

## Noisy toys: Annoying or harmful?

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Walk down a few aisles in a toy store and you can't miss them: toys that make noise. Their packages exclaim "Try me!" and "Lights and Sounds!" For the past eight years, the Sight & Hearing Association (SHA), a nonprofit organization based in Minnesota, has tested toys — taken right off retailers' shelves — for potentially dangerous noise levels.

### Testing

Because of a child's shorter arm span, toys are often potentially more dangerous to hearing because children hold them closer to their ears. In the Sight & Hearing Association study, the toys were repeatedly tested at distances simulating how a child might hold the toy, directly near the ear (0 inches) and at arm's length (10 inches). Otolaryngology residents at the University of Minnesota Medical School tested the toys. A soundproof acoustic chamber was used to ensure accurate measurements.

### Results

Out of 105 toys tested thus far, 47 toys (45 percent) sounded off louder than 100 decibels (dBA) directly at the speaker of the toy. That's louder than a chainsaw.

For instance, in 2000, 13 of 15 toys measured above 100 decibels (dB). The loudest toy, S.R.M.'s Power Fazer, measured at 123 dB at the speaker and 103 dB 12 inches from the surface of the toy. In 2004, two electronic books topped the list: Play-a-Song® "Pooh's Playful Songs" and Play-a-Sound® "Dora the Explorer Choo Choo," both meant for children 18-months-old and up, sounded off at 107 and 102 dB, respectively. In 2005, Kid Connection's Electronic Guitar, measured at 117 dB. The Elite Operations Quantum Blast Set peaked at 114 dB.

[Hear audio clip samples of noisy toys]

**Sight Hearing Association: Noisy Toys Study 2000**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level	
				0 inches	12 inches
Power Fazer	SRM	5+	Gun	123	103
Mega Turbo Blaster	SRM	3+	Gun	117	91
Blue's Clues Talking Mr. Salt and Mrs. Pepper	Fisher Price	18 months+	Crib toy/bring-along toy	115	85
Play-a-Sound Elmo's ABC	CTW Sesame Street	18 months+	Book	113	86
The Powerpuff Girls, Superhero Blossom	Cartoon Network	4+	Doll	110	78
Piano-Fun!	Disney	18 months+	Piano keyboard	109	84
Big Mouth Billy Bass	Gemmy Industries Corp	8+	Singing Fish	108	86
Barbie Steering Wheel	Mattel	3+	Steering Wheel	105	86
Little People Growing Smart Football Eddie	Fisher Price	1-1 1/2+	Bring-along toy/Crib toy	105	85
See 'n Say Pooh Bring-Along	Fisher Price	6-18 months	Bring-along toy/Crib toy	105	77
Winnie the Pooh Silly Music Maker	Fisher Price	9-36 months	Crib toy	105	85
Electric Violin	Agglo Corp, Ltd.	4+	Violin	104	80
Power Ranger Lightspeed Rescue Battle Booster	Saban	5+	Wrist device	101	81
Teachin' Tunes Talking Guitar	Fisher Price	3+	Guitar-keypad activated	96	73
Fun & Learn Sing Along Microphone	Leap Frog	2+	Microphone	89	70

**Sight Hearing Association: Noisy Toys Study 2001**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level	
				0 inches	12 inches
Electronic Talking Nursery Rhyme Bus	Tek-Nek Toys International	10-36 months	Baby/Musical	108	81
Pull-Up Ball Blast	Fisher Price	9+ months	Baby	105	78
Baby Smartronics Learn-a-Bot	Fisher Price	9+ months	Baby	103	74
Pip & Pop's Rappin' Radio	Fisher Price	18+ months	Baby	101	81
Air Trigger	SRM	5+	Gun	97	83
Sports Nut Sports Trivia Game	Radica	8+	Game	96	74
Power Gear Duck Hunter	SRM	5+	Gun	95	77
Fast and Fashionable Motorcycle	Toy State Industrial Ltd.	3+	Doll accessory/Musical	95	77
Sesame Street Soft Musical Rocking Pals	Fisher Price	3-24 months	Baby	94	67
Musical Movers & Shakers	Infantino	6+ months	Musical	92	74
Rockin' Talkin' Stick Pony	Tek-Nek Toys International	3+	Musical	91	73
Deluxe Electronic Bang-A-Boom	DSI Electronics	5+	Musical	90	72
See 'n Say Colors and Music Learning Key	Fisher Price	18+ months	Musical	86	73

**Sight Hearing Association: Noisy Toys Study 2002**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level	
				0 inches	12 inches
Scooby-Doo! Telephone Book	Cartoon Network	18 months and up	Hand-held	123	92
The Home Depot Workman's Chainsaw	Geoffrey, Inc.	2 and up	Impulsive sound	120	106
Kawasaki Power Strobe Guitar	DSI Toys	5 and up	Musical	119	97
Sesame Street Talk & Count Cell Phone	Fisher Price	18 months	Close-to-the-ear	115	112
Battery-Powered Leaf Blower	Kid Connection	3 and up	Impulsive sound	100	82
Barbie "Sing with Me" Microphones	KIDdesigns	3 and up	Musical	98	74
Cyclone Fazer & Saber	SRM Entertainment	5 and up	Impulsive sound	94	80
Sesame Street Light-Up Bongo	Fisher Price	18 months	Musical	90	84
Blue's Clues Blue's Tunes	Fisher Price	18 months and up	Musical	87	71
Electronic Air Snares	Mattel	7 and up	Musical	70	65
Preschool RC Car	Kid Connection	3 and up	Table-top	70	59

