HEALTH & WELLNESS ARTICLE

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In my article "Gut-Brain Health for Back to School: What Parents Should Know," I covered the foundational connections between the gut microbiome, brain function, and school readiness, and I introduced the practical strategies and supportive tools we use at Discover Health Chiropractic Center PC and Northern Laser Rehab PLLC to help families prepare. If you have read it, you already understand why August is the right month to pay attention to this. Now I want to go a level deeper.

What Is Vagal Tone, and Why Does It Shape How a Child Learns and Feels?

The vagus nerve is the longest nerve in the autonomic nervous system, the part of the nervous system that runs mostly without conscious input. It travels from the brainstem down through the neck, heart, lungs, and all the way into the digestive tract. It is the primary nerve of what is called the rest-and-digest state, the mode where digestion works well, sleep is restorative, and the brain is available for learning rather than bracing for threat.

Vagal tone refers to how well-conditioned and responsive that nerve is. Think of it like cardiovascular fitness, but for your nervous system. A child with strong vagal tone can move into a calm, focused state more easily, recover from stress more quickly, and tolerate the ordinary demands of a school day without becoming dysregulated.

How May Low-Grade Inflammation Affect Both the Gut and the Brain?

Inflammation is a normal and necessary part of how the body responds to injury or infection. The concern is not acute, purposeful inflammation. The concern is the low-grade, persistent kind that can develop when the body is under chronic stress, sleeping poorly, eating a diet high in processed food and added sugar, or carrying a gut microbiome that has been disrupted and has not yet been

supported back into balance.

When that kind of background inflammation is present, it does not stay localized. The gut lining, the one-cell-thick barrier I described in Part 1, is particularly sensitive to it. When the lining is under stress, its ability to function as a selective barrier may be reduced. And because the gut and brain communicate constantly through the vagus nerve, the immune system, and the bloodstream, signals from an inflamed gut may influence how the brain feels and functions.

This is not a single proven cause-and-effect chain. It is a set of related associations that researchers continue to study. What we do know is that the lifestyle factors supporting a healthy gut, consistent sleep, whole foods, adequate hydration, reduced sugar, and nervous system regulation, are the same factors associated with lower levels of systemic inflammation. These are not separate goals. They are the same goal approached from different angles.

This is also where gut lining support becomes relevant, not as a way to resolve inflammation, but as part of the broader terrain work that creates a better-functioning internal environment.

How Does Glutamine Complex PLG-U Support the Gut Lining as Part of This Picture?

The cells that line the intestinal wall are called enterocytes, and they are among the most metabolically active cells in the body. Their primary fuel is an amino acid called glutamine. When the body is under physical or emotional stress, glutamine is redirected toward other demands, and the gut lining may receive less of the support it needs to maintain its barrier function efficiently.

Glutamine Complex PLG-U from Physica Energetics is a powder formula built specifically around gut lining support. One scoop provides 5,000 mg of L-Glutamine as the primary ingredient. Alongside it, the formula includes Blue Agave Inulin and larch arabinogalactan, both prebiotic fibers that feed the beneficial bacteria whose activity, in turn, nourishes the gut lining further. The formula also includes deglycyrrhizinated licorice root, aloe vera leaf gel concentrate, and marshmallow root, three botanicals with a long traditional history as soothing, demulcent support for mucosal tissue.

This formula is not a treatment for inflammation, and it is not positioned as a corrective. It is structural support for the barrier that much of gut and immune function depends on. Think of it as providing the raw materials the lining needs to do its job.

Whether Glutamine Complex PLG-U is appropriate for you or your child is something we assess individually at a consultation. Please bring your questions and we will walk through the full picture together.

What Is Photobiomodulation, and How Does the Erchonia EVRL Fit Into a Whole-Body Wellness Approach?

Photobiomodulation uses specific wavelengths of light to support how cells produce energy and manage their internal environment. The mechanism is called photochemical rather than thermal, meaning the light does not heat or damage tissue. Instead, it interacts with light-sensitive structures inside the cell, supporting energy production at the cellular level, circulation, and overall tissue health.

The Erchonia EVRL is a low-level laser therapy device used in our practice as a non-invasive wellness modality. Low-level laser therapy, sometimes called cold laser therapy, delivers focused light at specific wavelengths to targeted areas of the body. Erchonia is one of the most established names in this category and holds FDA clearances for specific applications. We confirm current clearance details directly from the manufacturer before making any specific claims, and we are happy to walk through those details at your visit.

At Discover Health Chiropractic Center and Northern Laser Rehab, EVRL therapy is one of the supportive tools we use alongside chiropractic care, nutritional guidance, and lifestyle work. We discuss photobiomodulation, cellular energy support, and nervous system balance as related areas of whole-body wellness. We do not present them as a single demonstrated pathway to any specific gut or brain outcome.

This is a supportive wellness approach. It is not a treatment for any medical or psychiatric condition, and it is not a substitute for care from your physician or any licensed specialist. If you are curious whether EVRL therapy is a fit for your family's wellness plan, ask us at your next visit.

The gut-brain axis is not a metaphor. It is a real, bidirectional communication network running through the vagus nerve, the immune system, and the bloodstream, and it is active every minute of every school day. Vagal tone shapes how readily a child can settle into learning. The gut lining shapes how well the rest of the system functions. Lifestyle factors, from sleep and sugar intake to stress and routine, influence low-grade inflammation in ways that touch both gut and brain. And supportive tools like gut lining nutrition, strain-identified probiotic care, and photobiomodulation all point toward the same underlying goal: a body whose internal environment is stable enough to let a child show up ready. None of these pieces work in isolation, and none of them replace individualized care. What they do is give families a more complete picture of what back-to-school readiness actually means at the biological level, and a clearer sense of where meaningful support begins.

This article is for educational purposes only and does not constitute medical advice, diagnosis, or treatment. The information presented is intended to support informed conversations with your

healthcare provider, not to replace individualized care. All supplement and wellness decisions, particularly those involving children, should be made in partnership with a licensed healthcare practitioner who knows your family's full health history. Individual results vary.

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