



baseline

| Frequent Report Interpretation Questions Asked of Practitioners                                     | Frequent Report Interpretation Answers  |
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| <b>What is an EEG?</b>  | EEG non-invasively measures brain electrical activity from the scalp (or “activity produced by neuronal ensembles of the cerebral cortex.”) Because of its millisecond time resolution and accessibility, EEG offers a novel source of evidence that may complement other evaluations.  |
| <b>What is the best way to describe the audio P300?</b>   | The P300 is a brain-performance measure that tests the brain’s response to 2 audio tones: a common and a rare. Specifically we measure the strength of the response (voltage) and the speed of the response (or delay, called latency, which is typically 300 milliseconds—hence the name P300). The P300 does not offer a diagnosis but does offer a novel source of information that may complement evaluations of trauma, age-related decline, mood, and a host of other conditions. For example, immediately after a concussion the voltage may change (perhaps from connectivity or metabolic changes) but the brain speed often remains the same. In age-related decline, on the other hand, the speed too is seen to decrease. |
| <b>Is WAVi an EEG and is it FDA cleared?</b>  | <p><i>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.</i></p> <p>The WAVi Desktop software is provided as a service for use in Clinical Research settings where a combination of EEG with evoked responses and public domain assessment tools is desired.</p> <p>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.</p>  |
| <b>Where do the reference ranges in the report come from?</b>                                       | We give reference ranges for information only. The ranges come the WAVi database and are validated by the literature. Validation includes slopes and trends because some tests such as Trail are specific to WAVi tablet ergonomics while Theta/Beta endpoints are effected by different filtering.   |
| <b>Where do the test-retest numbers come from?</b>  | The test-retest numbers come from the WAVi database. Following the 68-95-99.7 rule, for example, we expect that 68% of the time a person will be within +-12% of their own normal P300V (unless an event or intervention). If from a single baseline this means 68% of the time a person should be within 24% of that baseline.   |
| <b>If my P300 voltage or speed is outside the reference range is this something to worry about?</b> | By definition, 16% of the population falls below the reference ranges. Hence a low reading could be “normal” for you OR you experienced a change that reduced the value. We are hesitant to draw a conclusion from a single measurement but will track you over time to establish a record and see if improvements can be made.   |
| <b>Is there something I can do to improve a voltage or speed?</b>                                   | Yes and we will work with you. It may be something simple, like improving vascular health, nutrition, lifestyle, or even improving your hearing. For concussive events the voltages usually return in time. The list of potential   |

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|   | <p>interventions is growing and clinicians using WAVi are pooling their results, working together to help us all get smarter.</p>   |
| <p><b>We are using WAVi as part of a sports evaluation. How does it fit in with my existing concussion protocol?</b></p>                | <p>WAVi includes standard concussion tests (Trail Making, Reaction Time, and SCAT) and is designed to fit within standard physical testing your clinician may already be using.</p> <p>WAVi scan adds a novel source of information that measures brain performance. Brain performance sometimes recovers more slowly than symptoms or other standard measures. Hence the WAVi scan adds an additional layer for the clinician or trainer to make sure your brain is performing optimally after a concussive event or other major events that could change brain function. Think of it as a stopwatch for the brain.</p>  |
| <p><b>What is the protocol if a concussive event occurs?</b></p>  | <p>It's best to do testing at baseline and then 24-48 hours after an event, and then after the clinician clears for return-to-play with standard methods. By tracking brain performance alongside standard return-to-play criteria you can better understand you or your child's overall return to baseline performance.</p>  |
| <p><b>If a scan is not in the normal range, what does that mean? Will the results prohibit me or my child from playing a sport?</b></p> | <p>No. As stated above, many people are by-definition lower than "normal." What we try to do is find out what's "normal" for you and track it from there. If, after an event, your brain fails to return to baseline then that should be a discussion with your clinician. It could mean that the brain is still not performing OR it could mean you had a really exceptional day at baseline. Either way, you need to know.</p>  |
| <p><b>Where do the neck/jaw tension numbers come from and what do they mean?</b></p>  | <p>Neck or jaw tension is common with concussive events and can produce the same symptoms. As seen in the jaw clench exercise in the beginning of the scan, muscle tension produces high beta activity in the jaw or neck areas and we often see this high beta after an event. We therefore provide a ratio of beta in muscle-prone versus less muscle-prone areas to provide additional information. The reference values come from the WAVi database.</p>  |
| <p><b>What is the best way to explain the Theta/Beta ratio?</b></p>   | <p>The Theta/Beta ratio offers a novel source of information that may complement an evaluation for ADHD. It measures "cortical arousal" and gives insight into brain performance. Literature has shown high ratios, equating with a lower arousal, to correlate with ADHD. Hence stimulant-based interventions are common. Because alternative conditions have not been thoroughly studied this ratio should be considered a performance measure and not a stand-alone diagnostic for any condition.</p> <p>For example, some of our practitioners have found elite athletes or military personnel with a high Theta/Beta trait, perhaps using this trait to their advantage. On the other hand, many have found those with this trait to also struggle with focus and performance.</p> |
| <p><b>Do I need both an eyes open and closed test for a Theta/Beta measure?</b></p>   | <p>In most cases eyes open and closed will produce similar trends. However, the eyes open condition has been the most widely studied and is thought to be the most accurate. For example, Alpha producers have very large Alpha with eyes closed and this can affect the Theta reading (no filter is perfect).</p>  |

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| <b>What is the best way to explain the F3/F4 Alpha ratio?</b>         | The F3/F4 Alpha Power ratio offers a novel source of information that may complement a clinical evaluation for depression or anxiety. Literature has shown high asymmetry, much greater or less than 1.0, to correlate with anxiety or depressive symptoms in many subjects. This DOES NOT mean it can be used as a diagnostic, rather it can give insight into how the brain functions and how interventions can change the function (i.e. meds). It can also be used in the sports report to investigate confounding variables such as medication or mood changes. |
| <b>What is the best way to explain Alpha peak frequency?</b>          | Alpha peak frequency is a measure of brain performance and offers a novel source of information that complements other evaluations. This number is the frequency (or speed) of the Alpha peak shown on the spectrums page of the report (or via the mode block button on the bottom left-hand corner of the screen). The clearer the alpha peaks are in the spectra the more reliable this frequency value. A slowing in frequency, particularly in the front, is seen with age and is sometimes considered an early sign of cognitive decline.                      |
| <b>Confidentiality; what does this mean about my child's results?</b> | Your child's results will be kept confidential by WAVi and always de-identified for the purposes of conducting research.   |
| <b>What is the best way to get a copy of my report?</b>               | This is between you and the test administrator. Note to administrator: It is in the PDF format for printing or emailing. It's also available in the cloud.   |