

PAIN MANAGEMENT

SPECIAL INTEREST GROUP

PRESIDENT'S MESSAGE

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The Brain... Another large piece of the persistent pain puzzle. Researchers have been looking at the brain by neuroimaging to explain persistent pain and pain severity.¹⁻³

There are many helpful techniques that Physical Therapists can use to help treat our patients who have persistent pain such as cognitive behavior, relaxation training, and meditation. Associative Awareness Technique (AAT) is another modality that can be added to our toolbox for patient care. If you are interested in exploring this technique further, you can visit their website at www.wellnessandperformance.com.

Hope you enjoy the rest of the summer.

John

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Associative Awareness Technique

Scott Musgrave, MSPT
Ernie Quinlisk, PT

In the last decade, there has been a tremendous amount of research and a plethora of books written about the brain. Neuroplasticity has emerged as a term that defines this new era of understanding learning, memory, and behavior and sheds light on the perplexing issue of chronic pain like never before. Neuroplasticity refers to the concept that the brain is not a static organ physiologically, but can change with training throughout life.

The idea of neuroplasticity was first proposed in 1892 by a Spanish physician named Santiago Ramon y Cajal, whose revolutionary ideas were rejected for the next 50 years! Many years later, a Polish neurophysiologist named Jerzy Konorski actually coined the term neuroplasticity prior to his death in 1973 as he further developed the work of Ivan Pavlov and Donald Hebb.

As we fast forward to current times, President Obama's administration also understands the vast potential available within this new understanding of the brain, which has been demonstrated in the launch of his BRAIN initiative on April 5, 2013 (WhiteHouse.gov/infographics/brain-initiative). Even though this initiative has its allies and adversaries, the concept

of an ever-changing brain has created a novel understanding of healing potential that can alleviate or eliminate human suffering that is as vast as the brain itself.

Since 2007, Scott Musgrave, MSPT, and Ernie Quinlisk, PT, through their company Wellness and Performance have been studying and researching the frustrating and fluctuating cycle of chronic pain. As a result, they are revealing an enlightened understanding of the brain, which has culminated in the creation of a simple method of treatment that in many cases can resolve the vicious cycle that defines this problem. It is called Associative Awareness Technique (AAT). This technique teaches patients how to be aware of past traumatic events that caused them pain previously and continues to trigger chronic pain patterns. There are currently over 100 AAT medical practitioners around the country that are now enjoying a new sense of professional satisfaction, by allowing their intellectual curiosity to be ignited by an innovative way of thinking and understanding, based on current scientific knowledge.

One of the many confounding physical problems that frustrates and confuses most medical practitioners and millions of people is the problem of chronic pain. According to the American Academy of Pain Medicine, 100 million people in the United States have chronic pain and more people suffer from chronic pain than diabetes, heart disease, and cancer combined! The economic impact on the United States is a startling \$600 billion annually.

Musgrave and Quinlisk have determined that the key to understanding chronic pain lies within the form and function of the base functional unit of the brain: the neuron. Associative Awareness Technique is designed around how information is processed in all 3 levels of the brain based upon neuronal function. By altering synaptic communication, we can extinguish the causative aspects of chronic conditions by using the scientific concept of neuroplasticity.

In chapter 6 of his book, *The Sensitive Nervous System*, Australian Physiotherapist, David Butler¹ talks about the grey zone of practice: "The grey zone is massive. This is an era of new, chronic and stress related disorders where there is neither vaccine nor cure. At this stage, best clinical reasoning must be applied to traverse the grey zones reasoning which includes, integrates and contributes to relevant evidence based work as it comes about."

Butler goes on to say, "the outcomes movement has brought about another compelling issue for manual therapists. Clinicians who have followed the content of mainstream journals such as *Spine and Pain* and even a past issue of *Manual Therapy* (Vol. 4, 1999) will have noted increasing support for the contention that chronic pain development and responses to treatment may have more to do with psychosocial factors than physical factors. These include pain beliefs, movement fears, job satisfaction, and childhood experiences. Some clinicians in the musculoskeletal management area may well begin to ponder their effectiveness in helping persistent pain patients. We may all go through this, but on the up side, the outcomes movement and the infor-

mation it brings, combined with the biological revolution is probably providing the most powerful stimulus for change and adaptation of practice ever. It can embellish existing successful management strategies and provide fresh and novel strategies.

