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Inside this Issue

Fatigue, Weight Gain, and Foggy Brain? It might be your thyroid.

1-3

Phospholipids to Protect Your Memory and Brain

4-5

Lifestyle Tips and Herbs for Brain Health

6-8

Brain and Mental Health Profile

8



Riordan Clinic is a not-for-profit 501(c)(3), nutrition-based health facility with locations in Wichita, Overland Park, and Hays, KS. The clinic was co-founded by Olive Garvey and Hugh D. Riordan. We have integrated lifestyle and nutrition to help you find the underlying causes of your illness. Since our inception in 1975, the mission has been clear and unwavering to "...stimulate an epidemic of health."

Fatigue, Weight Gain, and Foggy Brain? It might be your thyroid.

Many of us believe that fatigue, weight gain, foggy brain, and other low-grade discomforts are just a normal part of aging. However, it may be your thyroid that is responsible for these common complaints.

What is the thyroid?

The thyroid is a small butterfly-shaped gland that sits at the base of the neck. The most important hormones manufactured by the thyroid are triiodothyronine (T3) and thyroxine (T4). These hormones play a significant role in the metabolism, growth, and development of the human body. Thyroid hormones affect every cell, tissue, and organ in the entire body. Having the proper amount of thyroid hormones is essential to your overall health. Too much or too little of these hormones can create several uncomfortable symptoms and leave you feeling downright terrible.



What is a thyroid disorder?

According to the American Thyroid Association, more than 12 percent of the U.S. population will develop a thyroid condition during their lifetime. They also estimate that roughly 20 million Americans currently have some form of thyroid disease, many of which go undetected. Undiagnosed thyroid disorders can contribute to more severe conditions such as cardiovascular disease and osteoporosis and may also be linked to infertility.

Thyroid disorders fall into two different categories:

Hypothyroid

When there is **not enough** thyroid hormone

Hyperthyroid

When there is too much thyroid hormone

Hypothyroid conditions are more prevalent than hyperthyroid conditions and are more common in women than men. Advanced age may also increase susceptibility to a thyroid condition.

Continued on page 2

Symptoms of hypothyroid

Hypothyroid symptoms can be characterized by a general “slowing down.” This can affect metabolism, cognitive function, digestion, heart rate, and more. Some of the most common symptoms of hypothyroid include:

- Fatigue
- Weight Gain
- Fluid retention
- Dry skin, Hair loss
- Cold intolerance/
- Low body temperature
- Hoarseness
- Goiter (enlarged thyroid gland)
- Excess fluid in body tissues
- Constipation
- Memory problems
- Decreased concentration
- Depression
- Irregular or heavy menstrual periods
- Infertility
- Muscle pain or tenderness
- Slow heart rate



Symptoms of hyperthyroid

When there is too much thyroid hormone, a person may experience feeling “amped up.” This may include symptoms such as:

- Anxiety, irritability or nervousness
- Weight loss
- Insomnia
- Goiter (enlarged thyroid gland)
- Muscle weakness or tremors
- Irregularity or loss of menstrual periods
- Eye irritation or vision problems
- Intolerance to heat

Causes of thyroid disorders

Several things can impact how well the thyroid functions and the severity of the symptoms. Common causes of thyroid disorders include:

- Iodine deficiency
- Autoimmune conditions such as Hashimoto’s thyroiditis (hypothyroid) and Grave’s disease (hyperthyroid).
- Inflammation of the thyroid caused by a virus or bacteria
- Thyroid nodules
- Cancerous tumors on the thyroid gland
- Medical treatments such as radiation therapy, surgery, and some medications
- Genetic disorders

Lab tests to assess thyroid function

Our LifeCare lab profile is an excellent way to evaluate thyroid health and other factors that may affect the function of the thyroid gland.

MARKERS INCLUDED IN THE LIFECARE PROFILE ARE:

TSH (Thyroid Stimulating Hormone)

TSH is the hormone that tells your thyroid to produce more or fewer thyroid hormones based on levels detected in the blood. High TSH may indicate that not enough thyroid hormone is circulating, and low TSH may indicate that there is too much thyroid hormone circulating.

Free T3

Free T3 is the active and more usable form of thyroid hormone. Most T3 is produced from the conversion of T4 to T3.

Free T4

Free T4 is the storage form of thyroid hormone and is converted to T3 as the body needs it. Normal T4 levels do not necessarily indicate healthy thyroid function as the body must be able to convert T4 effectively to function optimally.

