



INNOVATIVE PERCEPTIONS

A QUARTERLY NEWSLETTER FOR HEARING AWARENESS IN THE GREATER BOSTON AREA

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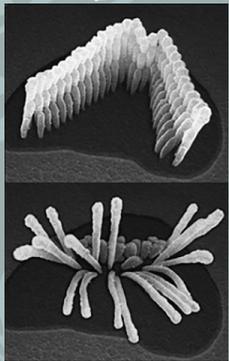
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Your Trusted Hearing
 Healthcare Professionals

Hungry for Hearing Loss?

The inner ear has about 20,000 hair cells that respond to sound. Our inner ear is well protected in our skull, but the sensitive hair cells can be damaged by loud noise. Once those hair cells are damaged, they cannot be replaced.

Healthy hair cells



Damaged hair cells.

Protect your hearing, it is precious!

Did you know, the inner ear, the shell shaped area that houses our organ of hearing and hair cells, is the size of pencil eraser?



Decibel level	NIOSH exposure limit
85 dBA	8 hours
90 dBA	2 hours
95 dBA	37 minutes
100 dBA	15 minutes

There has been a lot of press recently on noise levels in restaurants. I too have felt they have been getting louder over the years, but I wondered if it was just me because I am an audiologist and I was less accepting of these types of situations. Unfortunately, these elevated noise levels are not only obnoxious, they are also harmful to our ears—and especially dangerous to those people who work in the restaurants who are exposed to these noise levels for hours at a time. How loud is loud? Kate Wagner of *The Atlantic* measured noise levels ranging from 80 decibels (dB) at a wine bar to 90 dB at a brewpub. Jonathan Kauffman, a *San Francisco Chronicle* writer, also measured restaurants that got as loud as 90 dB. For reference, normal conversation is 60 dB and a lawnmower is around 90 dB. So why does it seem restaurants are becoming louder? First, recent architectural design trends have made open kitchens, high ceilings, and hard surfaces hip and modern. These surfaces reflect sound rather than absorb it. Second, restaurants feel that louder environments equate to excitement thus encouraging people to order more alcohol and food. Third, the restaurant industry has found that keeping it loud encourages turnover so people won't hang around as long and more people can be

served, which in the end increases profits. Unfortunately, all of these factors can wreak havoc on our ears, our conversations, and our health. So what can we do? Here's a few tips:

- 1) Ask management to turn the music down. The more requests, the more likely they are to change their ways.
- 2) Different areas can be louder than others. Request a different table if you find yours too loud.
- 3) Educate yourself on what is 'too loud' and choose not to frequent those places and always carry hearing protection.
- 4) If you wear hearing aids, try putting them in a noise program to increase the comfort.

Whenever you are exposed to noise levels over 85 dB, you should be wearing hearing protection and/or limiting your time. Using earplugs can make the atmosphere more bearable. I certainly never go out without my custom musicians earplugs, these reduce loud background noise and enable me to hear speech clearly while protecting my hearing.

There are many apps for your smartphone that allow you to measure noise levels; some enable you to rank restaurants by their noise level. Some of my favorites are **NIOSH SLM**, **Decibel X**, and **SoundPrint**. You can even use one of these apps to raise awareness and show the manager at that loud restaurant the level you have recorded on your new sound measuring app and let them know it can be damaging to you, their employees and themselves. □

Dangerous Decibels

What is a decibel (dB)? It is a unit used to measure the intensity of sound. We measure hearing based on decibels over frequency. The higher the decibel, the louder the sound and the more risk of damage to our hearing. The National Institute for Occupational Safety and Health (NIOSH), indicates that potential for hearing loss begins at 85 dB. A worker can experience hearing loss if exposed to 85 dB of noise for an 8 hour period. The duration of noise exposure is cut in half when the volume level increased by 3dB (see "Decibel level/NIOSH exposure limit" table in sidebar). This means when sound levels increase from 85 to 90 dB, the time limit before hearing damage can occur is only 2 hours. Therefore, one cannot stay in an area where the noise is 90 dB for longer than 2 hours without hearing protection, otherwise they risk damage to their hearing. The Occupational Safety and Health Administration (OSHA) is the federal entity that requires employers to provide their employees with a workplace that is free from known hazards, including noise exposure. OSHA is less stringent than NIOSH and states that a worker can be exposed to 90 dB for 8 hours. Why isn't OSHA regulating restaurants and other noisy venues? The unfortunate answer is they are not top priority as

EXPOSURE TIME	dB	EXAMPLE SOUNDS
Instantaneous permanent damage	140+	Shotgun, rifle, jet engine
Less than one second	130	Jackhammer, heavy industrial
Less than ten seconds <i>Threshold of pain</i>	120	Rock concert
1.5 minutes	110	Power tools, snowmobile
15 minutes	100	Chainsaw, motorcycle
2.5 hours	90	Lawn mower
8 hours	85	Beginning of Danger Zone
Prolonged exposure to noise levels 85 dB and higher can result in permanent hearing loss	80	City traffic
	70	Vacuum cleaner, hair dryer
	60	Office, sewing machine
	50	Normal conversation
	40	Refrigerator
	30	Whisper
	20	Rustling leaves
Common noise levels (dB) and their effect upon hearing	10	Breathing
	0	Threshold of normal hearing

they do not consider them "high hazard" industries and there are minimal complaints. But that doesn't mean you have to suffer. If you know you are going to be out in noisy situations, be proactive and bring hearing protection. Don't have any? Drop by our office and pick up a free pair for you and your loved ones, or better yet, have a custom pair made! □



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Dear Friends,

Happy 2019! The theme of this newsletter is noise in restaurants. In some cases, noise levels have gotten so loud that it can be no fun going out to dinner any longer. We have given a few tips of what you can do to help make it more comfortable, but the bottom line is the more people are aware, the more likely things might change. So download your apps, pack your hearing protection, head out to dinner and spread the word to the management if the volume level is too loud. As you'll read in our newsletter, it is not simply uncomfortable, it can cause long-term hearing damage. And if you or a loved one works in a loud restaurant, encourage them to measure the sound and ask the management to take appropriate steps to protect their employees who spend more hours in that environment. It really does "Take a Village" to obtain any meaningful change. I hope you enjoy this newsletter and find it educational and informative.

Sincerely,

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