HEARING LOSS & DECIBEL LEVELS

WHAT IS NOISE-INDUCED HEARING LOSS?

**Noise-Induced Hearing Loss (NIHL)** is a permanent hearing impairment resulting from prolonged exposure to high levels of noise.

Noise is all around us in our everyday lives and is a common cause of hearing loss. **Hearing loss typically occurs slowly, over a long period of time, and is painless.** Sounds become harmful when they are too loud, even for a brief time, or when they are both loud and long-lasting. Over time, exposure to harmful sounds can damage sensitive structures in the inner ear which causes hearing loss.

Noise-Induced Hearing Loss is an important public health concern and common issue (**over 36 million Americans have hearing loss**!), especially amongst musicians. NIHL is preventable if proper hearing protection is practiced – wear earplugs and limit the length of exposure to loud levels of noise (**over 80 decibels**).

FACTORS THAT AFFECT HEARING LOSS & HOW TO PREVENT THEM

**INTENSITY: (AVERAGE LEVELS)**

Turn down the volume!

**WEAR PROTECTIVE EARPLUGS WHEN YOU CAN'T CONTROL THE VOLUME!**

Besides turning down the volume and taking breaks, protective earplugs are one of the only protections against hearing loss brought on by loud noise.

**DISTANCE: (BETWEEN YOU & THE SOUND SOURCE)**

Don't stand in front of the speakers. Put some distance between yourself and the sound source.

**DURATION: (EXPOSURE LENGTH)**

Take a break in a quiet space, especially when sounds are over 85 dB!
This chart represents levels of noise measured in decibels (dBA) - an expression of the relative loudness of sounds in air as perceived by the human ear. Sounds (measured in dBA) are coded green (lower) – yellow (medium to loud) – red (loud) and the permissible or safe exposure times are noted before hearing damage begins to occur.

As a general rule, noise may damage your hearing if:

- You have to shout over background noise to make yourself heard
- The noise makes your ears ring
- You have decreased or “muffled” hearing several hours after exposure
- The noise is painful to your ears

When you’re out and about remember to ask yourself – How Safe is Your Sound?

**DAMAGING DECIBELS**

Sounds above 90 decibels (Decibel-dB or dBA - a measurement of the loudness or strength of sound vibration) may cause vibrations intense enough to damage the delicate sensory cells of the inner ear, especially if the sound continues for a long time. These sensory cells in the inner ear typically do not recover once damaged; once they are gone, they are never replaced.

For instance, daily activities such as speech take place in the 60-80 dB range (the GREEN zone) and are safe without hearing loss for up to 12 hours. Alternatively, a jackhammer produces a sustained noise level of 120 dB, the noise from a large truck can peak at around 90 dB, and the average noise level inside the cabin of an airplane can be between 90-100 dB over the duration of your flight.

If you turn up your iPod or car radio to drown out the racket around you, you are actually blasting your ears with a dangerous level of sound. This combination of noise can cause hearing damage in a very short period of time. For further information, visit the Dangerous Decibels website.

**OTHER SOUND EXPOSURE FACTS**

- The dynamic range of music, whether performed by a symphony orchestra, brass band, or at a rock concert, can peak at 95 dBA or above.
- 100 dBA of sustained sound can cause hearing damage after just 5 minutes! The roar of a cheering Saints crowd enclosed in the Superdome can peak at 100 dBA or higher. Sounds pouring out of some blocks of Bourbon St. can also peak at 100 dBA or higher.

**DO YOU NEED A HEARING TEST?**

CLICK HERE to take this interactive quiz provided by the NIH to see if you need a hearing test. If so, get in touch with the NOMC or your primary care provider to make an appointment.
The New Orleans Musicians’ Clinic & Assistance Foundation’s Safe Sounds wellness program provides resources and preventive health education aimed at protecting New Orleans’ hearing by working to reduce the number of noise induced hearing disorders.

Safe Sounds advocates for healthy sound environments with the goal of making New Orleans the nations’ number one acoustic friendly city. Through research, outreach, and preventive health education we strive to create a healthy local music environment for musicians and music lovers alike.

Like the NOMC & AF Safe Sounds Facebook page for updates on programming, hearing health and Safe Sounds events!

