



# Not So Safe:

## An Analysis of Headphones and Children's Safety



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There are multiple headphones marketed to young children available at toy stores, electronic retailers, and online. These headphones typically range from \$15-\$30 and are sized for kids 2-5 years of age. They display graphics consistent with young children's interests and are touted as safe.

However, the headphones industry does not have specific safety standards for children, so individual companies can make a claim of safety without testing or reporting to a regulatory agency. Unfortunately, many headphone companies

simply market a smaller version of their adult headphones without special considerations for the safety of children's sensitive hearing and safety. Specific considerations include:

- Hearing loss
- Strangulation on cords
- Choking on small parts
- Swallowing magnets in speakers

According to the [Consumer Safety Protection Commission](#), headphones are appropriate for kids 6 years and older. Below that age, headphones usage is at the parents' discretion.

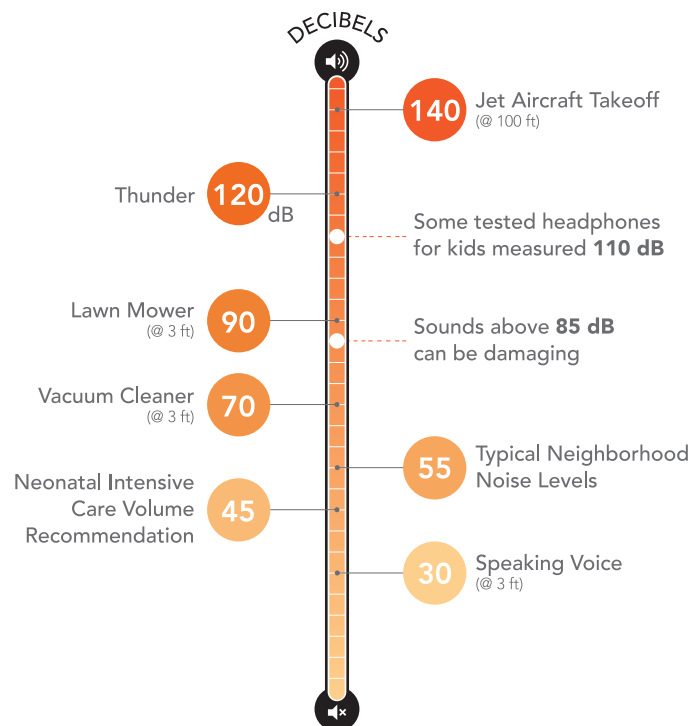
A survey of the headphones available to kids at a popular toy store chain demonstrates branding with Paw Patrol (ages 2-5), Thomas and Friends (ages 3+), My Little Pony (ages 2-11), and Dora the Explorer (ages 2+). Unlike toys that have recommended ages and small parts warnings, headphones may not come with adequate warnings to new parents. This is especially evident with some of the brands found online. Parents may be lead to believe that the headphones are safe for their 2-year-old child when in fact they are not due to the following four risks. •

## Hearing Loss

[Occupational Safety and Health Administration](#) (OSHA), the United States agency regulating work safety standards, mandates employers to monitor employee hearing when employees are exposed to noises over 85 dB for 8 hours a day. Guidelines from the [World Health Organization](#) (WHO) promote similar recommendations of less than 85 dB during an 8-hour period.

Chronic exposure to sounds over 80 dB by working mothers is linked with preterm birth and low infant birth weight. Sounds over 80 dB also cause lower oxygen levels in newborns. The [American Academy of Pediatrics](#) recommends neonatal intensive care unit sound exposure to be less than 45 dB. The U.S. Environmental Protection Agency has proposed a day-night average noise level of 55 dB during waking hours and 45 dB during sleeping hours in neighborhoods and 45 dB in daytime and 35 dB at night in hospitals.

Because there are no specific decibel standards for children by the American Academy of Pediatrics, the Consumer Technology Association, or the Consumer Safety Protection Commission, the only specific standard would be from OSHA and the WHO that indicates caution at 85 dB. In-house testing of various headphones marketed to children, including supposed volume-limited headphones, detect peak volumes of 93dB. [Extensive testing of 45 kid-friendly headphones](#) indicates that a staggering 30-50% of headphones on the market could be pushed well beyond a safe listening level (some upwards of 110 dB to 120 dB).



An in-house analysis reveals that there was no specific volume-limiting functionality hardware on any of the less expensive headphones. Instead, any potential reduction in volume was simply a function of smaller speakers or weaker speakers. Unfortunately, this is an inconsistent method of controlling volume.

Given these statistics, it's no wonder that one in five teens has some form of hearing loss, according to the [American Osteopathic Association](#) (AOA). This rate is about 30% higher than it was in the 1980s and 1990s, which many experts believe is due to an increased use of headphones.



In an interview with the AOA, James E. Foy, an osteopathic pediatrician, says, "Listening through headphones at a high volume for extended periods of time can result in lifelong hearing loss for children and teens...Even a mild hearing loss due to excessive noise could lead to developmental delays in speech and language."

