

Want a Better Listener? Protect Those Ears

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For football fans, the indelible image of last month's Super Bowl might have been quarterback Drew Brees's fourth-quarter touchdown pass that put the New Orleans Saints ahead for good. But for audiologists around the nation, the highlight came after the game — when Mr. Brees, in a shower of confetti, held aloft his 1-year-old son, Baylen.



Mark J. Terrill/Associated Press

DULL THE ROAR After guiding the New Orleans Saints to Super Bowl glory, quarterback Drew Brees shared the moment with his son, Baylen, 1, who wore protective earmuffs. The boy was wearing what looked like the headphones worn by his father's coaches on the sideline, but they were actually low-cost, low-tech earmuffs meant to protect his hearing from the stadium's roar.

Specialists say such safeguards are critical for young ears in a deafening world. Hearing loss from exposure to loud noises is cumulative and irreversible; if such exposure starts in infancy, children can live “half their lives with hearing loss,” said Brian Fligor, director of diagnostic audiology at Children's Hospital Boston.

“This message needs to be conveyed to parents over and over again,” Dr. Fligor said. “If a child attends only one loud sporting event, it isn't a big deal. But for those kids who will be going to football games throughout their lives, as Drew Brees's kids will, it's a very big deal. A young, tender ear may not be able to withstand damage.”

According to the National Institute for Occupational Safety and Health, more than 15 minutes of exposure to 100 decibels is unsafe. The noise in a football stadium can reach 100 to 130 decibels. And noise that is potentially dangerous to an adult is even more dangerous to a child, said Levi A. Reiter, head of the audiology program at Hofstra University, who also has a private audiology practice in Brooklyn.

Because a young child's ear canal is much smaller than an older child's or an adult's, Dr. Reiter said, the sound pressure entering the ear is greater. An infant might perceive a sound as 20

decibels louder than an older child or an adult. The shorter length of the ear canal increases dangerous noise levels in the higher frequencies, which are crucial to language development. Awareness of the problem is spotty, audiologists say. Even if concertgoers know about damage from loud music, few children are wearing protective gear at sporting events, parades or fireworks displays, or around high-decibel motorcycles and snowmobiles.

It's a hard message to convey. Hearing loss, which accumulates slowly over a lifetime, is neither painful nor disfiguring, so it goes unnoticed. Stephen Glasser, an audiologist in Great Neck, N.Y., says the stigma attached to hearing aids — often considered a sign of age or weakness — seems to carry over to hearing protection.

And while adults may be able to escape from uncomfortably loud noise, “when you are a toddler in your parents’ arms or a stroller, you can’t walk away,” said Nancy Nadler, assistant executive director of the Center for Hearing and Communication, formerly the League for the Hard of Hearing. Nor are they likely to articulate it if they are feeling aftereffects of loud noise exposure, which include sensations of fullness or muffling, or the ringing sounds known as tinnitus.

But protecting the hearing of very young children is not easy. Earplugs are too big for tiny ear canals and too easy to put into the mouth, where they pose a risk of choking. They are also hard to insert — even adults do not always insert their own earplugs correctly.

Enter protective headgear, like the earmuffs worn by Baylen Brees. Sold by a number of companies (Baylen’s came from Peltor), they include lightweight foam-filled ear cups, weigh less than half a pound and typically cost \$20 to \$30.

Most are not meant for infants, but Baby Banz sells earmuffs for babies 6 months and older. Though they are adjustable, they may still be too loose for younger babies, said Shari Murphy, the company’s North American operations manager, adding that earmuff sales rose 40 percent after the Super Bowl.

More than half of customers have special needs, like autism or sensory disorders, Ms. Murphy said. For other children, the purchasers are typically grandparents, who sometimes say that their grandchildren cover their ears at fireworks or air shows, or that they themselves suffer from hearing loss.

The use of hearing protection “can make the experience enjoyable instead of having the baby crying and you don’t know why,” said Ms. Nadler, of the Center for Hearing and Communication.

Often, she added, limiting a child’s noise exposure is a matter of common sense. It might be best to leave the baby home with a sitter. “We need to look at noise as something that is dangerous,” Ms. Nadler said, “like sharp tools or a hot stove.”