ABR Protocol for 0-6 month old infants

re: dBnHL: dB above behavioral threshold for given stimulus (or 0dBnHL)

          dBeHL: Estimated behavioral thresholds taking all correction factors and adjustments into consideration.

Parameters:

1. Pediatric Neurodiagnostic

Stimulus	Click	
Transducer	Insert	Bone conduction, circumaural headphones only when necessary
Polarity	Condensation & Rarefaction	1 run each
Ramping		
Duration	.1 ms	
Intensity	≥70 dBnHL	
Rate	21.1-39.1	Slower rate if enhanced response is needed*
Filter setting	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; no notch
Sweeps	≥ 400	Enough to adequately overcome SNR and replicate
Analysis time	15 msec	Pre-stim baseline: -1 msec

2. Pediatric Threshold Estimation

Stimulus	Click	
Transducer	Insert	
Polarity	Rarefaction Condensation (if needed to enhance wave V)	Provides larger amplitude and shorter latency than condensation. Replicate at threshold.
Ramping		
Duration	.1 msec	
Intensity	Variable	20dBnHL is WNL.
Time window	15 msec	
Rate	21.1-39.1	*see previous response
Filter setting	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Sweeps	≥ 600	Enough to adequately overcome SNR and replicate

Parameters for obtaining Frequency Specific Thresholds

Stimulus	500 Hz toneburst	
Transducer	Insert	
Polarity	Alternating	To reduce periodic waves
Ramping	Blackman	
Duration	2-0-2	4msec rise/fall and 0msec plateau
Intensity	≥70 dBnHL to begin	30dBnHL is WNL. Replicate at threshold.
Filter setting	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Time window	20 msec	
Stimulus Rate	21.1-39.1	

Stimulus	4000 Hz toneburst	
Transducer	Insert	
Polarity	Variable	
Ramping	Blackman	
Duration	2-0-2	.5msec rise/fall and 0msec plateau
Intensity	≥60 dBnHL to begin	20dBnHL is WNL. Replicate at threshold
Filter Settings	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Time window	15 msec	
Stimulus Rate	21.1-39.1	

Stimulus	2000 Hz	
Transducer	Insert	
Polarity	Variable	
Ramping	Blackman	
Duration	2-0-2	1 msec rise/fall and 0msec plateau
Intensity	≥60 dBnHL to begin	20 dBnHL is WNL. Replicate at threshold.
Filter Settings	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Time window	20 msec	
Stimulus Rate	21.1-39.1	

Stimulus	1000 Hz	
Transducer	Insert	
Polarity	Alternating/variable	To reduce periodic waves
Ramping	Blackman	
Duration	2-0-2	2msec rise/fall and 0msec plateau
Intensity	≥60 dBnHL to begin	20 dBnHL is WNL. Replicate at threshold.
Filter Settings	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Time window	20 msec	
Stimulus Rate	21.1-39.1	

Bone Conduction parameters

Stimulus	Click ONLY	Identification of Wave I will rule out crossover to non test ear
Transducer	Bone oscillator that came w/ system	Use leather headband
Polarity	Alternating	
Filter Settings	30 Hz; 1500Hz or 3000Hz	high-pass; low-pass; NO notch
Duration		
Intensity	≤ 50dBnHL	Identification of Wave I will rule out crossover to non test ear
Time window	15 msec	
Stimulus Rate	21.1-39.1	Reduce rate if poor morphology