



# **USER'S GUIDE**

Session Selection and Symptom Survey

The **ALERT Pro** is not recognized as a treatment or cure of any medical condition or disability.

The DAVID ALERT Pro is a non-invasive tool. All resulting effects are produced in the brain solely by audio and visual stimulation.

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## HOW TO USE THIS GUIDE

This guide will help you maximize the many benefits from your ALERT Pro. It is important that you read this entire guide so that you can learn how to properly use this system and choose the most effective sessions for your symptoms. *Please refer to your ALERT Pro Operator's Manual for additional operational and device set up instructions.* 

The Symptom Survey and the Relax, Improve Mood & Logic, Settle Hyperactivity and Instability sessions were designed exclusively for the ALERT Pro by Michael Joyce of Personal Resource Strategies in Minnesota. They are the result of numerous studies and have assisted thousands of children with various mental, emotional, behavioral and academic challenges over the past two decades.

If you would like more information about our products and research on AVE and CES, visit our website at <u>www.mindalive.com</u>. If you require additional assistance, please call us toll free at 1-800-661-MIND(6463). Outside Canada and the U.S., please call (780)465-6463.

GO ONLINE TO VIEW THIS MANUAL AT http://mindalive.com/index.cfm/store/manuals/

## ADD/ADHD AND THE BRAIN

All mental functioning involves an element of arousal - the "awakeness" or alertness of the brain. The level of the brain's arousal dramatically affects how well a particular mental challenge will be performed. For instance, it is almost impossible to pay attention if the brain is making an abundance of alpha or theta (dreamy) brain waves. It's just as difficult to fall asleep with excessive beta (alert) brain waves being produced when the eyes are closed.

People with attentional problems such as Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD) have particular difficulty shifting their pre-frontal lobes (the part of the brain behind the forehead) into "gear." The pre-frontal lobes are responsible for attention, intention and logical reasoning. These areas function poorly in the ADD/ADHD brain because of reduced blood flow and the production of too much slow alpha and/or theta brain waves, especially during cognitive (thinking) tasks and passive tasks (reading).

For those with ADD/ADHD, high levels of stimulation have been shown to wake up the pre-frontal lobes, resulting in reduced hyperactivity, improved attention, and less moodiness. People with ADD/ADHD do well with stimulating video games and action sports. Unless the activity is exciting (pushing up arousal), the pre-frontal and frontal lobes quickly lose their attentiveness and activation. Theta and/or alpha brain waves increase dramatically and the person "fogs out." A lack of stimulation in the typical school setting causes ADD/ADHD children to struggle constantly with mental fog, leading to poor grades.

ADD/ADHD rarely occurs in isolation and often exists with other conditions including depression, oppositional defiant disorder, conduct disorder, obsessive-compulsive disorder, learning disabilities, anxiety disorders, and other significant psychological, psychiatric, and neurological problems.

### STRESS AND ATTENTION

From the moment of birth, we are either building up or tearing down the brain/body system, depending on the stressors in our life and how we handle those stressors. The brain/body system has been designed to handle short-term mental, emotional and physical stresses, but not the long-term stressors typically associated with complex, busy, modern living. Stress levels also can be significantly affected regardless of whether the life challenges are real or imagined.

Chronic stress in children often arises from being too busy, feelings of inadequacy, struggling with school work, fear of failure, constantly getting into trouble with parents and teachers from impulsive behavior and general stresses of modern living. Stress can cause any number of disorders or diseases including anxiety, depression, insomnia, migraines, PMS, high blood pressure, chronic fatigue, fibromyalgia, inattention, memory impairments, and ADD/ADHD.

Poor nutrition also adds to stress by impairing the brain's ability to cope with life's challenges and by stressing the adrenal system, adding increased stress to the mind and body. Both daily events and eating habits have been shown to be major contributing factors for most of our health and wellness challenges including mental and emotional dysregulation.

It is generally quite easy for parents and teachers to recognize a child with severe ADD/ADHD. Parents of these children will typically consult professional help and may be extra tolerant of the child's challenging behaviors. However, when a child has mild to moderate ADD/ADHD, the child will be "normal" some of the time and a "terrible, obnoxious brat" at other times. These parents don't realize that the child has a disorder and assume that they have a child with mild ADD/ADHD is both frustrated and angry at him/herself and life in general and doesn't understand why he/she does what he/she does. In addition, because of the ADD/ADHD, this child typically has trouble thinking rationally and clearly, or making good decisions.

#### STRESS AND ATTENTION

The three main behavioral characteristics of stress are impulsiveness, inattentiveness and hyperactivity, which are also the same three main symptoms of ADHD. So the added stress of constant punishment, putdowns, "failures" and so on, just makes the child worse. A child with mild ADD/ADHD "fails" much more than a child with severe ADD/ADHD because mild ADD/ADHD children are expected to behave and perform the same as other children. This child often feels highly anxious in the struggle to compete mentally in our highly competitive society. This added stress only serves to make the child more impulsive, inattentive and hyperactive.

