

PEAK PERFORMANCE TRAINING
SOFTWARE FOR THE BRAIN

BY

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Goals of Peak Performance Training

It has often been said that human beings typically use only 10 per cent of their brain capacity. While the extent to which we use our brains is debatable, it is certainly a fact that each of us could use our brains more effectively. Peak Performance Training is a system that was developed to assist individuals enhance their ability to think with more quickness, accuracy and creativity and to physically act with increased speed and accuracy of movement. This training can result not only in a reduction in normal everyday stress, but also provide a resistance to daily stress. In addition the amount of time a person can work and feel less fatigued is extended. As a result, Peak Performance Training can often enhance the effectiveness and quality of our personal, athletic, educational and work lives.

PEAK PERFORMANCE TRAINING ENHANCES

LEARNING ABILITY

Concentration
Memory
Attention
Anxiety Reduction
Improved Storage
Processing Speed
Creativity

WORKPLACE SKILLS

Decision Making
Emotional Intelligence
Reduced Distraction
Improved Workload Capacity
Creativity and Innovation
Error Reduction
Workload Mastery

ATHLETIC PROWESS

Accuracy of Movement
Physical Speed
Mental Focus
Zone-Flow Action
Reaction Time
Stress Reduction
Stress Recovery

How is Peak Performance Training Done?

Peak Performance Training is carried out by assisting the individual to change brain energy. Some people may think that the brain has only two levels of functioning, awake and asleep. Actually the brain has a tremendous range of states. While the various brain waves are all important, unique levels are found in those who are thinking or physically reacting in more highly effective ways. For example, being too low in energy and slightly sleepy or being too high in energy and feeling anxious do not result in good performance. Research has shown that certain specific levels of brain energy result in more alert mental processing and greater speed and accuracy of physical movement.

When individuals are engaged in various human activities, the brain gives off different ranges of electrical energy. These energy forces are called brain waves. They vary from about 1 to 30 cycles per second (cps). The following table details the five brain wave patterns that appear most often in the brain along with the behaviors that are typical for each:

BRAIN WAVES AND STATES OF CONSCIOUSNESS

Brain Wave Energy in Cycles Per Second (cps)

<u>0</u>	<u>4</u>	<u>8</u>	<u>11.5</u>	<u>13</u>	<u>30</u>
<u><i>Delta</i></u>	<u><i>Theta</i></u>	<u><i>Alpha</i></u>	<u><i>Halpha</i></u>	<u><i>Beta</i></u>	
sleep	usually unconscious	normally conscious	alert zone flow	hyper alert	
	dream imagery	internal focus	balanced focus	external focus	
		relaxed calm	information processing	impulsive reactive	

The "Halpa" brain wave, which is really an abbreviation for "High Alpha", (11.5 to 13 cps) is the one which research has shown is most conducive to achieving Peak Performance in the educational, athletic and professional areas of life. Neurological Peak Performance Training can be compared to tuning in a radio station. As a person approaches the correct frequency, the radio station comes in more clearly. This is similar to how Peak Performance Training aids the individual in achieving the brain wave frequency that is best for mental processing and improved physical speed and accuracy.

To assist a person in learning to recognize and produce the High Alpha brain wave pattern at will, brain waves can be measured with the assistance of a device called an electroencephalograph (EEG). This is a big name for a powerful little instrument that merely records brain waves and magnifies them many times so that they can be viewed on a computer monitor. In order to detect brain waves, small, metal, disc sensors are placed on the scalp and on each of the earlobes. They are held in place by a small amount of paste that is non toxic and is easily wiped off following the procedure. Measuring brain waves takes place by using the brain as a battery and measuring its energy. No electricity is put into the brain by the instrument.

By using a process called "Biofeedback", a person can learn to increase the amount of High Alpha pattern that the brain is constantly emitting but often at a lower level. Peak Performance Training takes place by watching the computer monitor and consciously varying the mental energy between relaxed and very alert states. When the individual begins to produce brain waves in the effective range (High Alpha), a positive signal is presented by the computer as a sound as well as a visual image. Using these visual and auditory feedback signals, a person can learn to increase the amount of time spent in the High Alpha brain wave pattern. Similar procedures are also used to help people learn to increase the similarity of the shape and the timing of the firing of the brain waves. Research shows that this procedure can result in a more "whole brain" mental processing with improved communication between the brain cells. This process often results in an improvement in "Emotional Intelligence".

Peak Performance Training enhances the occurrence and the amount of a normally present pattern in the human brain but does not affect the structure of the brain itself. It provides an individual with an improved way to utilize normally appearing brain wave energies. In Peak Performance Training the instrumentation is not used to diagnose or to treat disease but to enhance the production of normally existing brain wave patterns.

The electroencephalograph (EEG) system used in Peak Performance Training is not a medical device. The FDA defines a medical device as an instrument that is intended for use in diagnosing diseases or other conditions and /or in treating disease or disorders in human beings. Any device that meets this definition is subject to FDA regulation and requires that it be prescribed or used by a licensed health care professional.

There are no specific known contraindications of Peak Performance Training. However, as a precaution any person with seizures, stroke, brain tumors, closed head injury or any neurological condition should not take part in the training. Persons with any other serious medical conditions should consult their physician before taking part in the training.

CREREDENTIALS

Jacob J. Elliott, Ph.D. is a psychologist who is licensed in the State of Ohio and has been in private practice since 1964. He is on staff at Toledo Hospital, St. Luke's Hospital, Riverside Mercy Hospital and the Children's Medical Center. He received Certification by the *Peak Performance Certification Board* as a **Certified Peak Performance Specialist** in June of 1997. In December of 1997, he was **Certified in Electroencephalographic Biofeedback** by the *Biofeedback Certification Institute of America*. He is also a researcher who has published a number of articles regarding neurological disorders and biofeedback. In November, 1997, he was appointed Division Chair in Biofeedback and Peak Performance with the *Association for the Advancement of Educational Research (AAER)*. In 1998, Dr. Elliott was elected to Fellow status in AAER. He is also a **Consulting Editor of the Journal Of Neurotherapy**.

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