

Swingle Neurofeedback Pro Forma

Name.....DoB

Date.....

Other Information:

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Neurofeedback (Swingle Mini Q)		
Cz	Readout	Probe
a). Theta:Beta ratio below 2.20 during EO and during cognitive challenge, (CC)	EO CC	If greater than > 2.2., probe attention/ADHD. If it jumps (15%), under cognitive challenge, then probe comprehension difficulties, reading fatigue,CADD.
b). Increase in Alpha band amplitude should be at least 30 percent EC relative to EO;		Limited or negative EC Alpha increase, probe for visual processing (memory) problems, poor STM, PTSD or fibromyalgia. If also negative at O1, probe for traumatic stress.
c). Alpha should block rapidly (i.e., drop to EO level quickly) so the post EC epoch should be close to the pre EC epoch.		If the difference between EO1 and EO2 is > 25%, probe foggy thinking. Test “Alert” (Omni), for Theta suppression (relative to mean) if > 5% prescribe for home use.
d). TA the sum of amplitudes of Theta, Alpha and Beta bands should be below 60.		TA >> 60.0, probe for developmental delay, autistic spectrum behaviour, marked cognitive deficits.
e). Theta/SMR EC		If > 3 probe for difficulties in remaining still, problems falling asleep, headaches, pain, body tremors, dystonia and seizure disorders.
f). Peak Alpha should be 9.5 or higher		If < 9.5, (EO or EC), probe for mental sluggishness.

O1	Readout		Probe
a). Theta:Beta ratio between 1.80 and 2.20 both EO and EC	EO	EC	Theta:Beta EO < 1.80, probe for poor stress tolerance, “racing” thoughts, anxiety. If << 1.8, probe for addictive behaviour, Generalised Anxiety Disorder, stress precipitated depression, Chronic Fatigue Syndrome, fibromyalgia. If Theta:Beta EO > EC by 25%, probe for sleep disturbance particularly sleep onset insomnia. If both EC and EO about equal and < 1.50 also probe for sleep disturbance, (onset and/or regaining sleep. Theta:Beta > 3.00, probe for cognitive inefficiencies. Also found in some Asperger's patterns., see also F4/F3 for symptoms.
b). Alpha amplitude increase at least 50 percent EC over EO			If Alpha EC increase minimal or negative and also at Cz, probe for traumatic stress. If high, (e.g. 150%), probe artistry.
c). Return of Alpha amplitude to EO level within one epoch i.e., post EC epoch is within 10 percent of the pre EC epoch.			If >25%, probe for foggy thinking/ concentration difficulties.
d). TA below 60.			TA >> 60.0, probe for developmental delay, autistic spectrum behaviour, marked cognitive deficits.
e). Peak Alpha should be 9.5 or higher			If < 9.5, EO or EC), probe for mental sluggishness.

F3/F4	Readout	Probe
a). Theta:Beta ratio is below 2.00		Theta:Beta > 2.2, probe for cognitive inefficiencies, including retrieval of information, impulse control,

		emotional volatility.
b). The difference between F3 and F4 in any band should be less than 10 percent.		If F4 Beta > 15% F3 Beta, probe for depression. In adults or impulse control in children. If >20% probe for fibromyalgia, CFS.
		F4 Theta > by 15% F3 Theta probe for emotional volatility or restricted emotional range: if F4 > by 20% of F3 Theta probe for fibromyalgia or CFS, particularly when O1 Theta/Beta < 1.50.
		F4 Alpha > F3 Alpha, probe for oppositional, defiant and socially aggressive or socially indifferent behaviour; General, elevated Alpha is associated with emotional deregulation.
		F3 Alpha > by 15% F4 Alpha, probe for depression in adults or impulse control in children.
		F3 Theta > by 15% F4 Theta then probe for depression in adults and impulse control in children.
c). Check % difference between F3 Theta/Beta and F4 Theta /Beta		F3 Theta:Beta > by 20% of F4 Theta:Beta, then probe for depression in adults or impulse control children.
		F3 Theta:Beta ratio > 20% of F4, probe for emotional volatility or conversely, restricted emotional range, (used to control emotional volatility).
d). Theta/Alpha ratio is between 1.25 and 1.75.		Theta:Alpha < 1.00, probe for frontal Alpha ADD - problems with organization, sequencing, sustained focus. If Theta:Alpha <<.80, also probe for fibromyalgia CFS and/or sleep disturbance.
e). The TA is below 60.		TA >> 60.0, probe for developmental delays, autism spectrum disorders, memory/cognitive deficits in adults.

Fz	Readout	Probe
a). Delta below 9.0		Delta (2hz) > 9.0, probe for cognitive deficits, (concentration, forgetfulness, comprehension), developmental delay, pain. (e.g. Lyme's disease, Lupus, fibromyalgia).
b). The ratio of 28-40Hz amplitude to Beta, (16 – 25), amplitude between .45 and .55.		28-40hz:Beta < .45, probe for excessive passiveness; if > .55, probe for stubborn behaviour, obsessive/compulsive behaviour; perseveration in autistic spectrum behaviours; assume hot midline (anterior cingulate gyrus) in treatment of autistic spectrum behaviours. If > 60 or < 40 probe for anxiety. If > 80, probe for OCD.
c). The sum 28 – 40 & Betas should be below 15		Summed amplitudes > 15, but 28-40/Beta is within normative range, probe for fretting and assume hot midline in treatment of autistic spectrum behaviours.
d). The ratio of Lo-Alpha (8 – 9), to Hi-Alpha (11 – 12), below 1.50.		LoAlpha to HiAlpha > 1.50, probe for cognitive inefficiency, age related deficits in memory and cognitive processing, (concentration and forgetfulness). If >> 1.50, probe for developmental delay, marked cognitive deficits.

LEGEND: EO = Eyes Open; EC = Eyes Closed; CFS = Chronic Fatigue Syndrome; SMR = Sensory Motor Rhythm; TA = Total Amplitudes, (Alpha/Beta/Theta); CC = Cognitive Challenge; CADD = Common Attention Deficit Disorder; OCD = Obsessive Compulsive Disorder; STM = Short Term memory and PTSD = Post Traumatic Stress Disorder; the sign > means that the figure to the left is bigger than the figure on the right; the sign < means the figure to the right is bigger than the figure on the left.

NOTE: These probes present tentative areas of difficulty. Clearly, discussion with the client is required to establish if particular problems apply. Remember, it is not the test that diagnoses a problem – it is the clinician!

Additional Information:

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