



BIAP recommendation n° 09/1 : Examining industrial workers' hearing capacity

This recommendation gives directives for protecting the hearing of workers subjected to noise. Noise is dangerous within a Leq of 90 dB (A), 8 hours a day. In certain cases, however, hearing damage may already appear at noise intensities of 85 dB (A).

This recommendation presents no proposals concerning noise-measurement. According to present scientific knowledge, the effects of noise on the inner ear depend on acoustic pressure, indicated by Leq in dB (A), and which can be measured exactly. Direct or indirect repercussions on hearing capacity and other physiological functions may originate from noise. Only hearing loss can be determined with a certain degree of precision.

1. All workers should undergo a hearing test, not only as soon as they are placed at a noisy work-station but when they change work positions, independently of the noise Leq, in the new environment.
2. When a worker is placed for the first time at a noisy work-station, it is essential for his hearing capacity to be measured at least twice a year during the first two years, period to be considered as an « apprenticeship ».
3. After the « apprenticeship period », a hearing test must be carried out at least every three years, independently of any other laws and regulations in force in different countries.
4. Workers who have finished the whole « apprenticeship » period and who are transferred into another industry shall be examined according to the stipulations given under 3.
5. Audiometric screening tests can take place with no preliminary acoustic rest period. If the results are pathological, however, a decision concerning preventive measures shall only be taken on the basis of tests carried out after at least 14 hours of acoustic rest.
6. A worker placed for the first time at a noisy work-station and independently of existing Leq shall undergo a tone audiometry test by air conduction at 250, 500, 1000, 1500, 2000, 3000, 4000, 6000 and 8000 Hz frequencies and by osseous conduction at 250, 500, 1000, 1500, 2000, 3000 and 4000 Hz frequencies.
7. Checking of hearing function shall take place in a soundproof cabin, without sound-proof headphones. Only audiometric screening tests may be done outside a soundproof cabin but on condition that sound-proof headphones be used and that environmental Leq not exceed 50 dB (A). see ISO norm 389 and recommendation CEI 303 and 318.
8. Prevention measures, according to national instructions, shall be put in place on the basis of audiometric results and physical conditions in the work-place. These measures can consist of regular hearing function checks at shorter intervals than mentioned in 2,3 and 4 ; the wearing of a hearing protection device to be indicated and previous warning of a change in work-stations given.

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