Neurofeedback begins with an evaluation of brain activity and brain wave function. Utilizing an Electroencephalogram (EEG), we are able to measure activity in different brain lobes and identify specific neurological hyperactivity, inefficiency, and brain mapping patterns consistent with common physical, behavioral, cognitive or emotional decline.

What are Brain Waves? Brain waves are the result of synchronized electrical impulses produced by the firing of billions of neurons in the brain as they communicate with each other. They are divided into bandwidths which identify their specific function. When slower waves are dominate you may feel sluggish, tired, sleepy, experience "foggy thinking" or have difficulty comprehending information. When fast waves are dominant you may feel hyper, alert, agitated or strange, the details of how and where the brain wave patterns are firing within the brain lobes and at what frequency reveal an understanding of certain symptoms or behaviors one may be experiencing.

Neurotherapy works with the fundamentals of Neuroplasticity to help make changes within the brain in the way the neurons fire.

Neuroplasticity is the ability of your brain to learn, change and adapt to stimuli and repetitive training. A simple example of neuroplasticity at work is when you begin routinely driving to a new location and are unfamiliar with the route to get there. As you begin to drive you must pay careful attention to the signs and find your way slowly and try to remember landmarks for when to turn. As you repeat the drive over and over your brain learns the correct pathway and will take you to your destination with little or no thought to the details of the destination.

Connections within the brain are constantly becoming stronger or weaker depending on what is being regularly utilized or exercised in the brain. Since the brain controls everything we think feel and do, harnessing and maximizing one's own neuroplasticity is essential for making the necessary changes in your life to achieve optimal performance and complete wellness.

Neurofeedback is a process by which the brain is trained to adapt by using visual, tactile and or auditory stimuli. The stimuli provided sends information back to the brain. The brain then processes the incoming information about how it is functioning and works to correct the areas of deficiency maximizing performance and correcting imbalances in the brain.

This is accomplished by placing sensors on the scalp which are connected to the EEG used to measure and monitor brain activity and also connected to a computer which provides the stimuli. Methods may include programing videos or animations to run off of optimal performing brain activity only so when the client watches the screen the picture will only move and the music only plays when the desired brain activity occurs. This rewards the brain and

encourages reparative optimal performing brain activity. Other methods may include brain frequency synchronization utilizing light and sound therapy. The lights and sounds are programed with the frequency of the desired brain wave. Brainwaves are measure in frequencies of Hertz (HZ) cycles per second. As the frequency of the lights and sounds at the desired frequency are processed by the brain at the area being trained the brain activity begins to synchronize with the light and sound frequency resulting in the desired brain activity. As the brain synchronizes it is again rewarded with pleasant music or scenery thus further encouraging the desired frequency to occur.

Optimal Performance Training involves various methods mentioned above utilizing Neurofeedback and or Biofeedback methods to identify opportunities for improvement in the areas of brain wave activity or controlling internal functions to achieve a maximal level of physical, behavioral or cognitive functioning.

Our Neurotherapist is a licensed Health Care professional that has completed the Biofeedback Federation of Europe's approved training requirements and is a participating member of the ISNR International Society for Neurotherapy and Research.