

## THE EFFECT OF AGE AND GENDER ON ACOUSTIC REFLEX DECAY LATENCY AMONG NORMAL HEARING ADULTS AT HOSPITAL UNIVERSITI SAINS MALAYSIA

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### ABSTRACT

**Introduction:** Acoustic reflex decay (ARD) is a known audiological test to identify retrocochlear lesions. In this study, the influences of age, gender and stimulus frequency on ARD latency were determined.

**Methods:** Sixty Malaysian adults (120 ears) aged between 20 to 50 years participated in this comparative study. All of them were healthy and had no history of hearing difficulties and otological problems. The ARD latency was determined ipsilaterally at frequencies of 500 Hz, 1000 Hz, 2000 Hz and 4000 Hz. For each frequency, the stimulus was presented at 10 dB above the acoustic reflex threshold. The ARD latency was calculated as the time required for the reflex amplitude to decline to 50% of its peak value.

**Results:** No significant effects of age and gender on ARD latencies were observed for all frequencies tested ( $p > 0.05$ ). Nevertheless, a significant influence of stimulus frequency on ARD latencies was found ( $p < 0.05$ ). That is, the mean ARD latency was significantly shorter at high frequencies relative to that of lower frequencies.

**Conclusion:** The ARD latency does not appear to be influenced by either age or gender. The notable effect of stimulus frequency on ARD latency deserves considerable attention. The preliminary normative data for ARD latencies provided by the present study might be useful clinically and can serve as the reference for future studies involving Malaysian adults.

**Keywords:** Acoustic Reflex Decay, Age, Gender, Malaysia

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