What do my WAVi results mean?

The WAVi Desktop Report is provided as a service to allow your clinician to combine brain measurements with standard assessments. While not intended to be a diagnosis, the WAVi report gives you a snapshot of your brain function. Just as a stopwatch can be used by an athlete to measure results, the WAVi tests can be used to track your brain performance over time.

1 AUDIO P300

The P300 test is a subconscious measure of attention and memory where P300 Delay measures the brain's speed in recognizing the odd (high) tone and the P300 Voltage measures the quality of this recognition. We have found that a person's P300 response may be either fast or of high quality but it's less common to be both fast and high. These measures decline with age and are also affected by certain medications.

On a first time visit we measure P300 to get a baseline snapshot of where you naturally fall so that we can track your brain's performance. For example, we have found that improved cardio performance can increase your P300 speed and voltage. This measurement also allows us to track you over time. A P300 slowing and/or a reduction in voltage may signal reduced cognitive function and our goal is to keep you functioning on a high level.

2 PHYSICAL REACTION TIME

Physical reaction time measures the speed at which you click the mouse when you hear the odd tone. As with P300, this reaction time is known to slow with trauma, aging, and other conditions. This measure relies on different pathways than the P300 and so your reaction time may be slower or faster than your brain. For this reason, physical reaction time compliments the P300. For example research shows in almost all cases, either a slowing in reaction time, a decrease in P300 voltage, or both are seen following a concussive event.

The Trail Making Test is a standard measure of brain function and includes measures of psychomotor and visual scanning. The scores represent the amount of time required to complete the task. As with reaction time and P300, research shows Trail Making performance declines with age, trauma, and other conditions.

4 THETA/BETA AT CZ

Just as sound waves vary in frequency, so do your brain waves. Brain wave bands are labeled from lowest to highest frequency as Delta, Theta, Alpha, Beta. Your administrator may have shown you Alpha and Beta waves during the test.

It has been found that the ratio of Theta/Beta power at the central electrode associates with cortical arousal. Research shows that individuals with high Theta/Beta ratios are more likely to have attention difficulties. This ratio gives us insight into how your brain functions, and provides a basis for measuring performance. While standard ADHD screenings are valuable diagnostic tools, the Theta/Beta ratio at CZ allows us to measure the effect of interventions on your brain.

5 F3/F4 ALPHA POWER

Differences in Alpha power between left and ride sides of the brain can provide information about emotional states. We measure the ratio of F3/F4 Alpha power where a number around 1.0 is the expected average. While standard depression and anxiety screenings are valuable diagnostic tools, the F3/F4 ratio allows us to measure the effect of interventions on your brain.

Coherence is a measure of the correlation between two EEG locations and may provide information about functional connectivity between cortical regions. Numerous studies have linked coherence to various conditions associated with reduced cognitive function. For example, a lowering of front-back connectivity has been reported to correlate with the aging brain, where an increase in connectivity between more distant areas of the brain has been associated with injury.

* WAVi reports have not been evaluated by the FDA and are provided for Clincial Research and educational information. WAVi makes no warranty as to the accuracy of the screening and assessment tools. L-1120 Rev. 1 0318

Session Number (Created Date)	Original Title	Reason for Visit	Followup	
Session 1 (9/8/2017)	Baseline	Other	No	
Audio P300 Memory/Attention (Best Central Parietal)			Session 1 (9/8/2017)	Ref. Range (45 yrs)
P300 Delay			296 ms	283- 331 ms
Test/Retest Change			- +60	% –
P300 Voltage			19 µV	10-20 μV
Test/Retest Change			- +	12% –
Physical Reaction Time increases with age.		:	319 (+34) ms – 3	18- 388 ms
Assessments				
Trail Making Test A			48 sec	34- 50 sec
Trail Making Test B			70 sec	46- 100 sec
State (Power)				
CZ Eyes Closed Theta/Be	eta		2.3	0.8- 2.8
F3/F4 Eyes Closed Alpha Asymmetric in some de	a pression and anxi	ety	1.1	0.8- 1.2
	F	2300 Depth (μV)	
		Session 1		
				20
Coherence Networ Rows show color-mappe	k Graphs ed coherence bet	ween head location	S.	
		COHERENC	E	
DELTA (1.0 - 4.0 HZ)	THETA (4.5 - 7.5 HZ	ALPHA) (8.0 - 13.0 F	BETA IZ) (13.5 - 20.0	HZ)
SESSION 1 THRESHOLD	0=0.4	COHERENCE BETWEEN 0 AND	01	
	2.0	•	1.0	• •

Disclaimer: The WAVi Headset is FDA cleared for use in routine clinical and research settings where rapid placement of a number of EEG electrodes is desired. The WAVi Desktop software is provided as a service for use in Clincal Research settings where a combination of research-EEG with evoked responses and public domain assesment tools is desired. WAVi reports have not been evaluated by the FDA and are provided for research, education, and information. WAVi makes no warranty as to the accuracy of the screening and assessment tools.