From a physiological perspective, stress causes critical blood supply to the frontal lobes of the brain to partially shut down and causes the adrenals to excrete damaging distress (sympathetic) hormones, resulting in impulsiveness, poor judgment, and the rapid consumption and loss of vitamins in the body. Continual stress results in more damaging than healing moments in our brain/body systems and therefore degrades the functioning of these systems.

A continual state of anxiety and over-arousal elicits large amounts of distress hormone, which can result in cellular toxicity, for instance in the way stress-released cortisol destroys neurons in the hippocampus (an important region in the brain that controls storage and retrieval of memories). Anxiety also causes a shutting down of brain-based serotonin and increased brain-based norepinephrine, which can lead to aggressive behavior within seconds of a stress-provoking event or thought. Since life may be viewed as a cooperative effort between how we live and the strength of our gene pool, it is useful to recognize just how much influence lifestyle has on our quality of life.

## ABOUT AUDIO-VISUAL ENTRAINMENT

Audio-Visual Entrainment (AVE) is a technique that provides pulses of light and sound at specific frequencies in the brain wave range. These pulses of light and sound settle down an out-of-control racing/agitated mind, enhance the production of the appropriate brain wave frequency, increase cerebral blood flow (blood flow in the brain) and increase the metabolization of glucose in the brain for improved functioning of the neurons. This results in improved mental performance.

An important objective of entrainment is to produce a *dissociative* state, which is a meditation-like state of deep relaxation. It is the brain/body rehabilitative benefits produced by this deep trance-like state that makes AVE so useful for so many conditions. The dissociative state can be first observed by noticing deep and diaphragmatic breathing. Hands and feet become warmer as arteries dilate. Skin color will become pinker as blood flow increases throughout the face and body. Blood flow will increase in the brain as well. The person will experience feelings of profound relaxation and contentment as beneficial neurotransmitters are released into the brain. When in this deep state, the brain/body's regenerative repair chemicals (parasympathetic hormones) and stabilizing neurotransmitters such as serotonin, endorphins and dopamine are released, which restore good brain function. AVE contributes to this restoration by providing a stress-break, increasing cerebral blood flow and encouraging impaired neuronal firing and allows the brain to return to normal function.

This deep state of AVE-induced regeneration has proven to be useful for many of the mental, emotional and physical challenges that nearly all of us face at one time or another in our lives, including but not limited to: anxiety, depression, insomnia, migraines, PMS, blood pressure, and chronic fatigue, along with improved attention, learning and ADD/ADHD.

When the body-mind effects from experiencing AVE are fully appreciated, the experience becomes as regular and beneficial as many other life essentials such as quality sleep, good nutrition, pure water and exercise. Sleep is another area where AVE has been shown to be beneficial, contributing to the natural regenerative process of the body and brain.

## ABOUT CRANIO-ELECTRO STIMULATION

As far back as the first century, the Greeks and Romans used the electric eel, a variety of the "Torpedo Fish" for electrical stimulation. The electric eel was used well into the 19th century, even after the invention of electronic stimulation devices. First century writings record placing a live torpedo fish under the feet of a person suffering from gout to ease the pain. There are also reports of placing these fish on people's foreheads to treat headaches.

Current interest in Cranio-Electro Stimulation (CES) was initiated by Robinovitch, who in 1914 made the first claim for electrical treatment of insomnia. In 1958, the book *Electro-Sleep* reflected the first serious works on CES. This book inspired research in Europe and in Eastern Bloc countries, as well as in South America, Asia and finally the US. Because the CES equipment used was bulky, inconvenient, and unreliable, CES, like the electric eel, was abandoned in favor of drug therapies.

With the invention of the transistor in the 1960s, small, low-power and reliable CES devices were developed. By 1975 several companies in the US and Europe were manufacturing CES devices for public use. During this time, research on CES was quite active and scientific papers were published.

Most studies to date have shown CES as a reliable method to reduce anxiety and improve cognition in recovering alcoholics. Additional studies have shown CES to be an effective tool in reducing anxiety and improving IQ.

Research to date is quite vague on the effects of using CES at various frequencies, citing both low and high frequencies can be effective for improving learning and reducing anxiety. Many people, who used CES along with AVE, have reported that they experienced deeper relaxation for prolonged periods of time. In addition to enhancing entrainment, CES increases neurotransmitter production. These neurotransmitters are necessary for information processing, memory, energy level and physical well-being. When our neurotransmitters and endorphins are not produced to necessary levels, it may lead to destructive behaviors and/or the abuse of substances as a substitute for that "natural high".

## CES AND ADD/ADHD

Children with ADD/ADHD and behavioral disorders (BD) often struggle with compounded issues such as insomnia, depression, anxiety, poor cognition (mental performance) and a tendency to experiment with drugs. There are several studies using CES to help with these concerns, as shown in Table 1. Parents and clinicians using the ALERT Pro sessions are experiencing very positive results and those that have used AVE with CES say that effects are enhanced when using both together.

