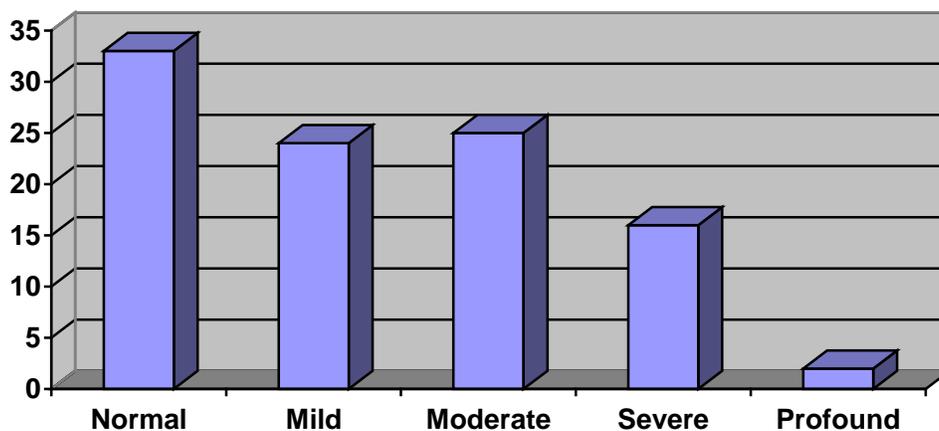


EMT's Still Suffer From Hearing Loss

The Department of Occupational Health and Safety in conjunction with the National Institute for Occupational Safety and Health (NIOSH) provided an opportunity for convention delegates to have their hearing tested during the 1998 EMS National convention. The NIOSH hearing test consisted of a questionnaire and a pure-tone test to measure hearing over a range of frequencies. The results were explained to each participant at the completion of the test. Additionally, a written explanation will be mailed by NIOSH to each participant's home. A more detailed analysis will compare this year's results to a similar test administered at the National EMS 1984 Convention held in Cincinnati, Ohio. Of the 458 EMTs tested two-thirds had measurable hearing loss. Test results indicate that despite the availability of quieter apparatus and increased awareness, EMT's exposure to noise is still a significant hazard. While noise induced hearing loss is irreversible; it is also a preventable disease.

BIENNIAL CONVENTION Hearing Test Results



Good hearing is a matter of life and death for EMT's. EMT's must have the ability to hear a victim cry for help, hear their radio for communication purposes and must be able to hear traffic sound and, discriminate and localize safety related acoustic cues such as horns, sirens, screams, collapsing walls, beams, timbers or gas leaks. EMT's are constantly exposed to noise from sirens, air horns, apparatus engines, and powered hand tools such as those used in forcible entry, and extrication activities. Excessive hearing loss in EMS is also explained by the interaction between noise exposures and other chemicals found in the EMT's work environment. Many of the chemicals produce a greater hearing loss than expected when EMT's are exposed to both the noise and

toxic agents at the same time. Every day on the job jeopardizes a EMT's hearing. Excessive noise may also have adverse health effects other than hearing loss. There are an increasing number of studies that demonstrate that noise may have and adverse impact on both the physiological and psychological aspects of a person's general health. Studies have shown noise to be a risk factor in such stress-related illnesses as hypertension, ulcers, allergies, and neurological disorders. Noise has been shown to cause nervousness, fear, psychosomatic illness, and results in sleep disturbances.

Warning Signs of Hearing Loss

Some warning signs of hearing loss are:

- You must shout in order to be heard by someone working near you
- Your hearing is dulled immediately after your work shift
- After your shift you experience noises in your head or ringing in your ears
- You, family members, or friends notice that your hearing is getting worse
- You have difficulty hearing people when others are talking around you
- You regularly experience headaches during or after your work shift

Some steps Emergency Medical Services can take to protect EMT's hearing are:

- Apparatus with sound dampening materials incorporated into their design
- Placement of the sirens and horns either below the front bumper, in opening in the front bumper, or in the front grill of the apparatus. The vehicle structure should be used as a shield from noise energy when ever possible.
- All mechanical sirens should be fitted with a metal shroud to direct the sound forward. Such shrouds have resulted in 70% reductions in sound energy to the EMTs
- Hearing protection devices (e.g. muffs) should be used during exterior operations where motorized hand tools are utilized
- The use of communication headsets which utilize speakers inserted in a protective muff and incorporate a noise-blanking microphone. Some of these communication sets now incorporate active noise cancellation to further reduce background noise.