



Earcanal sizing: what does your little finger tell you?

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The human earcanal remains mostly an uncharted territory: earcanal shapes and dimensions are unique to each individual and despite recent advances in 3D scanning, the capture of the earcanal's exact geometry remains challenging. Nevertheless, the proper selection of an intra-aural hearing protector often requires that the earcanal size be estimated. Therefore, several tools -such as earcanal and concha gages- have been developed over the years to quickly and approximately assess one's earcanal dimensions and recommend the appropriately matching earplug size. In this anthropometric study, sparked by the lexical similarity in French between the noun for the little finger (*auriculaire*) and the adjective related to aural parts (*auriculaire*), we explore whether Nature did not provide a suitable earcanal sizing tool... at the tip of our fingers. The results from a recent pilot study will be presented together with possible field applications for hearing protectors and a selection of in-ear wearables.

OBJECTIVES

At the end of our session the learner should be able to:

Understand the complexity of the process of sizing the human earcanal

Compare and contrast differences between various earcanal sizing and scanning technologies.

List the possible benefits of hearing protector recommendations and approaches based on empirical sizing procedures