



## Safety Message of the Day for IMEA Members



### Hearing Protection NRR Safety Message

The Noise Reduction Rating (NRR) is an estimation of the amount of protection a hearing protection device will provide in a noisy environment. It is simply the decibel (dB) noise reduction or attenuation for the earplug or earmuff based on laboratory test data. Most hearing protectors are rated to protect from 25 to 35 decibels; however, this rating is based on test results reached in a laboratory setting. To estimate protection in real-world working conditions, the NRR must be de-rated.

### An easy method to de-rate

1. Take the NRR on the package (NRR 30 decibels)
2. Subtract 7\*\* ( $30 - 7 = 23$  decibels)
3. Divide the result by 50% ( $23 \div 2 = 11.5$  rounding down for the safety factor).

So, if our noise level has been previously measured at 95 decibels, subtract 11 and 84 decibels our adjusted exposure.

NIOSH recommends that the eight-hour exposure be no more than 85 decibels; scientific studies have shown that some people lose their hearing even at this level of exposure.