

Your Brain, Healthier!®

Brain function matters!

Mark Twain who once said, “Never let the facts get in the way of a good story.”

“A Consensus on the Brain Training Industry from the Scientific Community” from the Stanford Center for Longevity, October 20, 2014, states that, “As the baby boomers enter their golden years with mounting concerns about the potential loss of cognitive abilities, markets are responding with products promising to allay anxieties about potential decline. Computer-based cognitive-training software – popularly known as brain games – claim a growing share of the marketplace. The promotion of these products reassures and entices a worried public.

Consumers are told that playing brain games will make them smarter, more alert, and able to learn faster and better. In other words, the promise is that if you adhere to a prescribed regimen of cognitive exercise, you will reduce cognitive slowing and forgetfulness, and will fundamentally improve your mind and brain.

Do you believe this Brain Training Industry statement to be true?

Introduction

These days, brain supplements and psychologist developed brain games are thought to keep your brain healthy and slow any degenerative changes. While the media tells us that an ingredient [originally discovered in jellyfish](#) and various other nutritional supplements are essential components to neurological health, these nutritional changes are only a small part of the answer to brain health. And while playing brain games of various kinds may help certain aspects of your brain stay healthy, the key to neurological health is to build the survivability—plasticity—of the fundamental pathways that ensure the continuity of the entire neurological matrix.

(The following definition of traumatic brain injury is the best the medical field has to date, and arguably it does not address all cases.)

Traumatic brain injury (TBI) is a nondegenerative, noncongenital insult to the brain from an external mechanical force, possibly leading to permanent or temporary impairment of cognitive, physical, and psychosocial functions, with an associated diminished or altered state of consciousness.

As I point out in my two books, [What Your Brain Might Say if It Could Speak](#), and [Receptor Based Solutions®; Functional Neurology Every Doctor Should Know](#), the human nervous system is receptor dependent. That is, in order to perform according to its original design

While it is true that, to date, there is no activity, supplement or medicine that has yet been shown to reduce risk of or prevent Alzheimer's disease, the human nervous system can maintain long term health when its incoming signals are reciprocal, according to its original design.

the human brain must be stimulated in all ways that encourage its fundamental behavior, which is to inhibit or control every function that happens underneath it except one, and we will get to that one exception.

The highest priority neurological input comes from the joint mechanoreceptors found in muscles, especially those that resist gravity – the anti-gravity muscles. These receptors are primarily organized from the top down, or

rostrocaudally. Here is what I mean: the upper extremity has a higher priority than the lower extremity; the upper part of the upper extremity has a higher priority than the lower part of the upper extremity; the neck has a higher priority than the lower back. The nervous system is highly organized; it is hierarchical.

Further, the centerline rule applies to mechanoreceptor input, i.e., centerline structures related to centerline structures. In other words, the spinal function directly relates to the performance of the centerline brain structures. These rules are ultimately important when you consider the longevity of cognitive capacity.

Traumatic Brain Injury (TBI)

If you have ever seen a patient with a traumatic brain injury (TBI), their presentation can be daunting. Its profound and very evident display receives significant attention because of its obvious effect on human performance. Although TBI may cause a host of observable deficits with motor, sensory, and speech functioning, the most debilitating impairments often result from the less conspicuous psychosocial, behavioral, and cognitive sequelae of the injury.

Studies have proved that *the number one predictor for a head injury is a previous head injury*. And we know that the effects of repetitive injuries are more than accumulative. In fact, there is an entire syndrome labeled *second impact syndrome*, whereby the second concussion, in rapid succession from the first, i.e., within days or weeks, can lead to a much more severe injury than the first TBI alone, even leading to death.

Current standard imaging techniques such as the MRI and CT scan do not show the lesions or damage in the vast majority (greater than 95%) of the TBIs. Therefore, the normal scan cannot relate to function nor explain the symptoms. Newer imaging techniques such as diffusion tensor MRI, SPECT and PET scans can better determine the extent of injury in persons with TBI. Neuropsychological testing, similar to tests done with athletes, can determine functional difficulties and therefore determine the location of the brain injury.