**PROGRAM GOALS**

- Share research and information on noise and music-induced hearing loss, as well as guidelines for safe sound exposure.
- Encourage self-efficacy in those in New Orleans’ music environments (i.e., musicians, sound engineers, club owners, music enthusiasts, etc.) by providing strategies for scientifically-approved hearing loss prevention and protection methods.
- Create a voluntary compliance system or pledge whereby clubs which “Practice Safe Sounds” are recognized and supported for their efforts to reduce noise related hearing disorders in musicians and cultural workers. Furthermore, consumers can be informed as to which clubs subscribe to these practices.
- Effectively advocate practicing ‘Safe Sounds’ in order to engage behavioral change and maximize the listening experience in musicians’ rehearsal and performance environments.

1 in 6 adults in the US experience noise-induced hearing loss.

#SAFELOUDS

#YAHHEARD
THE EFFECTS OF LOUD NOISE ON MUSICIANS

Did you know?

Chronic conditions can exacerbate hearing loss.

Moderate noise levels (approx. between 40 – 60 decibels) gets the creative juices flowing.

Smoking constricts blood vessels and smokers are more susceptible to hearing damage.

NEW ORLEANS MUSICIANS’ CLINIC & ASSISTANCE FOUNDATION
SAFE SOUNDS

DEPRESSION
ANXIETY
INABILITY TO FOCUS

MUSCLE TENSION

DISRUPTED SLEEP PATTERNS
SHRINKING BRAIN TISSUE
(coognitive)
PANIC DISORDERS

TINNITUS (permanent ringing in the ears)

INABILITY TO HEAR SOFT SOUNDS
INTOLERANCE OF LOUD SOUND
PERMANENT HEARING LOSS
PITCH DISCRIMINATION PROBLEMS
(hard to stay in tune)

ABNORMAL HEART RHYTHM
(your heart tries to sync to the beat of music)

RESTRICTED BLOOD FLOW
(hardening or narrowing of arteries due to heart diseases restricts blood flow to the cochlea, which is responsible for your hearing ability)

PATIENTS WITH DIABETES
are more likely to suffer hearing loss as high blood glucose obstructs blood flow to the cochlea. Diabetes can lead to an inability to flush toxins from inner ears.

VISIT NOMAF.ORG/SAFESOUNDS
**APPS**

Decibel Ultra measures volume and helps you determine the noise level around you.

![Decibel Ultra](image)


Decibel 10th turns your iPhone, iPad and iPod touch into a professional sound meter, precisely measures the sound pressure level all around you.

![Decibel 10th](image)


**RECOMMENDED VIDEOS**

**EDUCATIONAL VIDEOS ON THE TOPICS OF HEARING HEALTH:**

- **AUDITORY TRANSDUCTION**
- **FITTING FOAM EARPLUGS**
- **TINNITUS: RINGING IN THE BRAIN**

**MUSIC STUDENT RESOURCES**

INFO ON HEARING PROTECTION AND PREVENTIVE METHODS FOR WHEN PRACTICING:

- Preventing Music Induced Hearing Loss
- Soundscape: Hearing Loss
- National Association of Schools of Music (NASM)
- National Hearing Conservation Association (NHCA)

**NEW ORLEANS SPEECH & HEARING CENTER (NOSHC)**

New Orleans Speech and Hearing Center (NOSHC) was founded in 1930. Each year brings growth and expansion as they continue to be the forerunner of speech and hearing centers in the New Orleans area. Their audiology services include comprehensive hearing testing and rehabilitation, including hearing aids for both children and adults. They also offer Auditory Attention Screenings, Auditory Processing Disorder (APD) Testing, non-sedated Auditory Brainstem Response (ABR) testing, and custom musician earplugs. Their speech-language pathology department administers formal and informal testing to address the following: articulation disorder, fluency disorder, voice disorder, expressive and/or receptive language disorder, social pragmatic disorder, language processing disorder, auditory processing deficits, phonological awareness deficits, and reading/spelling deficits.

Many musicians, culture workers, and music lovers can benefit from Musician’s Earplugs. With Musician’s Plugs from the New Orleans Speech and Hearing Center, sound quality is clearer and more natural than when using foam plugs. In addition, they are shown to reduce fatigue associated with noise exposure. For more information on Musicians’ Plugs contact the Musicians’ Clinic: at 504-412-1366.

[NEWORLEANSMUSICIANSCLINIC.ORG](http://NEWORLEANSMUSICIANSCLINIC.ORG)