Surviving SOUND SENSITIVITY

A Five-Step Plan

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Michelle has an exquisite ear for pitch, melody and rhythm. At age eight, she has already performed in violin competitions, can play on her piano a song she hears only once or twice, and loves drumming to the music of her favorite rock band. However, if a balloon pops, kids shout at recess or a baby cries, she simply cannot tolerate it. Busy restaurants, birthday parties and even family gatherings are a nightmare for her.

Jaden loves school, but he's starting to fall behind. It's hard to listen to the teacher when there is so much noise! He can hear the other students writing and the kids at the back of the classroom whispering. The sound of chair legs scraping on the floor feels like a dentist drill hitting a nerve. Even though he seeks out the quietest spot at recess and in the lunchroom, he still feels besieged by noise all day long. He finds it exhausting.

If the speech teacher asks Juliana to look at her *one more time*, she feels like she just might explode. She is doing her very best to listen and mimic with her mouth the sounds she hears, but it's so hard. When people tell her to "look at me," she gets dizzy because there are too many moving parts, such as lips, eyebrows and hands. When she looks away, she finds it easier to listen and follow. She doesn't want to be rude, but she feels it's just not possible or fair to make her do both.

A person who passes a basic hearing test with flying colors can still have difficulty with auditory sensory skills. While most people start hearing at a volume level between 0 and 15 decibels, a person with hypersensitive hearing can detect noise at 0 or even -15 decibels. When so much noise floods people's auditory system, it can be challenging or even impossible to filter out the irrelevant noise and tune in to important sounds, such as someone speaking to them. It is understandable that they may quickly become overstimulated, overwhelmed, and even traumatized by auditory overload.

We hear with our ears but listen with our brains as we try to make sense of all of the noise out there. Some of the factors of sound include: intensity or loudness (measured in decibels); frequency and pitch (determined by the number of sound waves per second); duration (how long the sounds last); and localization (where the sounds are coming from). People with auditory sensory challenges may have difficulty processing all of these factors at once. They may find specific frequencies, such as a high-frequency hair dryer or a low-frequency air conditioner, intolerable. These could trigger fight or flight reactions. In noisy situations, the auditory system of these individuals may become overwhelmed by the intensity, frequency, directionality, and duration of the noise.

A Five-step Program

The following five steps may be helpful in dealing with auditory sensitivity or other sensory issues.

STEP 1
INVESTIGATE

Consider whether there is an undiagnosed medical issue at the root of the sensitivity. Is there underlying hearing loss that alters the perception of different frequencies? Are there chronic ear infections that distort what the person hears? Do frequent headaches or migraines contribute to auditory discomfort? What causes the person to be overwhelmed by sound? What are the particular sounds that are distressing? Is discomfort caused by just a few sounds, or is it caused by sounds that come from multiple sources, such as at a party?

If auditory issues are identified, start with an audiologist who works with autistic and other neurodivergent clients and who is more likely to be familiar with sensory differences. It is important to assess auditory skills, such as sound discrimination and foreground-background discrimination. The audiologist should test auditory thresholds starting at -15 decibels of sound, something that is not routinely done since this is far below the typical threshold of hearing.

Learning about auditory strengths and challenges can help us understand behavioral reactions in problematic situations and develop a well-informed plan to assist. Forcing a person to mask discomfort from auditory input is never acceptable.

STEP 2
PROTECT

If people say or indicate that their ears hurt, it's important to believe them. It's invalidating and infuriating for individuals to be told that a sound is not loud or scary when, in fact, they find it painful or frightening. Safeguard hypersensitive ears by using "ear defenders" such as earplugs or hearing protection earmuffs which mute sound. Noise-cancelling headphones are engineered specifically to filter out consistent and environmental noise like the sound heard on an airplane, but do not work as well with intermittent or loud noises, like fireworks.

Some popular earplug brands for teenagers and adults are Vibes Hi-Fidelity Earplugs and Loop Experience Earplugs. For young children and some teens, over-the-ear protection is safer. Such devices are less likely to be misplaced. There are many good brands such as Snug Kids Earmuffs and Muted Hearing Protection Ear Muffs. For babies up to 18 months, Baby Earmuffs by Ems for Kids may work well.

Please note that ear protection should *not be worn* for extended periods during the day since the brain and auditory system will have an even harder time managing sounds when the protection is removed. Save its use for specific situations that are especially challenging, such as fireworks, parties, and public transit.

STEP 3
DESENSITIZE

Some people find unfamiliar or sudden sounds very scary. Once scared, a person may remain fearful of the sound and anxious about the possibility of hearing it again. Never *force* someone to listen to an offending sound. Thoughtful, gentle, progressive exposure can help if facilitated by a trusted parent, teacher or therapist, especially if the original context is changed. For example, if a person is afraid of the mooing sound of a cow at the petting zoo, it may help to record the sound and listen to it together at home, allowing the person to control the volume and turn it on and off. You can also listen to selections from Sound-Eaze (available at https://pocketot.com/product/sound-eaze-cd/). These selections pair many of the most commonly intolerable sounds, such as the vacuum cleaner, blender, a toilet flushing, fire alarm, and thunder, with pleasant, rhythmic songs to help the person become familiar with and better tolerate these sounds.

STEP 4
BUILD SKILLS

Work with an occupational therapist, speech language pathologist or audiologist who has expertise in building sensory tolerance and auditory sensory skills. Sound therapy programs, such as Vital Links' Therapeutic Listening, Integrated Listening Systems (iLs), The Listening Program, and others, are designed to strengthen and integrate the person's auditory system with other sensory and motor systems.

Those who struggle to discriminate between someone speaking and environmental noise may benefit from the use of an FM system. An FM unit, usually recommended by an audiologist, is a device that allows the teacher to speak into a transmitter while the student listens through a receiver, such as headphones, a small speaker or a cochlear implant attachment.

STEP 5
TEACH ADVOCACY

Help children, teens and families to speak up for themselves diplomatically. For example, students can learn to ask the teacher to repeat an instruction or agree on a signal to use that indicates they need it repeated. Accommodations such as written notes can also be added to the IEP plan. Individuals can request that music be turned down at a restaurant if it is too loud. They can also be empowered to communicate through speech, sign or a picture that indicates they need a break or that they need their headphones.

Museums, theaters, sports arenas, stores, zoos and even some airports are increasingly recognizing sensory differences and attempting to be more sensory friendly. Plan ahead by checking online for accessibility options and downloading social narratives that can help autistic and other neurodiverse visitors to have a positive experience. Previewing a visit and knowing what to expect in an unfamiliar environment can reduce anxiety significantly and help manage sensory stimuli more effectively. Download the Kulture City app for the growing list of sensory inclusive places.

To learn more about auditory sensitivity and other sensory differences, please see *Raising a Sensory Smart Child* and the www.sensorysmarts.com website.

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