Reliability of Response in Audiometric Measurements, is one Source of Errors.

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Abstract:

A totals of (3) normal persons aged (16, 25, 35) yrs were tested for hearing threshold level (HTL) daily for 6 months by conventional pure tone audiometry, who had been previously exposed to minimum of occupational noise.

We estimate the mean hearing threshold & standard deviations of repeated tests over 6 months for each person. It is found that the reliability of response of the differences between successive audiograms based on standard deviations. The results showed an increase in standard deviation to about (4.1-5.5) dB at low frequency (0.25-0.5) kHz and to about (4.2-5.3) dB at high frequency (6-8) kHz but at moderate frequency (1-4) kHz. This means that the reliability of response of ears varies at different frequencies, so it is increase at moderate frequency and decrease at higher and lower frequency. This indicates that the Audiometric measurements must be repeated many times even in better circumstances in order to decrease this error factor.