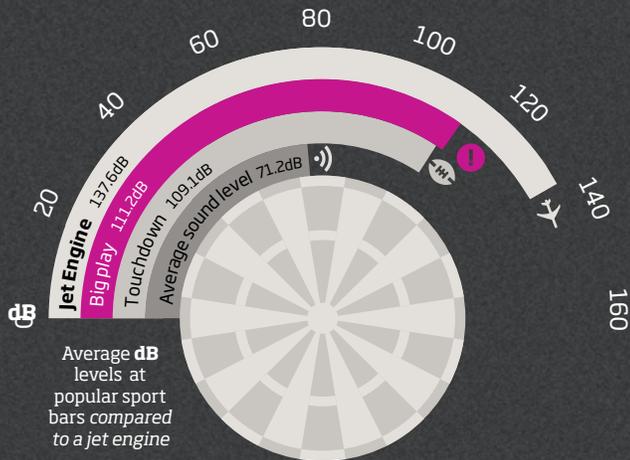


# Raising the Bar on Noise

When game tickets aren't in the cards, many fans enjoy the camaraderie at their favorite sports bars.

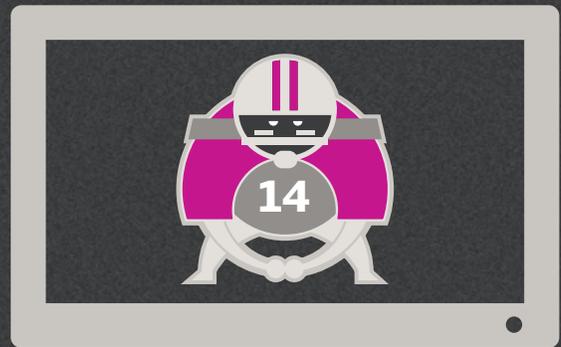


## Fan-tastically Noisy

During NFL playoffs, a group of Oticon audiologists fanned out to popular sports bars in the playoff cities to measure noise levels. They found that on average, bar noise was in the 70 decibel range, about the noise level of a vacuum cleaner. It ratcheted up to nearly 110 decibels during touchdowns and even higher to 111.2 decibels during big plays.

## Everything In Moderation

Some researchers have shown that ingesting alcohol in moderation is a protective agent against hearing loss. However, people who drink 4 or more alcoholic beverages per day have higher odds of having a high frequency hearing loss.<sup>1</sup>



## The Gang's All Here

Sports bars can be very loud places to watch the big game. Fans may be less likely to find the noise bothersome because they're in a social setting according to a study conducted at the University of Minnesota.<sup>2</sup>



<sup>1</sup> Filion, P, & Margolis, R. (1992). Comparison of clinical and real-life judgments of loudness discomfort. *Journal of the American Academy of Audiology*, 3:193-199.

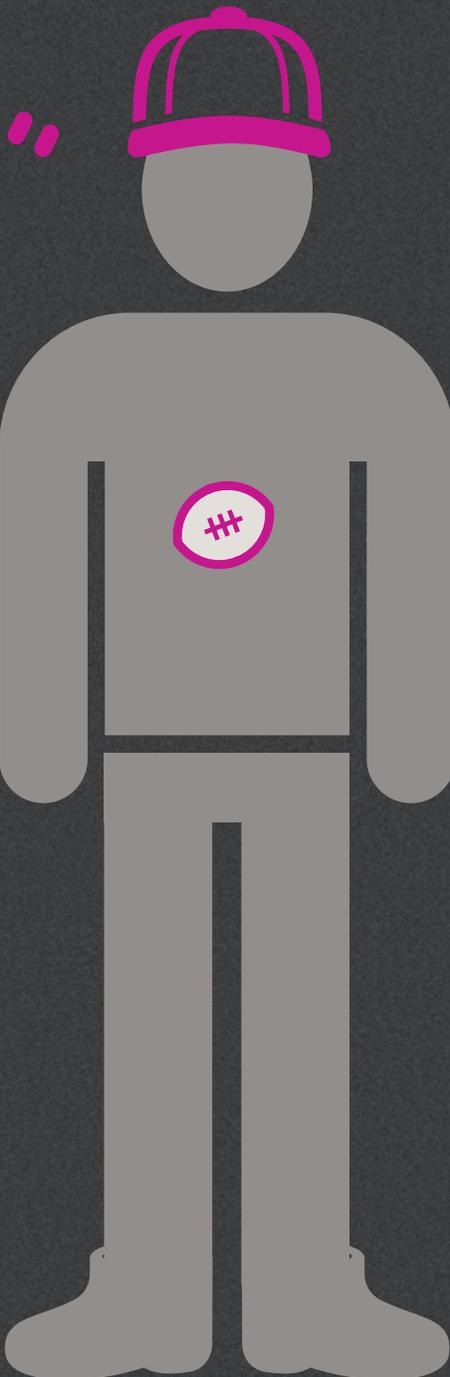
<sup>2</sup> Popelka MM, Cruickshanks KJ, Wiley TL, Tweed TS, Klein BE, Klein R, Nondahl DM (2000). Moderate alcohol consumption and hearing loss: a protective effect. *The Journal of the American Geriatric Society*, 48(10):1273-1278.

