Hearing is one of our five senses. Hearing gives us access to sounds in the world around us — people’s voices, their words, a car horn blown in warning or as hello!

When a child has a hearing loss, it is cause for immediate attention. That’s because language and communication skills develop most rapidly in childhood, especially before the age of 3. When hearing loss goes undetected, children are delayed in developing these skills.

Because early identification of hearing loss is so important, every newborn receives a hearing screen, usually before they leave the hospital. Catching a hearing loss early means that treatment can start early in order for the child to develop communication and language skills that will last a lifetime.

Causes of Hearing Loss

Congenital – Hearing loss is present at birth or acquired soon after birth
- Infections while mother is carrying baby (rubella, syphilis)
- Premature baby
- Premature baby takes medication to stay healthy which can be ototoxic (cause hearing loss)
- Baby has limited oxygen when born
- Baby has severe jaundice when born
- Genetic (inherited through family)

Acquired – Hearing loss can occur at any time and any age
- Infectious diseases (meningitis, measles, mumps)
- Chronic ear infections
- Fluid in the ears (leading cause of childhood hearing loss)
- Head injury or injury to ear
- Excessive noise
- Ear wax or foreign body in ear canal

Hearing Loss Facts

- In the United States, more than 12,000 babies are born every year with a hearing loss
- Hearing loss may be inherited or acquired
- Half of all cases of hearing loss are avoidable through primary prevention
- People with hearing loss can benefit from devices such as hearing aids, cochlear implants and assistive devices
**Prevention of Hearing Loss**

- Ensure all immunizations are up to date.
- Reduce exposure to loud noise.
- Move away from the sound source if possible and the decibel level will reduce.
- By moving away, the decibel level of a sound will decrease by 6dB every time you double the distance from the sound. This “Inverse Square Law” teaches us that for every doubling of the distance between a sound source and the recipient of the sound, a 6 dB drop would occur if there were no echo (as from a mountain top). This would be the equivalent to cutting your noise pressure levels by 75%.
- Turn down the volume on your personal stereo system (MP3, CD player, etc.), car stereo, radio, television, speaker system, PA system.
- Cover your ears with ear plugs, ear muffs, or even your finger. Depending on the situation one of these hearing protection devices will help. It is important to insert ear plugs properly. Watch these videos below to find out how to effectively use and fit ear plugs.

**Exposure Time Guidelines**

Accepted standards for recommended permissible exposure time for continuous time weighted average noise. For every 3 dBAs over 85dBA, the permissible exposure time before possible damage can occur is cut in half.

<table>
<thead>
<tr>
<th>Continuous dB</th>
<th>Permissible Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>85 dB</td>
<td>8 hours</td>
</tr>
<tr>
<td>88 dB</td>
<td>4 hours</td>
</tr>
<tr>
<td>91 dB</td>
<td>2 hours</td>
</tr>
<tr>
<td>94 dB</td>
<td>1 hour</td>
</tr>
<tr>
<td>97 dB</td>
<td>30 minutes</td>
</tr>
<tr>
<td>100 dB</td>
<td>15 minutes</td>
</tr>
<tr>
<td>103 dB</td>
<td>7.5 minutes</td>
</tr>
<tr>
<td>106 dB</td>
<td>3.75 minutes (&lt; 4 min)</td>
</tr>
<tr>
<td>109 dB</td>
<td>1.875 minutes (&lt; 2 min)</td>
</tr>
<tr>
<td>112 dB</td>
<td>0.9375 minutes (~ 1 min)</td>
</tr>
<tr>
<td>115 dB</td>
<td>0.46875 minutes (~ 30 sec)</td>
</tr>
</tbody>
</table>

For a complete Audiologic evaluation or to discuss noise protection, please call the **Audiology Department** at Children’s Hospital of Pittsburgh at **412-692-5580**.