Reverse T3

T4 can also be converted into Reverse T3. RT3 is another inactive form of thyroid hormone, and it can compete with T3 for the binding sites on cells. Your provider will look at the ratio of T3/RT3 when assessing overall thyroid function.

Also included in the LifeCare Profile are measurements of the other steroid hormones: DHEA-S, Estrogen, Progesterone, and Testosterone. Your provider will look for clinical correlations between the levels of thyroid hormones and these steroid hormones to get a full picture of thyroid function.



Other factors to consider in diagnosing thyroid disorders

It is not uncommon for some patients to return normal lab results, but still have an array of symptoms that point to abnormal thyroid function. This why an extensive physical exam, medical history, and family history are recommended and are the standard of care at Riordan Clinic.

Integrative therapy for thyroid disorders

Thyroid disorders are often the result of systemic imbalances rather than just a lack of or overproduction of thyroid hormones. Our approach is to view the disorder from all angles, seeking to find the root cause. Treatment may include dietary and lifestyle changes, supplements, and medication when necessary.

COMMON THERAPEUTIC RECOMMENDATIONS INCLUDE:



Diet

If an autoimmune condition is the cause of abnormal thyroid function, then certain foods must be avoided. Your practitioner may recommend food sensitivity testing or an elimination diet to determine specific trigger foods.

An anti-inflammatory diet rich in whole, unprocessed foods is always recommended for optimal health and wellness.



Lifestyle

Stress can have a significant effect on your thyroid and overall health. Stress hormones can impact the production of thyroid hormones and the conversion of the storage form of thyroid hormone (T4) into the active form of thyroid hormone (T3).

Stress management techniques such as yoga, meditation, and mindfulness are a few practices that can help mitigate the effects of stress on your body.



Supplements

The thyroid depends on several different nutrients to function optimally. These include Iodine, Selenium, Zinc, Iron, L-tyrosine, Vitamin A, Vitamin D, and several B Vitamins, to name a few. While they may be obtained through diet, you may need a little extra support from supplements.

Your practitioner may recommend advanced micronutrient testing to determine if you are deficient in these key nutrients.



Prescription Medication

In some cases, other medical interventions such as prescription medications may be necessary to alleviate symptoms and ensure the body is getting the proper amount of thyroid hormone to function optimally. A thorough assessment of your lab work,



medical, family, and lifestyle history will be conducted before these interventions are implemented. You must work very closely with your provider to determine proper dosages.

Your provider at Riordan Clinic may choose to work with synthetic thyroid medications such as levothyroxine, Synthroid, liothyronine, and Cytomel or desiccated thyroid hormones such as Armour, NP Thyroid, WP Thyroid, or Nature Thyroid.

If you think you might have thyroid dysfunction, call 1-800-447-7276 to make an appointment with one of our knowledgeable practitioners or schedule a lab draw. We look forward to working with you to obtain your REAL health!



LifeCare Profile

When delicate hormone levels are out of balance, it can impact physical, emotional and cognitive health for both men and women. These hormonal imbalances can cause unexplained weight gain or weight loss, fatigue, changes to libido, hot flashes, insomnia, bone loss, depression and numerous other side effects that can impact your quality of life.

Unfortunately, hormonal imbalances often go undetected and their symptoms are considered normal signs of aging. For that reason, checking your hormone levels is the best way to ensure that imbalances are identified and corrected.

For more information about any of the services offered by the Riordan Clinic, give us a call at 1-800-447-7276 or visit our website at riordanclinic.org.

Phospholipids to Protect Your Memory and Brain



AUTHOR

Dustin Moffitt, ND



We are all living in a world where conditions affecting the brain's health are becoming more prevalent. This leaves us in a vulnerable place compared to that of our ancestors. Today we must take extra measures to protect ourselves from developing degenerative health conditions. While there are many elements to our health, today I will be addressing the topic of

memory and brain health, and how phospholipids may potentially affect or improve them.

There are five general classes of phospholipids. These are phosphatidylserine, phosphatidylcholine, phosphatidylethanolamine, phosphatidylinositol, and phosphatidylsphingomyelin. In this article we will focus mostly on phosphatidylserine and phosphatidylcholine.