Chronic pain patients live in the grey zone. If those of us in the medical profession who treat chronic pain are truly honest, we must admit our lack of comprehension in regards to the roots of chronic pain and the type of treatment that would best suit a particular patient. We prefer to not treat these patients as they come to us with varying pain complaints, depending on the day, in the hope of an answer because we are the 'experts.' In this respect, we are far from experts, causing patients to leave our offices like they have left so many offices in the past with no answers and no hope.

The dilemma of chronic pain has been proposed by the American Fibromyalgia Association as an abnormality in the central nervous system that causes widespread muscular pain, sleep, digestive disorders, chronic headaches, memory and concentration difficulties, and many other body-wide symptoms. No doubt this is an indication of an autonomic nervous system gone awry, causing an abnormal cycling that has no end in sight for these unfortunate individuals. And where do we start with treatment? If we think the problem is peripherally based, we do not stand a chance in helping these patients.

Just like Dr. Santiago Ramon y Cajal proposed in 1892, a disruptive technology is required to improve the current medical model and get the respective brain experts (scientific and medical) to work together as proposed currently by President Obama similar to the way all the systems in the body work together, not separately. In order to be even remotely effective, this new technology must be easy to learn and apply. Care must also be affordable since many of the afflicted patients have spent thousands of dollars searching for answers. Unfortunately, physical therapists have too many questions of their own about chronic pain and therefore cannot supply an answer to deserving patients.

Fortunately, AAT is this new affordable disruptive technology that follows the known form and function of the central nervous system as it scientifically explains the human traumatic experience that is the root of chronic pain. It requires no medicine, expensive equipment purchases, or frequent visits to your medical practitioner(s).

Associative Awareness Technique is a unique and innovative treatment process developed specifically by physical therapists for chronic pain. It is unique not only within the physical therapy profession but in the entirety of medicine, because there is no current way to physically apply the current scientific knowledge. Associative Awareness Technique is an innovative treatment process that melds current understandings in neuroscience and behavioral medicine to correspond with the 3 levels of the human brain to change the negative autonomic physical reactions that are the hallmark of chronic pain.

Associative Awareness Technique is designed to be self-applied, which is critical to create the neuroplastic changes that chronic pain patients require to make lasting change. Each level of AAT contains two steps. The first two steps of Level 1 (one self-applied, one hands on) target restoration of homeostasis to the autonomic nervous system (ANS). You can't intellectualize your survival instincts! No wonder these chronic patterns continue to reoccur. The two self-applied steps of Level 2 are

designed specifically to target the limbic system and emotional associations that abnormally cycle the ANS. The final two self-applied steps that are part of Level 3 are designed specifically to address neocortical associations, anticipatory expectations, and memory that trigger emotional associations and abnormally cycle the ANS.

Associative Awareness Technique has been successfully used by many AAT practitioners to treat chronic conditions and is designed to follow the concept of neuroplasticity within the framework of its self-application model. Patients can make positive changes to all 3 levels of their brain by using these self-applied steps. Associative Awareness Technique is used in the situational events of their daily lives that have the potential to trigger the patient and reinforce previously conditioned negative physical responses and their chronic pattern of pain.

Unfortunately, the physical therapy profession does not understand how the brain is functioning in the chronic pain patient, and this is clearly evident in why patients do not respond to our constant efforts of administering evidence based peripheral approaches to our chronic pain patients. We need to be leaders and educators in the study of chronic pain and that starts with a better understanding of the available science that we can ascertain to provide appropriate care for this difficult patient population.

Associative Awareness Technique provides a comprehensive understanding of the human nervous system as it addresses the interrelationships of the triune brain and its profound effects on the rapid cycling noted in almost every chronic pain patient. Associative Awareness Technique also addresses the myriad of complicating factors that these patients live with 24/7 like insomnia, post traumatic stress disorder, irritable bowel syndrome, irrational fears, anxiety, and depression. By educating health care professionals, we will achieve our goal of removing hopelessness from the lives of many chronic pain patients and their families and provide all practitioners tools that will only enhance the reputation of the physical therapy profession within the health care community.

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