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THÈME: AUDITORY OBJECTIVE MEASURES

Acoustic Reflex Amplitude Growth in Young Adults

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Abstract

The growth function of the acoustic reflex corresponds to changes in the amplitude of the reflex according to the intensity of the stimulus, this amplitude growth function can provide a valid measure of neural integrity at the level of the brainstem. In this study was to analyze the growth of the acoustic reflex amplitude, in response to the increase of the contralateral auditory stimulus.

Thirty-three adults were evaluated, aged between 20 and 29 years old, 26 females and 7 males. The inclusion criteria were: Type A Tympanometry and pure tone hearing thresholds within the normal range (0 to 20 dB) at frequencies from 250 to 8000 Hz. The exclusion criteria were: Absent acoustic reflexes at frequencies from 500, 1000, 2000 or 4000 Hz and participants with pathological processes of middle ear that could interfere with the research.

Objectifs

The aim of this study was to analyze the growth of the acoustic reflex amplitude, in response to the increase of the contralateral auditory stimulus at frequencies of 1000, 2000, 4000 Hz and broadband noise, in young adults without hearing complaints.

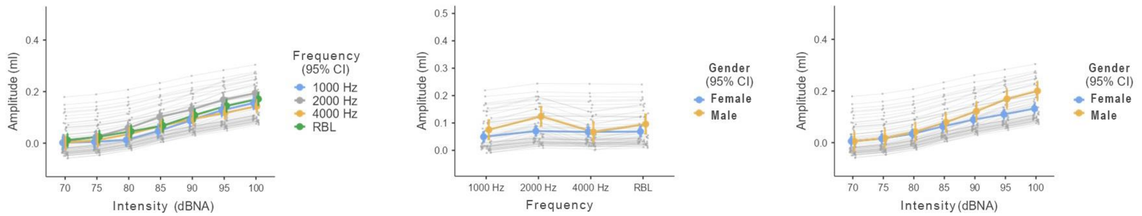
Méthodes et Matériels

Inspection of the external auditory canal | **Tympanometry** | **Pure tone audiometry** | **Reflex threshold ipsilaterally and contralaterally**

- For the growth curve of the acoustic reflex, the test was carried out with the presentation of the stimulus activated contralaterally in an ascending condition: starting at 70 dBHL, with the intensity level increased in steps of 5 dBHL until reaching an intensity of 100 dB.
- The growth of the reflex was tested at frequencies of 1000 Hz, 2000 Hz, 4000 Hz and Broad Band Noise, in this sequence. For each intensity level tested, the acoustic reflex amplitude (in ml) was recorded, provided on the equipment graph.

Résultats

There was no statistically significant difference in all factors that included the interaction between frequency and intensity. Furthermore, no statistically significant interaction between the ear and the variables Stimulus Frequency and Stimulus Intensity was observed, nor was there an isolated effect of the ear.



At higher intensities of activating stimulus, a more abrupt increase in the amplitude of acoustic reflexes was observed, compared to the increase recorded in reflex amplitude for stimuli at lower intensities. Regardless of gender or ear, there was no difference between the acoustic reflex growth curves for each stimulus frequency. There was also no isolated effect of the ear, indicating at, regardless of frequency, no influence of the ears on the growth curve of the acoustic reflex was observed.

Conclusion

There was an increase in the acoustic reflex with the increase in stimulus. No differences were observed between gender, ears and frequency in acoustic reflex growth.

Références

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