Syndrome Studied	# of Studies	# of Subjects	Avg. Improvement
Insomnia	18	648	67%
Depression	18	853	47%
Anxiety	38	1495	58%
Cognitive Dysfunction	13	648	44%
Drug Abstinence	15	535	60%

TABLE 1 - COMPILATION OF STUDIES USING CES (RAY SMITH, 2008)

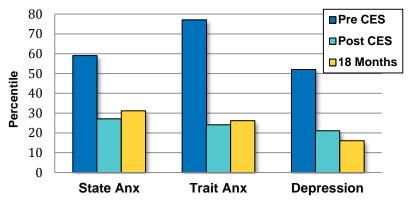
A study by Ray Smith (1992), of 23 ADD children using CES for 45 minutes per day for three weeks showed profound effects in reducing state anxiety (anxiety in the moment) and trait anxiety (overall anxiety) and depression (Figure 1). A follow-up after 18 months showed that the effects were still holding quite well. Ray also measured IQ and found significant improvements (Figure 2), which also held over 18 months.

A 1999 controlled study (n=21) by Susan Southworth, on attention and concentration of normal students found that one session of CES for just 20 minutes improved attention by 31%, whereas the placebo group improved by only 4%.

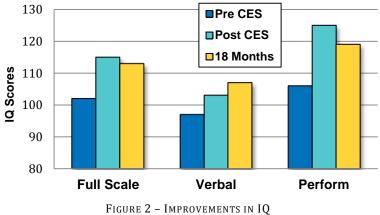
#### CONCLUSION

There is ample evidence indicating that CES is effective in improving mood and cognitive performance. Adding CES to the ALERT Pro sessions can enhance the positive effects.

## CES AND ADD/ADHD







FOLLOWING TREATMENT WITH CES

Parents and teachers: Get familiar with the ALERT Pro. We recommend that you complete a minimum of five sessions on yourself before introducing the ALERT Pro to the child. Your experiences will be useful as a good example and in answering questions the child might have.

- 1. To ensure that the AVE experience is successful, it is recommended that you prepare the environment so that it is conducive to a regenerative experience. Comfort is essential.
- 2. Dim the room lights and be sure that session time will be quiet with no disruptions.
- 3. Have the child lie down in bed or on a floor-mat or sit in a recliner. Always provide head support.
- 4. Cover the child with a light blanket. This serves to anchor and settle the child and helps limit body movement while providing adequate warmth during the session.
- 5. When introducing a child to the ALERT Pro, make it enjoyable. The ALERT Pro is more effective when the child is comfortable and relaxed. Tell the child that falling asleep is OK. This will allow him/her to let go and reduce the self-talk (brain chatter). Never tell or imply to the child that this will help him/her "stop being bad" or any other negative implications.
- 6. Drink a glass of water 15 minutes before the first six to 10 sessions to avoid mild nausea and/or headaches. Most children and stressed people are normally deficient in water (as stress increases dehydration). Also, be sure that the child has gone to the bathroom prior to beginning the ALERT Pro session.
- 7. A convenient time to use the ALERT Pro may be first thing in the morning. However, Group 1 (Relaxation) sessions may be used at any time. If using in the morning, wake the child up, have the child go to the bathroom and drink a glass of water. Then return the child to bed and run the ALERT Pro session. Whatever time you choose, it has been found most beneficial to use the ALERT Pro at approximately the same time each day get into a routine.

#### **BEFORE YOU BEGIN**

8. Playing easy-listening music or nature sounds into the audio input can enhance the ALERT Pro sessions. The music helps to engage the child by giving him/her something to focus on. On occasion, a children's book-on-CD can provide content on which to focus. Don't let the child listen to anything that contains aggressive, violent or negative content.

The objective is to obtain brain/mind/body relaxation and dissociation, best described as a trancelike, near-sleep experience. This can be observed in the child's breathing and related body/muscle (facial) movements. The way one breathes can be a key indicator of one's brain/mind/body state.

## HEART RATE VARIABILITY

After a few weeks of use, you may have your child practice paced breathing (also known as Heart Rate Variability) for the first 5-10 minutes of a session. Long, graceful breathing cycles are very effective in bringing about relaxation and increasing brain blood flow, and are scientifically proven to reduce stress and anxiety.

The heart normally speeds up with every breath in and slows down with every breath out. This difference in heart rate is called Heart Rate Variability (HRV). For example, a relaxed person using controlled breathing may have a heart rate of 80 beats per minute (bpm) while breathing in and as low as 65 bpm while breathing out. The difference or "swing" is about 15 bpm. When people get stressed, the heart produces undesirable "clamping" to as low as 3 bpm HRV with occasional undesirable "spikes" sometimes as high as 30 bpm HRV. This is abnormal activity and is stressful to the heart.

The HRV technique used in the ALERT Pro sessions is based on a 10 second breathing cycle (6 breaths/minute) by inhaling slowly for 5 seconds and exhaling slowly for 5 seconds in a controlled, relaxed breath. When using HRV-paced breathing, listen to the heartbeat generated by the ALERT Pro through the headphones. Inhale for two of these heartbeats and exhale for two heartbeats. All ALERT Pro sessions begin at 7 breaths/minute (28 heartbeats/min) and slow to 6 breaths/minute (24 heartbeats/min). This allows the user to breath a little faster at the onset of a session until he/she has had time to relax.

