

# Researchers urge caution when buying noisy toys

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While Road Rippers Lightning Rods, Let's Rock Elmo and the I Am T-Pain musical microphone might be sought-after gifts this holiday season, parents should ensure that their children don't risk permanent hearing damage by misusing them.

Researchers from UC Irvine's Department of Otolaryngology measured the [noise levels](#) of two dozen popular toys in stores and purchased the 10 loudest for precise gauging in a soundproof booth at UC Irvine Medical Center. They found that all exceeded 90 [decibels](#) and several reached 100 or more, equivalent to the noise of a chain saw, subway train or power mower.

"Generally, toys are safe if used properly," said Dr. Hamid Djalilian, associate professor of otolaryngology and director of neurotology and [skull base surgery](#). "We tested the sound levels at the speaker and again at 12 inches, which is about the length of a toddler's arm."

But problems can arise if a noisy toy is held too close to the ears, he said: "Children are very sensitive to loud and high-pitched sounds. Unfortunately, hearing loss from noise damage is permanent and not currently curable."

According to the American Academy of Otolaryngology, unprotected exposure to sounds above 85 decibels for a prolonged period can lead to [hearing impairment](#). Two factors contribute to this, Djalilian noted: loudness and duration. The louder a sound is, the less time it takes to

cause [hearing loss](#).

He suggested that someone buying a noisy toy for a child pay attention to the speaker's location – under the item is often better than on top.

Djalilian also recommended that an adult hold the toy as a youngster would and listen to its sound. "If it hurts your ears," he said, "then it's probably too loud for a child."

Toys tested / Decibel level at the speaker / Decibel level 12 inches from the speaker

Road Rippers Lightning Rods / 108 / 68

I Am T-Pain microphone / 101 / 64

Tonka Mighty Motorized Fire Truck / 100 / 69

Marvel Super Shield Captain America / 98 / 69

Whac-A-Mole game / 95 / 69

Tapz electronic reflex game / 95 / 65

Sesame Street Let's Rock Elmo / 95 / 74

VTech Magical Learning Wand / 94 / 69

Toy Story Buzz Lightyear Cosmic Blaster / 93 / 60

Green Lantern Colossal Cannon / 92 / 67

Provided by University of California - Irvine

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