Lipids are a key cellular component in our body. Phospholipids, a class of lipids or fats, are especially crucial to the health of both cell membranes and neurotransmitters. Brain cell membranes are rich in two phospholipids in particular: phosphatidylserine (PS) and phosphatidylcholine (PC), with PC accounting for the larger percentage. In our cells, the phospholipids line up in a lipid bilayer where the head of the molecule points outward and the tail inward, which helps to create a selectively permeable membrane to ions and most polar molecules. The cell membrane is selectively permeable and able to regulate what enters and exits the cell, facilitating the transport of materials needed for survival. Phospholipids are also crucial to brain health, as their release from glial cells helps to control the positioning of sensory neurons within the brain and spinal cord¹. Glial cells surround our nerve fibers and act as insulation. Much like the insulation over an electrical cord, they help guide direction of electrical flow and without them we would have electrical shorts and sparks.

How phospholipids play into memory and brain health

Cell membranes and glial cells are so vitally important to our cells' health and the way our nerves and brain fire nerve signals. Without them we are truly in a world of trouble. As a matter of fact,

phospholipid metabolism through metabolic markers is used to estimate cellular metabolism and aging in the brain cells², and determine the amount of possible myelin loss³. There are also screens for autoimmune conditions involving either phospholipids, cell membrane parts, or even their metabolic byproducts.

What are the potential benefits of phospholipids?

ENERGY PRODUCTION

When oxidized, or burned for fuel, the phospholipids supply energy via glycerol and fatty acids.



PROTECTION OF THE GASTROINTESTINAL MUCOSA

Biologically active lipids, notably phospholipids (e.g., PC) and their metabolites (e.g., LPA) are able to enhance the barrier properties of the GI mucosa and to reduce the toxicity of pharmacological (e.g., NSAIDs) and natural damaging agents (e.g., bile acids, LPS), which induce tissue injury and disrupt membranes, leading to leaky gut⁴.

SUPPORTING CELL MEMBRANE STRUCTURE AND FUNCTION

As described above, Essential Phospholipids (Eps) supply the basic structural elements of every cell membrane in the body.

SUPPLYING CHOLINE FOR ACETYLCHOLINE (ACH)

PC is an excellent source of choline for the neurotransmitter ACh. More than 98% of choline in blood and other tissues is held in the form of phosphatidylcholine. Thus, PC serves as a "slow-release" source of the essential nutrient,³ causing levels to rise for up to 12 hours after ingestion.

ENERGY STORAGE

Fatty acids and glycerol that are not oxidized may be stored as fat; a process called lipogenesis. Stored body fats provide a ready source of potential energy.

PROSTAGLANDIN PRODUCTION

The body uses linoleic acid, one of the fatty acids in EPs, to make prostaglandins, a valuable family of signaling molecules. Prostaglandins also help to cause inflammation, pain, and fever, which are needed in the healing process. Prostaglandins are involved in regulating the contraction and relaxation of the muscles in the gut and the airways.

EMULSIFICATION OF FAT AND BILE

In the GI tract, phospholipids aid digestion by emulsifying dietary fats and bile produced by the liver.

AID IN BLOOD CLOTTING

EPs help modulate the aggregation of erythrocytes (red blood cells) and clotting agents called platelets.



INCREASING CHOLESTEROL SOLUBILITY

By increasing the solubility of cholesterol, EPs decrease cholesterol's ability to promote atherosclerosis. PC also aids in lowering cholesterol levels⁵, removing cholesterol from tissue deposits, and inhibiting platelet aggregation⁶.

ANTIOXIDANT PROTECTION

Studies in animals demonstrate that PC has potent antioxidant activity, which can protect against one of the most important factors promoting body aging – oxygen free radical damage⁷. By this and other mechanisms, PC protects the body against a wide variety of adverse drug effects and other chemical toxins. The high content of linoleic acid in phosphatidylcholine may be responsible for much of its antioxidant benefit.

How does protection from leaky gut help the brain health?

There is something called the gut-brain axis (GBA), in our body where the brain and GI tract constantly communicate with each other by sending signals. Many of these signals involve both initiation of inflammation and halting markers. Excessive inflammation initiated in the brain can lead to a brain on fire syndrome, or “leaky brain”, which mostly translates to slowed mental ability, and increased brain disease (e.g. Alzheimer's, Parkinson's, or ALS). As the literature involving the GBA and gut biome evolves we are learning far more about the impact that our gut bacteria have on our brain health and immune system. Studies have shown that an estimated 90% of our

serotonin⁸ is made in the GI tract and that 60-80% of our immune system is in the gut.