Mind Alive offers an HRV training CD. See **Article One** - Audio-Visual Entrainment: History and Physiological Mechanisms, **Article Three** - Audio-Visual Entrainment: Applying Audio-Visual Entrainment Technology For Attention and Learning http://mindalive.com/index.cfm/research/research-articles-by-davesiever/ – Dave Siever, CET

Additional Resources (page 29) for details.

Also refer to the ALERT Pro Operator's Manual for more information on set up and operation.

- 1. Put the eyeset on first, then the headphones. Please ensure that you have the side marked "L" on your left ear and the side marked "R" on your right ear.
- 2. Have the eyeset sitting well up on the nose to minimize the child's ability to see over or around the eyeset. A scarf may also be laid over the eyeset to block out light and distractions.
- 3. Ask the child to close his/her eyes. It will not harm the child if he/she opens his/her eyes during the session, but sessions are more effective with eyes closed.
- 4. Adjust the intensity of the lights and volume of the tones to a comfortable level. If using a CD or MP3 player, adjust the volume from the player. The volume on the ALERT Pro does not control the player volume.
- 5. Initially, stay with the child during the entire session and watch for signs that the child is drifting into trance (i.e. respiration rate, volume and rhythm, body twitches). Make a note of the estimated amount of time taken to dissociate and any other interesting observations. It is okay if the child falls asleep. After the child has become a 'seasoned brain trainer,' it will not be necessary to observe the child.
- 6. Should a session need to be interrupted or terminated, fade out the intensity of the eyesets and volume in the headphones or activate the Soft Off<sup>™</sup> process by pressing and releasing the power button (<sup>(U)</sup>) once. This will prevent the child from being startled from an abrupt end to the session and the possible feeling of nausea or "out-of-sorts" later on.
- 7. When the session has ended, remove the headphones first and then the eyeset, before the child sits up. Don't rush the child. Allow the child a few minutes to "wake up." It can take up to 30 minutes for some children to become fully alert.
- 8. Keep a journal to record your observations from each of the sessions. For example, if dissociation occurs, the amount of time taken to dissociate.

## YOUR CHILD'S FIRST AVE SESSION

The following hints are to help facilitate a successful start. Keep rapport with the child by making the process fun, enjoyable and relaxing.

#### We recommend that the child begin with Relax 1.

You can add an easy music or nature-sound relaxation CD. Continue with Relax 1 until the child learns to disassociate easily. One sign of this is breathing diaphragmatically (from the belly where the stomach moves up and down) in a steady rhythm. Generally the deep breathing just happens with no need for formal instruction. It may take up to ten sessions before deep dissociation is observed. It is suggested that Relax 1 be utilized for a minimum of six sessions before moving on.

## If after approximately 10 sessions, the child is still having difficulty reaching the breathing criteria, HRV training may be necessary.

Instruct the child to be conscious of his/her breathing by resting one hand on the stomach and the other on the chest, while listening to the heartbeat sound in the headphones. Instruct the child to notice how the hands move up and down on each breath. With proper breathing, the diaphragm should show greater movement while the chest area has less.

Additional resources for learning HRV are the HRV Training CD by Mind Alive, or a biofeedback training system like the emWave by HeartMath. See page 29 for more information.

#### Consider using a "breath pillow" to help the child learn to breathe.

The breath pillow is a pillow specifically designed to strengthen the diaphragm while enhancing one's awareness of proper diaphragmatic breathing. A soft cover book, placed low on the stomach, beneath the ribs can also work well.

*If dissociation occurs easily after the minimum of six Relax 1 sessions, you may then move on to other sessions as determined by the Symptom Survey.* 

## USING CES TO ENHANCE AVE

Unless you are familiar with using AVE and/or CES, you may want to start using the ALERT Pro with AVE only. CES can be added to any AVE session or used by itself for relaxation while remaining awake and mobile.

#### PLACEMENT OF ELECTRODES

Remove glasses, earrings or any other objects near the ears that might interfere with the ear clips. Plug in the stimulus cable into the CES output jack ( 小). To ensure a better electrical connection, wet the earlobe using tap water, saliva or a tiny amount of conductive gel before attaching the ear clips. Attach the **black** clip to the left ear and the **red** clip to the right ear.

#### ADDING CES TO AN ALERT PRO SESSION

To operate CES, the ALERT Pro must be run off of battery only. Unplug the 9-volt DC adapter from the unit before you begin, and ensure that the battery has a reasonable charge (2 or 3) before you begin.

Connect the CES stimulus cable and attach the ear clips to the earlobes. Turn on the unit and select a session as normal. Once the session begins the CES may be enabled by pressing the CES  $\blacktriangle$  button. The  $\exists L \notin$  and  $\exists R \notin$  lights will flash with the stimulation. Adjust the CES intensity using the CES  $\blacktriangle$  and  $\bigtriangledown$  buttons. Turning the CES intensity down all the way will shut it off completely.

CES can be used by itself: start a session but don't connect the eyesets or headphones. You can even do light tasks (like office work or cleaning) while running CES.

