

# TONE BURSTS AUDITORY BRAINSTEM RESPONSES (ABR) IN NORMAL HEARING YOUNG ADULTS

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This study was performed in order to obtain normative ABR data using tone bursts stimuli with longer stimulus duration, at octave frequencies from 500 to 4000 Hz. Stimulus envelope contains of 2 cycles for rise/fall time at all test frequencies except at 4000 Hz which was at 4 cycles rise/fall time were used. Plateau duration was maintained at 5 ms at all test frequencies. A total of 10 subjects (15 ears) with average age of 21 years 1 month and had normal hearing participated in this study. All subjects had to go through and otoscopic inspection, tympanometry and pure tone audiometry (PTA) testing prior to ABR test. Results showed mean ABR thresholds are consistently higher than mean PTA thresholds and reduce with frequency. Comparing to the previous studies, mean ABR thresholds in this study are lower at all test frequencies. The mean latency of Wave V ABR also reduce as the frequency increases but noted to be longer when compared to other studies which were using shorter stimulus duration. Test-retest reliability which was done on 3 subjects revealed no significant difference ( $p>0.05$ ) between results of the two different test sessions in terms of mean ABR thresholds and mean Wave V latency at all test frequencies. These findings suggest tone bursts stimuli with longer stimulus duration which were used in this study, can still give reliable results and can be used to predict auditory sensitivity in difficult-to-test patients.

Hussin, M. K. 1999. Tone Bursts Auditory Brainstem Responses (ABR) in Normal Hearing Young Adults. Bachelor of Audiology Thesis. Universiti Kebangsaan Malaysia.