We have only begun to scratch the surface of what is beneficial to our health, and particularly our brain health. Phospholipids play a part in our brain health, specifically in regulating our cholesterol, inflammation, and gut health. Therefore, ensuring a steady supply of PS and PC through diet and supplementation can help to mitigate age-related cognitive decline and illnesses.

Food Sources of Phosphatidylcholine:

Beef liver	Scallop	Brussel sprouts
Wheat germ	Salmon	Broccoli
Eggs	Chicken	Peanut butter
Beef	Shrimp	

Food Sources of Phosphatidylserine:

Soy lecithin	White beans	Turkey
Tuna	Veal	Atlantic Cod
Chicken	Beef	Sardines

Dr. Moffitt is a doctor of naturopathic medicine. He spent five years working with the community to teach nutrition and wellness with the Food as Medicine Institute. While practicing in Oregon, Dr. Moffitt worked alongside acupuncturists, massage therapists, and chiropractors as a primary care physician. He specializes in regenerative injection techniques, pain management, sports rehabilitation, chronic illness, functional medicine, and weight loss. He is currently accepting new patients at the Riordan Clinic, Hays location.

1. “Glial cells use lipids to direct neuron organization in the spinal cord.” ScienceDaily. ScienceDaily, 27 August 2015. <www.sciencedaily.com/releases/2015/08/150827154239.htm>.
2. Gaiti A, Sitkiewicz D, Brunetti M, Porcellati G. Phospholipid metabolism in neuronal and glial cells during aging. *Neurochem Res.* 1981;6(1):13-22.
3. Grigoletto J, Pukaß K, Gamliel A, et al. Higher levels of myelin phospholipids in brains of neuronal -Synuclein transgenic mice precede myelin loss. *Acta Neuropathol Commun.* 2017;5(1):37.
4. Jäger P. Letter to the editor: Selection bias not discussed concerning the article “PTSD of rape after IS (Islamic State) captivity” by J. I. Kizilhan, published in: *Archives of Women's Mental Health* 2018 Oct; 21(5):517-524. doi: <https://doi.org/10.1007/s00737-018-0824-3>. Epub 2018 Mar 10. *Arch Womens Ment Health.* 2019
5. Navder KP, Baraona E, Lieber CS. Polyenylphosphatidylcholine decreases alcoholic hyperlipemia without affecting the alcohol-induced rise of HDL-cholesterol. *Life Sci.* 1997;61:1907-1914.
6. Brook JG, Linn S, Aviram M. Dietary soya lecithin decreases plasma triglyceride levels and inhibits collagen- and ADP-induced platelet aggregation. *Biochem Med Metab Biol.* 1986;35:31-39.
7. Simpson BN, Kim M, Chuang YF, et al. Blood metabolite markers of cognitive performance and brain function in aging. *J Cereb Blood Flow Metab.* 2016;36(7):1212-23.
8. Mawe GM, Hoffman JM. Serotonin signaling in the gut—functions, dysfunctions and therapeutic targets. *Nat Rev Gastroenterol Hepatol.* 2013;10(8):473-86.

Lifestyle Tips and Herbs for Brain Health.



AUTHOR

Jessica Moffitt, BS, CHES

A healthy brain is one that performs at an optimal level, with quick reflexes, thought processes, and actions. It utilizes each compartment efficiently and works in a holistic manner to help the body.

Brain health is a combination of addressing our brain in a holistic manner and tailoring our nutrition to each compartment of the brain for optimal functioning. The pieces of the brain work together to cause thoughts, actions, and movements. They help with digestion, our fight or flight response, walking, sleeping, and everything in between.

Like a perfect recipe, there is a proper balance of ingredients for each compartment. When the recipe is correct, the brain yields perfection. When there are extra ingredients that do not belong or when there are missing ingredients, we may end up with something less.

What Ingredients Are Needed?

In an ideal world, we would be able to provide the EXACT recipe for our brain. All ingredients would be present with nothing missing and nothing that doesn't belong. The list, however, is endless, and varies based on your genetics, current health status, and environment. Despite this, brain health is achieved by regulating the systems within our brain and restoring them back to balance when they are disturbed. For example, helping us relax and calm our mind after a stressful encounter.

What Throws Us Off Balance?

STRESS

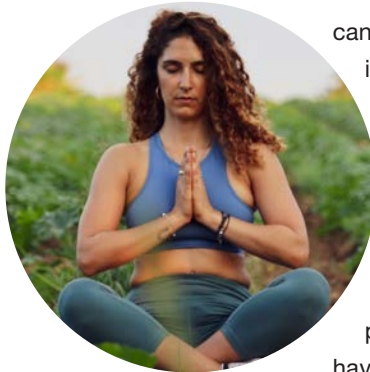
Stress increases our flight or fight response, which suppresses other areas of the brain.