#### **100Hz OPERATION**

By default the CES stimulation is synchronized with the AVE stimulation in the running session. When you first turn on CES, the rate of pulses will be the same as the AVE frequency. 100Hz CES produces more serotonin than other frequencies, boosting relaxation and helping to improve sleep.

To engage 100Hz stimulus at any time, press both the CES  $\blacktriangle$  and  $\triangledown$  buttons together. Press them again to return to AVE frequencies.

It is recommended that you engage 100Hz operation when the CES intensity is set low, as the sensation from 100Hz stimulus is often much stronger.

For more detailed instructions on using CES with your ALERT Pro, see the **CES Operating Instructions** section of the **ALERT Pro Operator's Manual**.

#### USING THE SYMPTOM SURVEY

The Symptom Survey (*pages 18-21*) is a useful tool to assist in identifying areas of concern and which sessions to use. The Symptom Survey is not intended to be prescriptive so much as it is meant to provide general guidelines as to which ALERT Pro sessions may be most useful.

Complete the Symptom Survey prior to starting your first AVE session and record the results in a journal. The brain begins to change and rearrange itself after just the first few AVE sessions. So after the first six to ten sessions of Relax 1, complete the Symptom Survey again to compare with your first results to observe if any of the original concerns have been reduced. The Symptom Survey provides a guide for choosing the appropriate AVE sessions and also prompts the parent to ask "what is the logical next step?" with regards to other aspects of the child's life.

Continue to complete the Symptom Survey after every five to ten sessions and compare the new results with the original results.

As mentioned previously, the primary goal is to produce the sleep-like dissociated state. Although Relax 1 is usually very successful for producing the dissociated state, we recommend that you use whatever sessions accomplish this objective most reliably for your child.

When completing the Symptom Survey, circle all of the items that apply. Then place a number next to the three items of greatest concern, with number 1 being of most concern.

## SELECTING FURTHER SESSIONS

#### SELECTING SESSIONS

Once you've used the Session Survey to determine which group of sessions to use (Relaxation, Left Hemisphere, Right Hemisphere, or Whole Brain), start with the first session and progress through all of the sessions in that group. After you get familiar with the sessions, you may eventually settle on a few particular sessions that you see as most beneficial, or you may notice that a particular session is better to use along with a particular mood or activity of the child.

For example; you may notice that the child responds best to a certain session when he/she is moody and another session when he/she is inattentive. You may also find that the child responds better to one particular session on weekends and another on school days.

#### This is why it is important to record your observations in your journal.

#### EXAMPLE 1

The survey tabulation results in a total of 8 circled symptoms from Group 1, 5 circled symptoms from Group 2 and 13 circled symptoms from Group 3 with ranking of primary concerns from Group 3 (impulsivity), Group 3 (constipation) and Groups 1 and 3 (aggressive). This indicates that the majority of the challenges are from Group 3, which means that the Right Hemisphere (SMR – sensory motor rhythm) protocols are to be used (Hyperactivity 1, 2, and 3).

You might start with Hyperactivity 1 for a few days, followed by one session of Relax 1. Next use Hyperactivity 2 for several days, followed by one session of Relax 1. Then do the same with Hyperactivity 3 for several days, followed with a session of Relax 1.

#### Example 2

The survey tabulation results indicate the use of the Left Hemisphere protocols (Group 3, Beta), but the primary concerns indicate another group of sessions, for example the Whole Brain Sessions (Group 4, Instability). You might consider using Instability 1 followed by Instability 2. Use Relax 1 after five to ten uses of each Instability session, or between other sessions taken from the symptom survey.

Circle the symptoms of concern. Place a check mark or number by 3 items that are of primary concern. Total the circled items for each section to identify program possibilities.

Some items may be repeated as they are both right and left hemisphere concerns

#### GROUP 1 - RELAXATION ( )

THETA/ALPHA

(LEFT AND RIGHT: TARGET RATE 4-11) Sessions: Relax 1, 2, 3 and 4

Anxiety (worry)		Chronic pain with depression
Perfectionist		Lacks empathy
Obsessive-compulsive		Suicidal thoughts
Anger		Depression (despair)
Panic attacks		Fibromyalgia
Irritable bowel syndrome (IBS)		High threshold for pain
Chronic aching pain		Aggressive
Anxiety (fearful)		Binge eating (with remorse)
Chronic fatigue syndrome		Poor expression of emotions
Depressed (helpless, hopeless)		Manipulative, aggressive
Compulsive overeating		Autoimmune disease
Anorexia, bulimia with: Anxiety, controlling, angry and aggressive		
PMS with: depression, irritability, sugar cravings, pain, insomnia, mood swings, migraines		
PMS with: rage, agitation, mania		