# Sound advice for Game Day

Suiting up for the big game? Here are some practical tips to protect your hearing.

## Add a pair of earplugs

or earmuffs with a good noise reduction rating to your game day attire.



## Big and Small Ticket Items

Super Bowl ticket prices have averaged between \$500 - \$600 in recent years. The cost for a package of earplugs to protect your hearing from big game noise is just under \$3.50 - and that includes enough for 10 fans!

## Take a break from the noise

Head to the snack bar, take a walk around the stadium or shop for game day souvenirs.



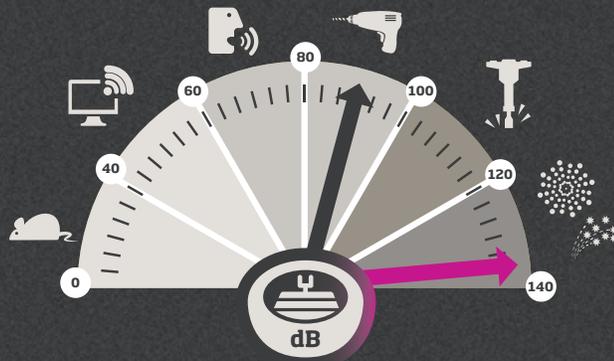
It's not uncommon for your ears to ring for a short period after being in a noisy environment. But if the ringing doesn't go away after 3 or more days, get checked out by a [hearing care professional!](#)

# Stadium Noise

An NFL game can get very loud for a number of reasons

## The average volume during NFL games

is estimated to be in the mid-90-decibel range (think power tools). Over time, sounds that are louder than 85 decibels can lead to noise-induced hearing loss.



Kansas City Chiefs fans upset the noise record for the loudest outdoor sports stadium previously held by the Seattle Seahawks CenturyLink Field. Noise levels at Arrowhead Stadium came in at a roaring 142.2 decibels (about the range of ear-damaging reworks).



## During an NFL game, how does sound affect players and referees?



### Football helmets are designed to protect players' heads, not their hearing.

Openings on either side of the helmet allow them to hear crowd noise and calls on the field. When Oticon audiologists measured sound levels with a regulation helmet using KEMAR, an acoustic research mannequin, sound levels were virtually the same with and without the helmet.

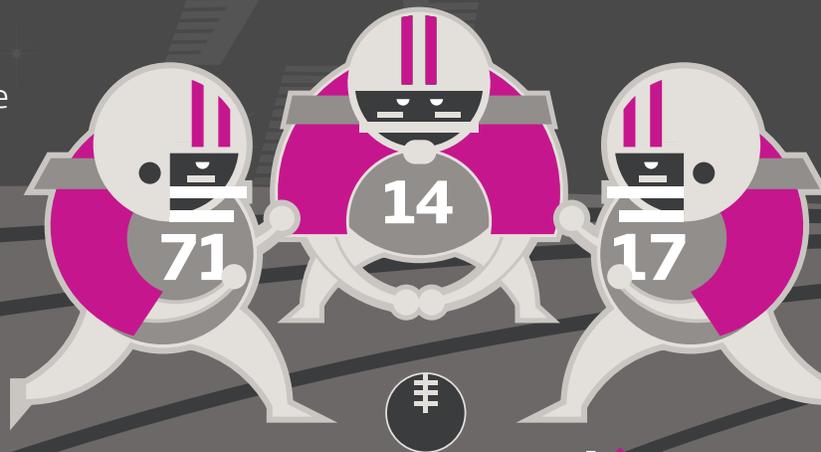
### Bad Call!

A UK study showed crowd noise influenced referee calls in favor of the home team. It is suspected that noise caused greater uncertainty when determining calls, resulting in fewer penalties called against the home team.<sup>1</sup>



### Huddle Up

Players from schools for the deaf used sign language to communicate plays on the field. Opposing teams were often able to decipher the hand signals. In 1894, a Gallaudet University QB introduced the huddle as a way to conceal upcoming plays.



<sup>1</sup> Nevill, AM; Balmer, NJ; Mark Williams, A; (2002) The influence of crowd noise and experience upon refereeing decisions in football. Psychology of Sport and Exercise, 3(4):261 - 272.