratrol

Increases cerebral blood flow, boosts BDNF, protects mitochondria, and prevents the release of toxic glutamate during a stroke. Resveratrol is associated with the removal of β -amyloid peptides from the Alzheimer's brain and neurons.

Food Sources: Red grapes, bilberries, blueberries, dark chocolate, peanuts, red currants, Itadori tea.

Dose: 500-1000 mg daily.

Brands: [Now Protocol for Life Balance](#), [Verso Cell Being](#)

Brain Health Supplements

Boost your brain



Saffron

For many centuries, this plant has been used in traditional Arabic and Islamic medicine for its healing properties. Some important substances it contains, like crocin, picrocrocin, safranal, and crocetin, have powerful antioxidant effects.

Food Sources: High-quality saffron strands that are deep, vivid red with orange tips are the best quality.

Dose: 50 mg twice daily.

Brands: [Life Extension](#), [Patient One](#), [Swanson](#)



St. John's Wort

For centuries, people have turned to St. John's wort, a plant known scientifically as *Hypericum perforatum*, to help with conditions like depression. However, we're still not completely sure how it works to relieve depressive symptoms.

Food Sources: Brew tea with dried St. John's Wort flowers

Dose: 600 mg to 1,800 mg/day.

Brands: [Now](#), [Nature's Way](#), [Vitanica](#)



Taurine

Taurine is important for keeping our brains working well, but as we get older, our levels of it go down. Studies have found that adding more taurine to our diet can help make our mitochondria, the energy factories in our cells, work better. It's even been shown to help animals live longer!

Food Sources: Seafood, meat, poultry.

Dose: Follow the dosage on bottle.

Brands: [Pure Encapsulations](#), [Designs For Health](#), [Life Extensions](#)



Zinc

Research shows that taking zinc supplements may help reduce feelings of depression. Zinc works like a natural antidepressant by blocking a receptor in your brain called the glutamate/N-methyl-D-aspartate (NMDA) receptor. This can help improve your mood. Also, like some antidepressant medications, zinc can increase the expression of a gene called brain derived neurotrophic factor (BDNF), which is important for brain health.

Food Sources: Oysters, red meat, poultry, beans, lentils, seeds, nuts, mushrooms, spinach, tofu and tempeh

Dose: 20-30 mg daily.

Brands: [Jarrow](#), [Cymbiotika](#), [EquiLife](#)

Other Considerations

Nootropics

Nootropics are things that can make your brain work better, like helping you think more clearly, remember things better, be more creative, or feel more motivated.

Synthetic Nootropics:

- Modafinil: Frequently used to increase alertness and decrease sleepiness in individuals with sleep disorders. It's also commonly used off-label for improving cognitive function.
- Piracetam: One of the earliest synthetic nootropics, mainly used to enhance memory and cognitive abilities.

Natural Nootropics:

- Caffeine: Often used to boost alertness and focus.
- Ginkgo Biloba: Used to improve memory and increase blood flow to the brain.
- Bacopa Monnieri: An herb from Ayurvedic medicine known for enhancing cognitive abilities and memory.

Medicinal Mushrooms

Medicinal mushrooms are fungi known for their health-promoting properties. They are primarily used for:

- Lion's Mane (*Hericium erinaceus*): Famous for its ability to help nerve growth and enhance cognitive functions.
- Reishi (*Ganoderma lucidum*): Mainly used to boost the immune system, reduce stress, and improve sleep quality.
- Cordyceps: Commonly used to boost energy and athletic performance, but may also help protect the brain.



Other Considerations

Peptides

Peptides for brain and mental health are short chains of amino acids with different effects on the brain. They interact with the brain and body in complex ways, often influencing neurotransmitter levels, blood flow, and neural connections.

Neuroprotective Peptides: Protect nerve cells from damage, reduce inflammation, or promote recovery from neurological injuries.

Cognitive Enhancing Peptides: Potential to improve learning, memory, and cognitive performance.

Specific Peptides

- **Cerebrolysin:** A peptide mixture that has been shown to have neuroprotective and neurotrophic repair properties, often used in the treatment of Alzheimer's disease and other types of dementia.
- **Noopept:** A peptide-derived nootropic that is believed to offer a wide range of cognitive benefits, including enhanced memory and learning ability.
- **Semax:** A peptide developed in Russia, used to prevent and treat circulatory disorders; it has also shown benefits in enhancing cognitive function and has neuroprotective effects.



Mindfulness Mindset

Reprogram the brain and utilize mindfulness

FIXED MINDSET

I already know it all

I give up easily

I ignore useful feedback

I can't change how I was born

I don't need to practice

I'll never be good at this

Mistakes are bad so I avoid them

I avoid things that require effort

GROWTH MINDSET

I am learning

I welcome and learn from feedback

I am learning from others

I am training my brain

I work hard to get better at something

I am progressing in my actions

Mistakes are learning opportunities

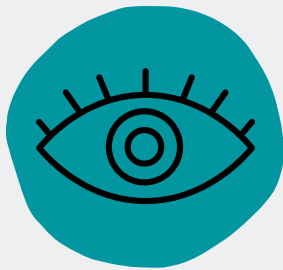
I want to be challenged



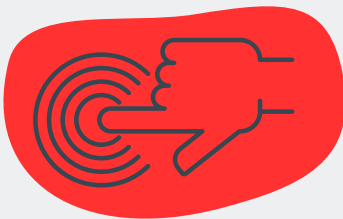
Calming



Mindfulness Exercise



5 Things you can see



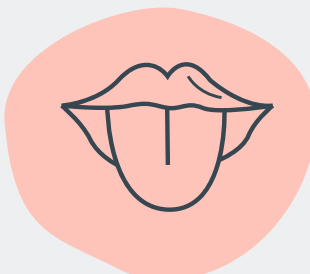
4 Things you can touch



3 Things you can hear



2 Things you can smell



1 Thing you can taste



RAIN

Technique

Bringing mindful awareness to emotional distress

R

Recognise your emotions, thoughts, and distress

A

Acknowledge and accept your present reality

I

Inquire and investigate your distress

N

Non-identification: your thoughts, feelings and distress do not define who you are

Conclusion

The aim of this guide is to empower and educate readers on regaining control of their lives. Here are some key points to learn and practice:

- Perspective on life often stems from how we program our brains. Sometimes, negative thoughts can loop in our minds, but we can change this by practicing daily affirmations with positive messages such as “ I am worthy of my own happiness”.
- Balance is crucial; it's as important as other responsibilities. Scheduling "me time" is vital, especially when feeling hopeless.
- Making good nutritional choices is key for our bodies to function optimally, fight infections, and maintain a positive mood.
- Human connection reminds us that we're not alone. Find a group with shared interests or set aside time to talk with someone regularly.

Remember, there's always hope! Keep trying—you deserve to feel good and be happy. Even small victories matter when you're committed to a healthy lifestyle.

For questions or comments, reach out to FLCCC at clinical@flccc.net or support@flccc.net.



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