
PROTECTING THOSE LITTLE EARS

~ Taking Kids to Music Festivals ~

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Anyone who enjoys live music appreciates the “energy” experienced at a great show. There are many levels to the energy, some perhaps metaphorical. Some levels of this energy are, however, very much real in the form of sound waves. Yes, the music we come to soak in is generated by waves of energy travelling through the air around us, which eventually vibrate microscopic “hair” cells inside our ears. These hair cells ultimately turn the sound energy of vibration into an electrical energy our brain interprets as our favorite tune. The louder the sound, the more these ear components move. Unfortunately, excessively loud sounds can cause damage to these hair cells, leading to both temporary and permanent hearing loss (noise induced hearing loss: NIHL), especially for the little ones among us who enjoy rocking out.

My wife recently brought this up as we prepared to take our little ones (ages two and four) to their first reggae festival, so we did a little research, including asking our ear, nose and throat (ENT) specialist and reading some scientific literature about protecting their ears. We came up with a few things that can be done to help the young ones (and big ones too) enjoy the music at concerts and festivals safely:

1. Children should wear noise reducing headphones. We found some easily and fairly cheaply online. It took a little battling and bribing with fresh squeezed lemonade, but we managed to get the kids to wear them.
2. Most smartphones have free apps that measure the sound intensity in decibels and indicate dangerous levels. Two mathematically

based points of interest here: First, decibels measure sound intensity using a logarithmic (huh?!) scale. This simply means that small increases in the number of decibels represent large increases in sound “energy.” Second, the intensity of this sound “energy” decreases with the square of the distance from the source. This simply means that moving twice as far from the stage lowers the sound intensity four times, and vice versa. Being up front might be exciting, but probably isn’t the best idea, especially for younger ears.

3. Recent research indicates that antioxidants (for example, vitamin C) and B vitamins for nerve protection may help to reduce the damage to hair cells and nerves. The data is not conclusive, but why not!? Enjoy some fresh squeezed fruit juice with that jerk chicken! The food is half the fun at a festival anyway!



Author Dr. Nathanael Heyman enjoying Kaya Fest with his daughter Natania. Photo by Tracey Heyman