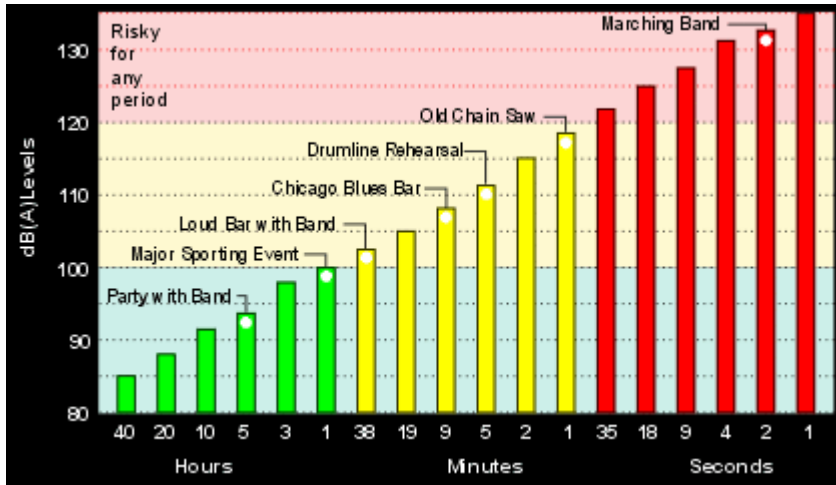


## Safe Weekly Sound Exposure Guidelines



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Noise-induced hearing loss is a function of exposure time, the average sound level and the peak level of very loud sounds. OSHA (Occupational Safety and Health Administration) set industrial exposure limits of 8 hours per day (unprotected) at 90 dBA, and uses a 5dB time-intensity tradeoff (for every 5dB increase in noise level, the allowed exposure time is cut in half). NIOSH (National Institute of Occupational Safety and Health) recommends the more conservative equal-energy (EE) method, which limits unprotected exposures to 85 dBA for 8 hours per day, and uses a 3-dB time-intensity tradeoff.

**Allowable Daily Exposure (OSHA)**

source level in dB	85	88	90	92	94	95	97	100	105	110	115	120
<b>OSHA</b>	16		8	6		4	3	2	1	½	¼	⅛
<b>EE</b>	8	4			1	¾	½	¼				

**According to the OSHA standard a person can be exposed to a 95 dB environment for 4 hours before risking hearing damage. With 10 dB of protection that person can be exposed to 95 dB for 16 hours per day.**

*For maximum protection, foam earplugs, muffs or other hearing protection devices are recommended.*

While the OSHA and NIOSH exposure guidelines offer a useful starting point, they are based on industrial noise exposures, and are sometimes difficult to apply to musicians, whose sound exposures tend to be more intermittent, with different spectral levels and intensities than those found in industrial environments.