## GROUP 2 – LEFT HEMISPHERE ( D)

Вет	A		(Left: Target Rate 15-18)
Tota	ıl:	Sess	ions: Improve Mood & Logic 1 and2
	Inattentive		Poor reading comprehension
	Feelings easily hurt		Irritable
	Night sweats (hypoglycemic)		Difficulty waking
	Cries easily		Dyslexia
	Daydreams, inattentive		Slow, variable response time
	Poor reading comprehension		Immune deficiency
	ADD		Poor concentration
	Passive, withdrawn		Feelings of shame
	Not rested after sleep		Sleep apnea
	Aching pain		Depressed (helpless, hopeless)
	Panic attacks		Fibromyalgia
	Lack of motivation		Remorseful after tantrums
	Frequent waking from sleep		Difficulty decoding words
	Migraines		Hypoglycemia
	Spaciness		Difficulty calculating numbers
	Anxiety (worry)		Perfectionist
	Chronic fatigue syndrome		Mood swings
	Enuresis (bedwetting)		Tension headaches
	Sugar (carbohydrate) cravings		Poor word fluency
	Poor sequential processing		Sleeping too much
	Snoring		Chronic pain with depression
	Binge eating (with remorse)		Autoimmune disease
	Irritable bowel syndrome (IBS)		
	PMS with: depression, irritability, sugar cravings, pain, insomnia, mood swings, migraines		
	Anorexia/bulimia with: <i>depression, history of abuse, poor self-esteem, emotional fragility</i>		

## GROUP 3 – RIGHT HEMISPHERE (

SMR	(RIGHT: TARGET RATE 12-15)
Total:	Sessions: Settle Hyperactivity 1, 2 and 3
Impulsive	Lack of social awareness
Easily distracted	Holds a grudge
Speech lacks intonation	Migraines (with stress)
Restless sleep	Poor spelling
Poor eye contact	Autistic symptoms
Constipation	Irregular menstrual periods
Physical agitation	Mania and/or paranoia
Too busy to sleep (manic)	Heart palpitations
Chronic fatigue syndrome	Autoimmune disease
Impatient	Obsessive-compulsive
Suicidal thoughts	Anger
Irritable bowel syndrome (IBS)	Poor expression of emotions
Poor drawing and spatial skills	Tics (with stress)
Difficulty with math concepts	Difficulty falling asleep
Loud un-modulated voice	Poor sense of direction
Menopausal hot flashes	Skin allergies – eczema
Panic attacks	Lacks empathy
Manipulative, aggressive	Depression (despair)
Lack of body awareness	Bruxism (teeth grinding)
Nightmares	Stimulus seeking
Poor visual tracking when reading	Poor handwriting
Fibromyalgia	(fearful)
High threshold for pain	Aggressive
Compulsive overeating	PMS with: rage, agitation, mania
Anorexia, bulimia with: anxiety, co	ontrolling, anger and aggressiveness
Chronic pain with: <i>burning, throb</i>	bing, shooting pain

	GROUP 4 – WHOLE BRAIN ( 🗣)
INSTABILITY	(Left & Right: Target Rate 12–18)
	Sessions: Instability 1 and 2
If totals from Gr Instability Sessi	roups 2 and 3 are similar or close to equal, consider using the ons.
	NOTES

## SESSION DESCRIPTIONS

		<b>Group 1 – Relaxation</b> Promote relaxation, dissociation, and proper breath	ing
_	Relax 1	t	21 min
1	7.8Hz ( <i>I</i> (Alpha)	Alpha) to 4.8Hz and 5.2Hz (Theta) alternating sides to	10Hz
-	Relax 2	t	21 min
2	-	Alpha) to 4.8Hz and 5.2Hz (Theta) alternating sides to 3Hz (Alpha) alternating sides.	9.7Hz
	Relax 3	t	21 min
		Alpha) to 4.8Hz and 5.2Hz (Theta) alternating sides to Hz (Theta) alternating sides to 7.8Hz (Alpha).	.3.8Hz
	Relax 4	t	21 min
4	7.8Hz ( <i>I</i> (Alpha)	Alpha) to 4.8Hz and 5.2Hz (Theta) alternating sides to	7.8Hz
_	Alpha a	ind Theta for Sleep	36 min
5		sion can help to break up distressing thoughts that are in ep. 10Hz Left and 6Hz Right.	nterfering

	D	<b>Group 2 – Left Hemisphere</b> Improve mood and logical thinking		
_	Improv	ve Mood & Logic 1 <sup>†</sup>	21 min	
1	-	Alpha) to 4.8Hz Left and 5.2Hz Right (Theta) to 12Hz I ight. (SMR/Beta).	eft and	
2	Improv	ve Mood & Logic 2 <sup>†</sup>	22 min	
-	7.8Hz (Alpha) to 5Hz (Theta) to 7.8Hz (Alpha) to 14Hz (SMR).			
	Mood I	Booster 1	30 min	
3		down negative emotions from the right brain while stimul n to rebalance alpha asymmetry. 10Hz Left (Alpha) and 1	U U	
	Mood H	Booster 2	42 min	
4		sion has an alpha front end to reduce anxiety and enhanc on. 10Hz (Alpha) to 10Hz Left (Alpha) and 18Hz Right (Be		

† Sessions © copyright Personal Resource Strategies, 1993, 1995, 1997, 1998, 1999, 2001, 2003, 2004 (Version 8.04)

## SESSION DESCRIPTIONS

(	R	<b>Group 3 – Right Hemisphere</b> Settle hyperactivity	
1	Settle H	Iyperactivity 1 <sup>†</sup>	21 min
-	15Hz Le	eft (Beta) and 12Hz Right (SMR).	
_	Settle Hyperactivity 2 <sup>†</sup> 21 min		
2		Alpha) to 13.5Hz Left and 15Hz Right (SMR/Beta) to 1	
		to 13.5Hz Left and 15Hz Right (SMR/Beta) to 13.5Hz.	
3	Settle H	Iyperactivity 3 <sup>†</sup>	20 min
Ŭ	7.8Hz (A	Alpha) to 4.8Hz and 5.2Hz (Theta) alternating sides to	13.5Hz.

