Neuroscience-based opportunities to improve academic performance of low-income students

The early years of a child’s life are crucial for building the brain’s foundation for future learning, health and success. However, children who live in poverty are often at a disadvantage when it comes to the development of cognitive skills essential for learning due to a number of factors. Dr. Bruce Wexler, BrainFutures advisor and Professor Emeritus of Psychiatry at Yale University School of Medicine, shares his insights.

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Using Magnetic and Electrical Stimulation to Heal the Brain

For centuries, scientists have attempted to use electricity to heal the human body and brain. This practice continues today, with major advances in magnetic and electrical stimulation. Learn what Dr. Alvaro Pascual-Leone, professor of neurology and director of the Berenson-Allen Center for Noninvasive Brain Stimulation at the Harvard Medical School, shared about this topic.

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Regaining Control Over Our Distracted Minds

Cognitive controls such as attention, working memory and goal management are abilities that enable us to interact with the environment around us based on our goals. According to Dr. Adam Gazzaley, professor of neurology, physiology and psychiatry at the University of California – San Francisco and founding executive director of Neuroscape, technology can adversely affect our cognitive controls yet can also help improve our cognitive controls. Find out what strategies he recommends.

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Leafy greens may reduce memory loss and preserve cognitive function

Swapping your iceberg lettuce for a greener leaf may be a healthy way to reduce memory loss and preserve your cognitive abilities. Learn which greens may have a significant impact on your brain health.

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Brain Facts

Brain experts agree that although our knowledge of the brain has increased drastically in recent years, there is more to learn. Here are our fascinating brain facts of the month:

1. How does the brain keep us awake? Wakefulness is maintained by the brain’s arousal systems, each regulating different aspects of the sleep cycle.

2. Several complex brain systems and endocrine (hormone) systems contribute to sexual arousal and behaviors, but brain regions, neurotransmitters, and body systems are similar to those involved in general arousal.

3. If you are paying attention right now, there should be detectable changes in your heart rate, breathing, and blood flow. If that sounds familiar, it’s because those same physiological changes occur during arousal, which is necessary for being alert and paying attention.

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Share information with the BrainFutures community!

In coming weeks, we will be highlighting news and resources from the BrainFutures community. Please submit information that you’d like us to share across our network to info@brainfutures.org.

Mission

BrainFutures accelerates adoption of effective applications of brain science advances to maximize human potential.

Vision

Science-based brain health practices will be widely accessible to people of all ages, resulting in improvements in learning, enhancement of cognitive performance, prevention of debilitating brain conditions and effective treatment of mental health and substance use conditions.