

BRAIN HEALTH BOOST



Brain Health Matters and Inflammation's Effects on Childhood Development Make a Difference

Inflammation is part of our body's defense system. Our immune system responds to harmful, foreign invaders by releasing white blood cells that protect us and begin the healing process. Inflammation can also be triggered by our experiences, such as stressful or traumatic events. In much the same way, our inflammatory response helps our bodies, brains, and minds to react and survive those experiences.

The Brain Health Initiative (BHI) studies and takes innovative action on the factors that protect brain health, as well as the factors that increase risk for brain illness. Chronic inflammation is a factor that may increase the brain and body's risk of future illness.

There are two types of inflammation: acute and chronic. Most of us are familiar with and easily recognize acute inflammation — the redness, warmth, swelling, and pain that occurs in response to an injury. But if our inflammation response gets turned up too high and for too long, continuing to pump out white blood cells and chemical messengers that prolong the process, that's known as chronic inflammation. Chronic inflammation causes our bodies and brains to feel like they are under constant attack and the white blood cells often end up "fighting" healthy tissues and organs.

When those organ systems are still developing, as they are in childhood, chronic inflammation can cause those systems to adapt in ways that can have an impact and increase risk for physical and brain illness across the lifespan. Chronic inflammation during childhood can put us at greater risk for many chronic health conditions including cardiovascular disease, diabetes, asthma, cancer, arthritis, gastrointestinal diseases, and even depression and dementia later in life. Many of these conditions that can be traced to stress and trauma as far back as early childhood or even prenatally, can also make it more difficult to fight off viruses like COVID-19.

Luckily, there are things we can do to help prevent chronic inflammation in children and reduce the risk for lifelong health conditions. By reducing the sources of stress that many families

experience and offering programs that support the well-being of everyone in our communities, we can help protect ourselves and our children.

WHAT YOU CAN DO TODAY TO BOOST YOUR BRAIN HEALTH

There are ways to reduce the constant flooding of white blood cells that increase risk for brain illness and cause chronic inflammation in your children. By taking these actions today, you can help improve their lifelong physical and brain health, and reduce the need for costly medical and mental health interventions as they get older.

- Support programs that provide strong, responsive relationships between children and their caregivers.
- Advocate for programs that support families, such as paid family leave.
- Develop programs that strengthen core life skills, giving children and caregivers the tools they need to be in control of their environment.
- Reduce sources of stress by improving programs that address income, nutrition, housing, and medical needs, helping to increase family well-being.
- Adopt a brain healthy lifestyle that works to decrease risk of future brain illness, like chronic inflammation including:
 - Building resilience to stress
 - Consuming brain healthy nutrition
 - Increasing physical activity
 - Acquiring adequate sleep and rest
 - Participating in positive social connections
 - Enhancing emotional well-being
 - Engaging in meaningful activities that inspire sense of purpose
 - Participating in cognitively stimulating and creative activities
 - Protecting general health
 - Making positive impacts

The Brain Health Initiative colleagues at the [Center on the Developing Child at Harvard](#) developed a [graphic](#) that demonstrates the impact of chronic inflammation on the systems of young children.

About the Brain Health Initiative (www.brainhealthinitiative.org)

The Brain Health Initiative (BHI) is a cutting-edge, new approach to protecting brain health and fighting brain illness across the lifespan. The BHI works collaboratively with Massachusetts General Hospital, a Harvard Medical School Teaching Hospital, and the Academy for Brain Health and Performance to build brain healthy communities through education, research, innovation and action, with a specific focus on *brain health promotion, prevention, early detection, evidence-based intervention, and performance optimization*. The BHI is creating a culture that promotes brain health protective factors and decreases risk factors, thereby improving brain health and optimizing brain performance outcomes for the Florida Suncoast region and beyond. Join the brain health movement, ***because brain health matters, and lifestyle makes a difference***. To view all Brain Health Boosts [click here](#).