

## Children and Noise

The word noise is derived from the Latin word, *noxia*, meaning injury or hurt.

### Noise Impacts Children's Health

The Centers for Disease Control and Prevention indicates that one of eight children between the ages of 6 and 19 suffers noise-induced hearing loss. Children are being exposed to sounds that may hurt their hearing. Parents themselves may be unwittingly contributing to this exposure.

### Noise Impacts Learning

Sound affects more than a child's hearing. Blaring stereos and televisions, shouting voices, and loud appliances create a home environment that can be harmful to a child's development. Children from noisy homes may have slowed language skills and cognitive development.

An experimental study looked at the impact of noise in a child's home environment, as related to the child's school performance. The key variable was the floor on which their family's apartment was located. With each higher floor, the average decibel level from city street noise was lower. The higher the floor (less noise), the higher the child's school performance. Children in quieter homes learned more.

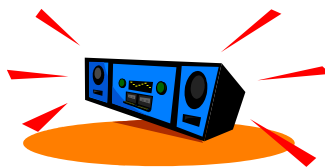
### Homes Can Be Noisy Places

Imagine a home around 5:00 p.m. The television is on, perhaps the stereo is blaring. The phone rings. One child is pulling at your leg, another screaming

about a sibling knocking down a carefully constructed block construction, all while you are trying to make dinner and help with homework. Now imagine the same home without the background noise. "Noise confusion" in the home lowers caregiver attentiveness and can affect social interactions of children.

### Value of a Quieter Home

Noise presents a serious threat to a child's hearing, health, learning, and behavior. Quiet promotes an environment which fosters learning, as well as the opportunity for parents and children to enjoy each other's company. Analyze your home and make every possible effort to include quiet times with your child.



Children who are highly successful in school have homes where their parents provide them with quiet places to think, read, and study. Parents discipline with looks and firm voices, not with shouts and screams. Quieter homes contribute to the child's success and foster better parent-child relationships. Parents read to the children, engage them in conversation, listen to their thoughts and ideas.

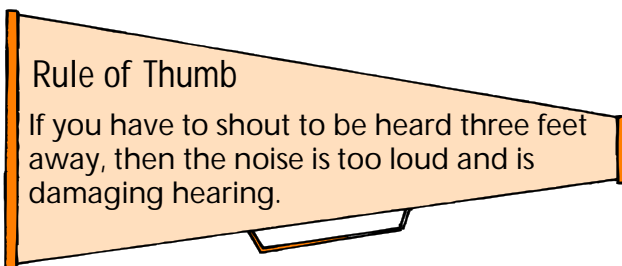
### When Is a Sound Too Loud?

To know if a sound is loud enough to cause damage to your ears, it is important to know both the level of intensity (measured in decibels, dBA) and the length of exposure to the sound. In general, the louder the sound, the less time before hearing is affected. Standards set by OSHA (Occupational Safety and Health Administration)

indicate that continued exposure to noise over 85 dBA will eventually harm hearing. To avoid noise induced hearing loss, OSHA recommends that hearing protection be worn in the workplace when loudness levels and exposure time exceed the allowable standards. For example, 15 minutes of exposure at 115 dBA is considered dangerous to hearing and even an exposure of less than two minutes at 130 dBA may be hazardous to hearing. Although OSHA protects a person in the workplace, the same protection is not available to children.

#### **Avoid:**

- **Noisy Toys** — Certain rattles, squeaky toys, toy telephones, and musical toys measure over 110 decibels (comparable to power tools). Because children play with these toys close to their ears, the sounds emitted from toys may be damaging to hearing. Listen to toys before buying them and if the toy sounds too loud, don't buy it.
- **Video Arcades** — Noise levels at video arcades can exceed 110 decibels (the level of factory machinery). Limit your child's time at these arcades.
- **Computer Games & Stereo Systems** — Children should be cautioned to keep the volume down. Some systems are as high as 135 decibels (the level of a jackhammer).
- **Loud Movies** — Action movies have the volume turned up well beyond 90 decibels, exposing young ears to exceedingly loud sounds.



### **Protect Your Children's Hearing**

Be aware that noise can and does cause hearing loss. Listen to a toy before buying it. If it sounds

loud, hurts your ears or causes ringing, do not buy it. Report the toy to the Consumer Product Safety Commission at 800-638-2772 and to the Noise Center at the League for the Hard of Hearing at 888-NOISE-88. Your complaints may support the need for a change in current regulations.

If you have any questions about your child's hearing, discuss it with your pediatrician or a licensed audiologist. Remember, noise induced hearing loss, though permanent, is preventable.

#### **Encourage:**

- **Quiet times** — Spend time together talking, listening, and reading.
- **Books** — Reading to your child helps develop their reading skills and serves to forge a closer relationship between you and your child.
- **Toys** — Puzzles, construction sets, blocks, card games all allow children to learn while playing in quiet, creative settings.
- **Quiet Movies** — Family oriented films that focus on warm interpersonal relationships are a nice way to spend family time.
- **Visits to Libraries and Museums** — Quiet outings spent together with family and friends build relationships.

### **Sensitive Children Are Especially Susceptible to Noise**

Some children are temperamentally more susceptible to noise in the environment. A "sensitive" child may become over-stimulated with a high level of noise. Controlling the amount and volume of television, radio/stereo, and noisy toys is essential. Over-stimulation can result in the sensitive child becoming fussy and uncooperative. Controlling noise contributes towards less conflict and greater family harmony.

#### **Sources:**

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