Sometimes it can take up to two years after the injury for the brain to heal, or even longer. Nerve injury healing processes require time and patience, and the brain can continue to repair itself for up to several years. This healing time can be significantly reduced with the application of specific functional neurological principles.

Because of the lengthy, and at times incomplete recovery process, TBI survivors may reenter community, work or school settings still dealing with their particular deficits, yet may be expected to perform at preinjury levels. Such a scenario can lead to frustration and anger, possibly exacerbating existing deficits and impeding the recovery process. This is all the more reason for the doctor to have a better understanding of the receptor based treatment programs that use functional manual muscle testing (fMMT).

Accumulative Brain Microtrauma

There is an even more dangerous effect of the more micro traumatic incidents that happen every day that have an accumulative and negative effect on the human brain. Non-reciprocal muscle function and the consequential breakdown of physiological joint motion can be equally detrimental to human performance when it is allowed to persist over the eight decades of the average human lifespan.

The human nervous system considers whole body function, not the performance of individual muscles, per se.

The brain will heal faster when treatment is delivered consistent with the fundamentals of the human neural fabric. Dr. Allen's *Receptor Based Solutions® Series* will teach you how to reconnect the basic framework for neural connectedness that gives your patients a greater opportunity to perform the functions lost as a result of their original injury.

This *Receptor Based Solutions® Series* was developed after reading several research papers that discussed the physiological consequences of primitive reflex dysfunction. One such paper, *Cortical release signs in psychiatry* (Walterfang and Velakoulis; Aust N Z J Psychiatry. 2005 May;39(5):317-27) concludes: "A number of issues complicate their [the primitive reflex involvement] interpretation in neuropsychiatric illness, including the apparent high base rate of some CRS [cortical release signs] in non-clinical populations, their increasing prevalence with age, lack of specificity and uncertainty over what constitutes an 'abnormal' response. In some circumstances, CRS may assist in diagnostic differentiation and illness staging."

Further, in a more recent article entitled, *Cortical Release Signs in Patients with Schizophrenia, Depressive Disorders, and Bipolar Affective Disorder* (de la Espriella RA, Hernández JF, Espejo LM. Rev Colomb Psiquiatr. 2013 Dec;42(4):311-9) the authors recently agreed that, “Determining the presence of cortical release signs associated with white matter damage, is a clinically easy method to perform... The signs of cortical release do not have the same importance as cortical damage... It is suggested that these signs imply subcortical white matter damage.” The point here is that people can have a dysfunctional cortical affect with obvious release signs without showing obvious cortical tissue damage; these issues of cortical dysfunction cannot be appreciated using standard radiological diagnostic techniques.

After decades of exhaustive neurological study and with the application of primitive reflex testing, the seamless impact of physiological reflexes on the human neurological display has become more evident to the sophisticated specialist. As Dr. Allen will demonstrate, brain damage can occur even in the absence of a TBI. However, these issues can be rehabilitated when the doctor understands the specific application of primitive reflex testing and the appropriate treatment criteria.

This *Receptor Based Solutions*[®] *Series* starts with the fundamentals of neuron theory and uses functional manual muscle testing techniques to sequentially nurture the specialist into a greater understanding of the brain's influence on both functional and autonomic performance, ultimately leading up to a greater functional understanding of the heart-brain connection and nutritional testing. Dr. Allen's ten module *Receptor Based Solutions*[®] *Series* teaches you how to clearly recognize the daily microtrauma that happens on an ongoing basis. Consistent microtrauma slowly changes the receptor input and causes adaptation of the motor response that is ignored by the unskilled observer. However, once these adaptations are identified and diagnosed their displays can be rehabilitated to the benefit of the nervous system as a whole. The goal of this series is to help you develop that eye for clinical detail.