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## **THE EFFECTS OF DIFFERENT TYPES OF STIMULUS AND ITS TEST-RETEST RELIABILITY ON CERVICAL EVOKED MYOGENIC POTENTIAL (CVEMP) RESULTS**

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**Introduction:** The Cervical Vestibular Evoked Myogenic Potential (cVEMP) is used to evaluate the integrity of saccule and inferior vestibular nerve. There are a lot of factors affecting cVEMP results including stimulus types. This study was carried out to determine the effects of different stimuli on cVEMP results and its test-retest reliability.

**Materials and method:** 25 normal hearing subjects were recruited. The cVEMP testing were performed in 2 sessions with 1 week gap between each sessions. The cVEMP waveforms were recorded in sitting upright position with electrodes placed at; i) upper one-third of sternocleidomastoid muscle for active electrode, ii) suprasternal notch for inactive electrode and, iii) middle of forehead for the ground electrode. The stimuli (500Hz tone burst, click, narrowband chirp and broadband chirp) were presented via insert phone at 95dBnHL. The cVEMP results (P13-N23 peak-to-peak amplitude, P13 latency and N23 latency) were recorded.

**Results:** Result showed; i) 500Hz tone burst produced significantly largest amplitude; ii) narrowband chirp produced significantly shortest P13 latency; iii) broadband chirp produced significantly shortest N23 latency; iv) no significant difference of P13 and N23 latency were observed between two sessions; and v) significant difference of P13-N23 amplitude were observed between two sessions for all stimuli except for narrowband chirp.

**Conclusion:** The 500Hz tone burst was observed to be the most ideal stimulus (produce highest amplitude). All stimuli produced good test-retest reliability in terms of latency. However, most of the stimuli produced poor test-retest reliability in terms of amplitude except for narrowband chirps.