ļ	R	<b>Group 4 – Whole Brain</b> Balance instability with Alpha, Beta and SMR	
	Instabi	ility 1 <sup>†</sup>	21 min
1	-	Alpha) to 5Hz (Theta) to 10Hz and 18Hz (Alpha/Beta) ting sides.	
-	Instabi	ility 2 <sup>†</sup>	21 min
2	7.8Hz (Alpha) to 5Hz (Theta) to 14Hz Left and 18Hz Right (SMR/Beta) reducing in frequency to 13.5Hz		
	ADD ar	nd Learning	26 min
3	This session has rapid transitions for mental stimulation to help keep the user "engaged" in the session. Used in the ADD study published in the Journal of Neurotherapy. Cycling from 10Hz (Alpha) to 13.5-14Hz Left (SMR) and 18-20Hz Right (Beta).		

The **Left** and **Right** target rates refer to the visual field and auditory stimulation rates.

Pulsing in the left visual field and ear means the right hemisphere of the brain is stimulated. Pulsing in the right side stimulates the left hemisphere.

## ADDITIONAL SESSIONS



#### **Extra Sessions**

In addition to the Relaxation and targeted sessions designed to be used in conjunction with the Symptom Survey, these sessions may be used by any member of the family.

	Extended Schumann	40 min				
1	For effective deep meditation and to improve the onset of sleep. Calms "hyper/chattery" minds. Ideal for those with insomnia who have a busy mind and tense body.					
2	SMR for Reading (short)	20 min				
	Use with a set of Tru-Vu Omniscreen Viewhole eyesets ( <i>sold separately</i> ) to improve attention, alertness, and comprehension while reading.					
3	SMR for Reading (long)	60 min				
	A longer version for extended reading or study sessions.					
4	Roller Coaster	7 min				
	This action-packed session is very engaging. Some with ADD can benefit.					
5	Beta Perker	20 min				
	A great way to get going in the morning without caffeine. This session helps reduce ADD and SAD symptoms. May cause anxiety.					



#### **User Designed**

These sessions have been left blank for adding custom sessions (*requires the DAVID Session Editor, sold separately*).

1							
2							
3							
4							
5							

There are other factors that will have a major impact on ADD/ADHD symptoms:

- 1. vitamins and nutrition
- 2. high glycemic foods and food additives
- 3. life stresses

#### VITAMINS AND NUTRITION

Ensuring proper daily intake of vitamins and good general nutrition are vital for anyone who is struggling mentally. Most children and adults have been found to be deficient in vitamin D, tryptophan and omega 3 as well as many other minerals. Recent studies have shown that fish oil supplements have reduced the symptoms of ADD/ADHD more than stimulant drugs. Michael Lyons' book, "Driven to Distraction," has many meal-making tips and good information about nutritional supplements.

Antibiotics can cause severe nutritional troubles by destroying the good aerobic bacteria (acidophilus, bifidus, etc.) found in the intestines. These bacteria help to absorb nutrients and protect the thin wall of the intestines. Once the good bacteria is dead, there is room for anaerobic bacteria to get a foothold in the gut, which in turn, robs us of nutrition and eats holes in the intestines, allowing actual food and pre-feces particles to enter into the body. Since food and feces particles aren't supposed to be in the blood stream, it causes the immune system to go wild as it tries to control the "poison." This is known as leaky-gut syndrome and impairs brain function. It often causes anxiety, hyperactivity, impulsiveness, poor judgment, sleep problems, and aggressiveness. Always take acidophilus and bifidus supplements during and after completion of an antibiotic.

#### HIGH GLYCEMIC FOODS AND FOOD ADDITIVES

When people feel tired, depressed or foggy-headed, which is often a symptom of ADD/ADHD, they often crave high glycemic foods (simple carbohydrates such as pasta, cake, cookies, doughnuts, chocolate, sugary breakfast cereals, etc.) as a means to spike the brain with glucose and perk it up. This works for 15 to 30 minutes, but when the insulin kicks in, there is a sugar crash and the brain is more dysfunctional than before the carbohydrates. Eating simple carbohydrates also makes the body more acidic from metabolizing fat.

#### ADHD CHILDREN ARE EASILY ADDICTED TO JUNK FOOD.

Restrict intake of these high glycemic foods. For example, most breakfast cereals contain simple sugars and have very little nutrition. Stay with basic granola where the oat seed can be seen. Only eat sprouted grain breads and cereals, as many people have difficulty tolerating the gluten found in whole grains (wheat, rye, barley).