SLEEP

Lack of sleep suppresses the hippocampus which is crucial for storing memories. It also prevents certain hormones from being released, leading to imbalances in the endocrine system. Endocrine imbalances can mean thyroid concerns, fertility concerns, and other hormone-related illnesses.

TOXINS

Exposure to environmental toxins such as perfumes, hair sprays, aerosols, machinery chemicals, paints, and even scented



candles can mean toxic exposure for the brain. This increases the number of free radicals in the body. An increase in free radicals means an increase in oxidative stress. When oxidative stress is high (and antioxidants are low), free radicals pull ions from other molecules, degrading cells and the nervous system, and potentially causing cellular destruction and aging. Nutritional toxins such as preservatives, food additives, and food dyes can have similar effects.

MISSING NUTRIENTS

Important nutrients like Omega 3s, and amino acids are crucial to brain function, serving as the food, fuel, and catalysts for our systems.

IMPROPER HYDRATION

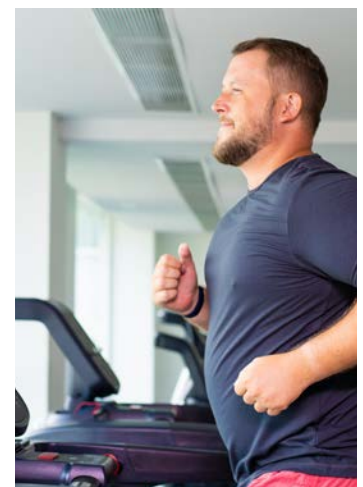
Lack of proper hydration throughout the body changes blood flow and blood volume of our bodies. When our circulatory system is functioning subpar, nutrients do not make it to the cellular tissues and toxins are not filtered out.

What Happens When These Needs Are Not Met?

Every body responds differently, but here are some common symptoms that arise when nutritional and recovery needs are not met: mental fog, migraines, headaches, irritability, moodiness, poor memory, impaired judgement, decreased learning, decreased attention span, and decreased overall cognitive performance. Over prolonged periods of time, this can also mean endocrine disruption, infertility, and secondary diseases.

What Are Some Simple Ways to Get the Brain What It Needs?

Think of your health on a scale from 0-100. Zero is like a rock that doesn't move or eat, and 100 is like a unicorn - a mythical creature that no-one has ever really seen. We must be honest about where we are on the scale and where we aspire to be. Every choice we make either moves



us closer to or further from unicorn status. In an ideal world, we would eat exactly 100% of our daily recommended values of nutrients. No more, no less. We would have zero toxic exposures and would get a perfect 7 hours of restful sleep each night. Most importantly, we would have the proper amount of daily exercise and healthy social engagement.

An ideal world doesn't exist and becoming healthy doesn't happen overnight, but here are some simple tips to get you moving in the right direction.

LIFESTYLE:



GET SLEEP

Your brain goes through thousands of microscopic processes while you sleep. If you don't sleep, these don't happen. In addition to herbs to support brain health, you can try white noise machines, blue light filters, and healthy bedtime routines.



REDUCE STRESS

Do your best to decrease stress whenever possible. More importantly, work on the way your body handles stress. Meditation, yoga, breathing exercises, stress-reducing teas such as chamomile & lavender, and essential oil blends are all great natural options.

NUTRITION:



DRINK WATER

Drink water daily. If you are a coffee/soda/juice drinker, drink even more water to balance it out.



DECREASE TOXINS

Avoid processed foods, fast foods, food dyes, artificial ingredients, and added sugars when possible.



REAL NUTRIENTS

Try to get most of your nutrition from food. This means looking at portions, servings, and your daily intake of macronutrients and micronutrients.



SUPPLEMENT THE REST

When an adequate balance of nutrients does not come from diet alone, or when you need an extra boost, supplements can be a great way to help.

Herbal Support for Optimal Brain Function

Please note that herbs, particularly in therapeutic quantities, are not meant for everyone. Certain medical conditions, particularly pregnancy and breastfeeding, have a special list of herbs that are safe. Always consult with your medical provider, or a holistic health provider, before modifying, adding, or removing any supplements, pharmaceuticals, or herbs to your nutrition regimen.