Many doctors agree that electronic listening devices should be set to about 60% of their full volume. They also urge parents and guardians to encourage frequent breaks from headphone usage to allow the ears to recover. A good rule of thumb follows that if you are within a couple of feet from your child, they should still be able to hear you talk to them.

Studies have linked hearing loss to:

- Diminished psychological and physical health
- Fatigue, tension, stress, and depression
- Frequent withdrawal from social situations and loneliness
- Impaired memory and ability to learn
- Irritability, negativism, and anger
- Reduced alertness and increased risk to personal safety

Unsurprisingly, there is also a financial cost to hearing loss. According to the [Center for Disease Control and Prevention](#) (CDC), an estimated \$297,000 is lost over the lifetime of person suffering from hearing loss due to fewer employment opportunities, lower worker productivity, and higher health care costs. •

## Strangulation

According to [The National Center for Fatality Review and Prevention](#), there are 965 unintentional infant suffocations annually and another 239 for children ages 1-17. In 2002, the [Consumer Product Safety Commission](#) launched a baby safety campaign highlighting the risk of cord strangulation upon discovering that nearly one child a month dies after becoming entangled in a window-covering cord.



Suffocation can occur in one of four ways:

- Covering of the face or chest
- Choking
- Confinement
- Strangulation

Infants, toddlers, preschoolers, and children with special needs are at a greater risk of death by strangulation. Strangulation incidents have also involved children up to nine years of age. Headphones with excessively long cords can increase the risk of strangulation in minors, while cords designed with shorter cords may help reduce the risk of strangulation. •

## Choking



Choking is also a very real risk for children. According to the [National Safety Council](#), choking is one of the leading causes of death for infants while suffocation is the leading cause of unintentional death among children younger than four. The small parts that may break off damaged headphones are potential choking hazards. Most headphones are made of plastic, metal, foam, or vinyl. All of these materials may become lodged in a child's airway. Headphones with fewer well-constructed pieces that are larger than what can fit inside a child's mouth are potentially safer. •

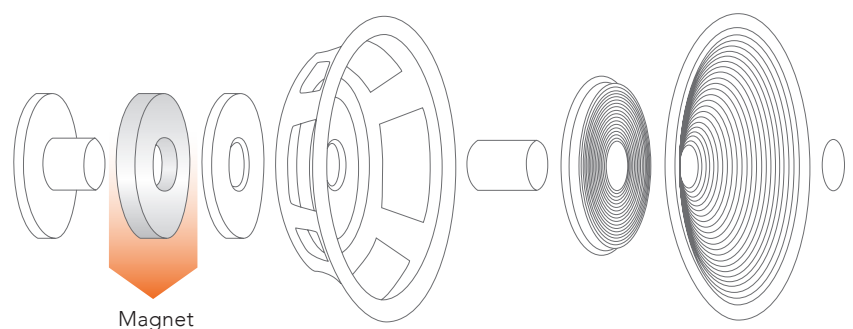
## Swallowing Speaker Magnets

When taken apart, headphone speakers contain a small magnet. Since headphones contain two speakers, it is possible for small fingers to dig out two small magnets from damaged headphones.

Swallowing two or more magnets is a particular hazard because the magnets may attract within a child's intestines and cause an intestinal obstruction or volvulus (twisting and strangulation of the intestines). These conditions are potentially fatal unless treated in time with surgery. Sometimes part of the intestines may need to be removed during surgery.

As with the choking hazard, speakers enclosed in a durable shell that is too large to fit inside a child's mouth would be safer. •

DISSECTION OF A SPEAKER



## Final Conclusions

There are many headphones brands that advertise directly to kids and/or parents searching for children's headphones. However, these headphones have both compressible and small parts that increase the risk of choking and may come with a wire that increases the risk of suffocation by way of strangulation.

Meanwhile, damaged headphones may reveal small but powerful candy-sized magnets that can cause intestinal twisting if swallowed. Finally, many well-known brands reach dangerously high volume levels that can cause permanent hearing loss in young children. Parents should refrain from buying corded, poorly built headphones for young kids under 6 years of age. •

## About AcousticSheep LLC

AcousticSheep LLC is the company behind SleepPhones®, the premier headphones for sleeping and relaxing, and RunPhones®, top-rated headphones for running and working out. Our products feature flat speakers in a comfortable headband. Our collections include both corded and wireless options. Learn more about our company by visiting <https://www.acousticsheep.com/>.



This article is meant to serve as an educational document that details the dangers of young children using headphones. At AcousticSheep LLC, we pride ourselves on making great products and care deeply about our customers' satisfaction and safety. From both a medical and ethical standpoint, we feel it is important for headphone manufacturers to advertise to the appropriate market. Young children should not be part of a target audience. It is for that reason we do not recommend our products for children under the age of six. If you have questions regarding this information or headphone safety for children, please [click here](#) to contact us today. •