Breakthrough Research Reveals New Insights into Noise-Induced Hearing Loss (NIHL)

How Does Loud Noise Exposure Cause Impaired Hearing?


Noise Induced Hearing Loss (NIHL)

LONDON, UNITED KINGDOM, August 8, 2023 /EINPresswire.com/ -- The detrimental effects of noise on hearing have long been recognised. Yet while we know that noise damage is a major cause of impaired hearing, the exact mechanisms behind it remain largely unclear.

A groundbreaking study conducted by Pierre Hakizimana and his team at Linköping University in Sweden has now brought us significantly closer to understanding how exposure to loud noise can lead to impaired hearing. The study provides crucial insights into the role of how the cochlear signal informs the brain about the normal functioning of the ear.

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> *Lee Fletcher (RHAD) (BSHAA), Principal Audiologist*

We spoke with Lee Fletcher (RHAD) (BSHAA), the Principal Audiologist and Director at Regain Hearing, for his thoughts about the research. He told us:

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Hakizimana and his team made a breakthrough by analysing electrical signals from cochlear hair cells. By measuring these signals, they discovered that the polarity of the DC signal changes from positive to negative after exposure to harmful noise.

"This signal could be a way for the body to inform the brain if the ear is functioning properly or not," explains Hakizimana. "By knowing this, the brain can focus its resources on amplifying weak signals from a healthy ear, rather than wasting energy on trying to improve a signal from an injured ear."

Previously, the interpretation and reliable measurement of this signal in humans posed significant challenges, hindering progress in this field. However, Hakizimana's study provides valuable insights into the creation of the DC signal and its potential applications in hearing loss research.

Hakizimana's groundbreaking research also opens doors to novel diagnostic tools and interventions for preserving and protecting hearing health. This study represents a significant advancement in the field of audiology and offers hope for millions worldwide who experience noise-induced hearing loss.

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