Stress Helpers:

Rhodiola (Golden Root), St. John's Wort, Yerba Mate, Rosemary, Ginseng, Parsley, Thyme, Turmeric, Ashwagandha, Lemon Balm, Chamomile, Oligomeric Pro-Cyanins, Flavonoids, Omegas, Pine Bark, Lavender

Continued on page 8



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newseditor@riordanclinic.org
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Leah Chischilly
MS, L.Ac.
Editor

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Sleep Support:

Rhodiola (Golden Root), St. John's Wort, Rosemary, Ginseng, Turmeric, Ashwagandha, Lemon Balm, Chamomile, Omegas, Pine Bark, Lavender

Free Radicals (Detoxifying) Support:

Yerba Mate, Rosemary, Ginseng, Parsley, Thyme, Turmeric, Ashwagandha, Sage, Lemon Balm, Oligomeric Pro Cyanins, Flavonoids, Omegas, DHA, EPA

Nutrition/Absorption of Nutrients Support:

St John's Wort (Gut /Brain Axis), Parsley, Thyme (Antimicrobial), Lemon Balm, Sage (Antibacterial). Pine Bark, Pomegranate, Green Tea Extract.



Beyond Herbs

The list doesn't end here though. There are also many natural teas, essential oils, and tinctures that can be taken to help balance the body. While teas and essential oils (used externally) are generally recognized as safe, it is best to consult with your medical provider, or a holistic health provider, before adding them to your nutrition regimen.

Teas: Chamomile, Lavender, Yerba Mate, Ashwagandha, Lemon Balm

Essential Oils: Rosemary, Sage, Thyme, Parsley, and Lavender

Tinctures: St. John's Wort, Rhodiola

Better Choices

Remember, that not everything will happen overnight. Each better choice that you make provides fuel for the next, creating a cascade effect that leads you to a healthier, stronger version of you.

REFERENCES:

- Ackerman S. Discovering the Brain. Washington (DC): National Academies Press (US); 1992. 2, Major Structures and Functions of the Brain. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK234157/>
- Agatonovic-Kustrin S, Kustrin E, Morton DW. Essential oils and functional herbs for healthy aging. *Neural Regen Res.* 2019;14(3):441-445. doi:10.4103/1673-5374.245467
- Ayaz M, Sadiq A, Junaid M, Ullah F, Subhan F, Ahmed J. Neuroprotective and Anti-Aging Potentials of Essential Oils from Aromatic and Medicinal Plants. *Front Aging Neurosci.* 2017; 9:168. Published 2017 May 30. doi:10.3389/fnagi.2017.00168
- Gómez-Pinilla F. Brain foods: the effects of nutrients on brain function. *Nat Rev Neurosci.* 2008;9(7):568-578. doi:10.1038/nrn2421
- Iriti M, Vitalini S, Fico G, Faoro F. Neuroprotective herbs and foods from different traditional medicines and diets. *Molecules.* 2010;15(5):3517-3555. Published 2010 May 14. doi:10.3390/molecules15053517
- Medic G, Wille M, Hemels ME. Short- and long-term health consequences of sleep disruption. *Nat Sci Sleep.* 2017; 9:151-161. Published 2017 May 19. doi:10.2147/NSS.S134864
- Shohani M, Badfar G, Nasirkandy MP, et al. The Effect of Yoga on Stress, Anxiety, and Depression in Women. *Int J Prev Med.* 2018; 9:21. Published 2018 Feb 21. doi: 10.4103/ijpvm.IJPVM_242_16

Jessica Moffitt is the co-owner of Prospectively Healthy, a virtual health company that offers research-based education around nutrition, fitness, and wellness, in bite-sized pieces. Credentials: Certified Health Education Specialist, Bachelor of Science in Public Health, Certified Personal Trainer, and Nutritionist. Follow Jessica on social media @prospectivelyhealthy for recipes, fun facts, and tips for improving your health and wellness, one step at a time.

Brain & Mental Health Profile

Neurotransmitters are made from amino acids, vitamins, and minerals. As a result, a healthy diet is also a brain-healthy diet. However, sometimes the nutrients in your body are not at the levels they need to be, and you are not aware of the problem.

Finding out your individual profile is the first step toward making improvements. **The Riordan Clinic Brain and Mental Health Lab Profile** assesses a multitude of nutrients, including nine important vitamins, essential fatty acids, essential amino acids and blood lipids; all vital to optimizing your brain and mental health as you age.

Call to Order: 800-447-7276 x1385 or visit riordanclinic.org to learn more