For more information, read "Dangerous Grains" by James Braly. Avoid potatoes (unless after aerobic exercise) as well and anything that is fat fried. Food additives and dyes contribute to cognitive and emotional troubles. Both MSG and aspartame affect glutamate (an excitatory neurotransmitter in the brain), which in turn causes brain cell death from over-excited neurons, known as excitotoxicity. BHA and BHT, additives to promote "freshness" in many breakfast cereals, chips and other snack foods, can sometimes cause severe reactions in children. *Carefully read the labels on all prepared foods.* 

> MAINTAIN A DIET HIGH IN VEGETABLES. REPLACE JUNK FOODS WITH VEGETABLES OR FRUITS FOR SNACKS.

#### Home and Life Stress

As mentioned before, raising a challenging child can be stressful for parents. This stress can cause parents to respond inappropriately to the child's behavior, which can lead to unnecessary punishments and scolding. This will add even more to the child's stress, eventually spiraling the whole family into a vicious stress cycle.

However, if the parents can learn how to effectively deal with the child's ADD behavior, the child can often improve just as a result of the parents' improved attitudes. We have always encouraged parents to use the ALERT Pro before using it on their child. We have seen many cases where the child began improving shortly after the stressed-out, worried, punitive parents began using AVE, even before the child has used it.

Whether caused by poor nutrition, stress, or both, many ADD/ADHD children have intestinal distress, with stomach bloating and constipation. Intestinal troubles directly cause neurological malfunction, slow the brain and increase symptoms of ADD/ADHD.

## **CLOSING COMMENTS**

ADD/ADHD is a neurological condition that primarily impairs function in the pre-frontal and frontal regions of the brain. As a result, ADD/ADHD children become impulsive, inattentive and distractible. They also often crave stimulation (good or bad) in an effort to excite their brains. Yet, many of our best entrepreneurs, visionaries, inventors, artists, musicians, scientists and CEO's of corporations have ADD/ADHD. Richard Branson of the Virgin Group of companies attributes his ADHD to his overwhelming business successes! So, properly channeled, the ADHD-induced drive to stimulate and create can be a powerful asset. Without management and direction, it can be excruciatingly difficult for the ADD/ADHD person to regulate him/herself in school, society and in relationships.

The mind state is a dynamic condition – it is constantly responding to how we sleep, what we eat, what we think, who we interact with and what events we have witnessed during the course of daily living. It is important to realize that there may be no one "perfect" forever-lasting treatment. Because of the brain's ever-changing dynamic, the Symptom Survey provides only general indicators and the sessions suggested provide a place to start. As your child's brain gets "in shape" by becoming more flexible and resilient, both you and your child will develop the insight to select sessions, which best address your brain/body requirements based on how you live your life and support your brain/body fitness efforts. Keep in mind, just as in body fitness, the brain may go through growth/fitness hurdles along the way. Progress is not always linear. Get to know yourself and child and play with the AVE as your understanding grows. When in doubt - just do it – Relax 1 that is.

AVE benefits the entire brain and body. This is continually evident and demonstrated by those children who have had the opportunity to use AVE in both school and home settings. Many schools have initiated AVE programs for the benefit of their students and staff alike. More and more children are given the opportunity to realize their innate potential that for many would not have been realized. They have come to realize that the biochemical experiment called life is largely a coordinated effort between how life is lived and one's gene pool. They have personally experienced and realized the profound impact of their innate distress chemicals – versus – their repair chemicals and how AVE has taught them to appreciate the difference. This awareness will influence them to continue making supportive wellness choices in the face of life's trials and tribulations.

## SUGGESTED READING LIST

Children with Starving Brains: A Medical Treatment Guide for Autism Spectrum Disorder - Jaquelyn McCandless, M.D.

Healing the Hyperactive Brain: Through the New Science of Functional Medicine - Michael Lyon, M.D.

Dangerous Grains – James Braly, M.D.

The Untold Story of Milk – Ron Schmid, N.D.

Know Your Fats: The Complete Primer of Understanding the Nutrition of Fats, Oils, and Cholesterol - Mary G. Enig, Ph.D.

Is This Your Child's World? How You Can Fix the Schools and Homes that Are Making Your Children Sick – Doris J. Rapp, M.D.

Driven To Distraction – Michael Lyon, MD

Article One - Audio-Visual Entrainment: History and Physiological Mechanisms, Article Three - Audio-Visual Entrainment: Applying Audio-Visual Entrainment Technology For Attention and Learning http://mindalive.com/index.cfm/research/research-articles-by-davesiever/ - Dave Siever, CET

## ADDITIONAL RESOURCES

#### Heart Rate Variability Training by Mind Alive

An introduction to HRV, complete with guided tutorial and relaxing audio accompaniment. Available on CD and iTunes.

#### emWave by HeartMath

A biofeedback training system that can be used to teach proper breathing and HRV techniques. The emWave monitors your heart rate to help assess and guide your breathing and relaxation.

#### HPP (Hypno-Peripheral Processing)

A series of personal development programs by Dr. Lloyd Glauberman, which use a technique called dual induction, which are designed to "help people channel emotion into successful behavior."

#### www.heartmath.com

#### www.hppcds.com

## www.mindalive.com



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