



A Game Changer for Concussion & Neurodegenerative/Behavioral-Brain Health Diseases: Brain Performance EnhancementSM **By: William T. White MSN, Katharine B. White MSN, CPHQ & Alan Ashare MD**

THE SCIENCE: The 2009 Nobel Prize for Medicine introduced a relatively 'new' science to healthcare's thought leaders. Called **Epigenetics (EpiG)**, it will someday be recognized as the healthcare discovery of our lifetimes. EpiG instructs that the genes which determine our health and wellness (both 'good' disease/injury-prevention genes and 'bad' disease-causing types) are activated (turned on/up) or deactivated (turned off/down) by 'dimmer-switches' located on genes called epigenomes.

The associated break-through discovery for humankind is that epigenomes get their marching orders on which genes to activate or deactivate from environmental exposures and behaviors. Understandably, the new medical research 'chase scene' is to identify which exposures/behaviors (good-bad) change gene expression such that diseases/injuries are prevented or ameliorated. Thus, highest quality health and longevity would be a function of implementing those exposures and behavior routines that turn on/up 'good' disease and injury prevention genes while avoiding those known to activate 'bad' genes.

For clinician-scientists dedicated to **brain injury/disease prevention and treatment**, a new epigenetic subspecialty has surfaced called **neuroepigenetics (N-EpiG)**, accelerated by research showing that brain functioning and structure can be significantly and quickly changed (**neuroplasticity**) for the better. This at any age - in response to specific environmental exposures and/or behavioral manipulation. For the USA's most emergent public health crises involving the brain, **youth sports-related concussions** (projected as a leading cause of disability by 2020) and **age-related dementias** (CDC predicts an epidemic as 10,000 U.S. citizens turn 65 daily for next 18 years), N-EpiG offers new hope for such brain injury and illness victims, and their families. It is important to note that the final common pathway for neurodegenerative diseases and major mental-health illnesses is, in fact, dementia.

THE COMPANY: Brain In Play is a privately held company founded by clinician scientists William T. White MSN, APRN-BC and Katharine B. White MSN, APRN-BC, medically directed by youth sports brain and spinal cord injury safety icon Alan Ashare MD, and advised by nationally reputed neurologists and physician executives that is in the business of brain health, brain wellness and brain performance enhancement. This includes providing prevention, treatment, consultation and education services utilizing brain optimization therapies and technologies. Our mission focuses on the N-EpiG management of brain injuries, neurodegenerative diseases (Alzheimer's/Parkinson's) and major psychiatric/addictive disorders. Our N-EpiG innovation is called **Brain Performance Enhancement** and equally values N-EpiG best practices and client engagement/activation.

THE INNOVATION: Brain Performance Enhancement (BPE) is an **evidenced based system** improving the functioning, communication, preservation and growth of brain cells by changing gene expression, and is comprised of three therapies:

1. **12 Brain Wellness Best Practices:** A unique aggregation of environmental enrichment, behavioral management and brain stimulation techniques which *at threshold enhance brain performance and structure* (8 of 12 evidence based);
2. **10-Point Activation Science:** A customizable client-centric amalgamation of therapeutic psycho-educational, cognitive, behavioral, psychosocial and self-management techniques, which **powerfully engages and strongly activates commitment and sustained adherence** to the 'Best-12' – blueprinting client/patient 'Best-12' success;
3. **Cognitive Behavioral Therapy/Restructuring:** An evidence-based therapeutic modality which *facilitates* ongoing 'Best-12' adherence, while simultaneously improving brain cell functioning, communication, preservation and growth.

BPE's N-EpiG value proposition exponentially reduces brain cell inflammation and oxidative stress, while increasing immunity at molecular, cellular and organ system levels – creating a **brain-healing eco-system** optimizing cell functioning, development, communication and growth. BPE has the same epigenetic effect on body cell gene expression (facilitating disease/injury healing and anti-aging). BPE's brain injury/disease and dementia prevention premise, is that a more functional, cellular healthy and growing brain will be more resistant to trauma and age-related disease vulnerabilities, while supporting healing.

That Brain In Play offers a prevention/healing/amelioration solution for brain injuries and diseases is truly exciting, but pales in comparison to helping brain injury/disease victims and their families become as protected and restored as possible from the acute and cumulative impacts of their brain challenges - and their longer term consequences.