**Sight and Hearing Association: Noisy Toys Study 2003**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level (dB)	
				0 inches	12 inches
Barney "Songs"	Publications International	18 months+	Book	115 dB	87 dB
The Home Depot Workman's Screwdriver	Geoffrey, Inc.	3+	Hand toy	112 dB	96 dB
See 'N Say Barnyard Banjo	Fisher Price, Inc./Mattel	18 months+	Musical	110 dB	92 dB
Fun Years Music Sing-A-Long Electronic Guitar	Geoffrey, Inc.	3+	Musical	109 dB	94 dB
Kool Toyz Talk 'N Learn Keyboard	Target Brands, Inc.	3+	Musical	107 dB	91 dB
Light and Sound Lawn Power Tool	Kid Connection/Wal-Mart Stores	3+	Hand toy	107 dB	87 dB
The Wiggles Musical Guitar	Spin Master LTD	2+	Musical	107 dB	91 dB
Barney Bend-a-Tune Trumpet	Fisher Price, Inc./Mattel	18 months+	Musical	104 dB	80 dB
Leap Frog Alphabet Pal	LeapFrog Enterprises, Inc.	12 months+	Floor toy	102 dB	84 dB
Light 'N Sound Popping Piano	Shelcore Toys	18 months+	Musical	99 dB	88 dB
Little People Mixie the Cement Truck	Fisher Price, Inc./Mattel	1-5	Floor toy	98 dB	79 dB

**Sight Hearing Association: Noisy Toys Study 2004**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level (dB)	
				0 inches	12 inches
Play-a-Song® Pooh's Playful Songs	Publications International, Ltd.	18+ months	Hand	107	80
Play-a-Sound® Dora the Explorer™ Choo Choo	Publications International, Ltd.	18+ months	Hand	102	82
Matchbox® Super-Blast Helicopter™	Mattel, Inc.	3+	Hand	101	82
Light & Sound Weed Trimmer	Wal-Mart, Inc.	3+	Hand	100	84
Play-a-Song™ Finding Nemo Splashy Songs	Publications International, Ltd.	18+ months	Hand	100	83
Leap Frog® Fridge Phonics™ Magnetic Letter Set	LeapFrog Enterprises, Inc.	2+	Table-top	98	84
CAT® Bulldozer	Toy State Industrial Ltd.	3+	Floor	97	85
The Home Depot® Leaf Blower	Geoffrey, Inc.	3+	Hand	96	86
Barney™ Singin' Alphabet Songbook	Fisher-Price/Mattel	18+ months	Hand	95	78
Road Rippers® Extreme Rider®	Toy State Industrial Ltd.	3+	Floor	95	81
Shaking Railway™	Shelcore, Inc.	1+	Floor	95	84
Power Gear® Max Sound Blaster	SRM Entertainment, Ltd.	5+	Hand	90	82
Kid Connection Keychain & Portable Phone	Wal-Mart, Inc.	18+ months	Hand	89	74
The Wiggles® Wiggling Dancing Guitar	Spin Master, Ltd.	2+	Musical	84	70
Barney™ Love 'n Lights™ Stars	Fisher-Price/Mattel	18+ months	Hand	82	74
Kasey the Kinderbot™ Learning System	Fisher-Price/Mattel	3-7	Table-top	82	72
Leap Frog® StoryBlock™ Book	LeapFrog Enterprises, Inc.	9+ months	Hand	82	72

**"Ear-Friendly" Toys**

Care Bears™ Share Bear™ Talking Telephone	Play Along, Inc.	12+ months	Hand	74	63
Toy Story Search and Rescue Buzz Lightyear	Hasbro	4+	Hand	75	67
Toby the TotBot	Fisher-Price/Mattel	1+	Table-top	77	65
Block Buddies® My Musical Farm™	Mega Bloks Inc.	1-5	Floor	78	65
Playskool Crawl 'n Flutter™ Bee	Hasbro	6+ months	Floor	80	68

All measurements were taken with a calibrated sound level meter, A-weighted scale, fast-reponse.

**Sight and Hearing Association: Noisy Toys Study 2005**

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level (dB)	
				0 inches	10 inches
Kid Connection Electronic Guitar	Wal-Mart Stores, Inc.	3+	Musical	117	88
Elite Operations Quantum Blast Set	Geoffrey, Inc.	5+	Hand-held	114	87
Barbie™ "Jam With Me" Electric Guitar	KIDdesigns, Inc.	4+	Musical	113.3	82
Play-a-Song® Dora the Explorer™ Adventure Songs	Publications International, Ltd.	18 months+	Hand-held/Musical	110	85
Power Gear Pirate Adventure Set	SRM Entertainment Ltd.	5+	Hand-held	107	81
Play-a-Song™ Disney Princess Magic Songs	Publications International, Ltd.	18 months+	Hand-held/Musical	105	75
The Home Depot Light & Sound Grinder	Geoffrey, Inc.	3+	Hand-held	101	84
Play-a-Song® Baby Einstein Animal Melodies	Publications International, Ltd.	18 months+	Hand-held/Musical	98	74
Sesame Street 2-in-1 Giggle Guitar	Fisher-Price/Mattel	18 months+	Hand-held/Musical	98	68
Buenas Noches™ Dora doll	Fisher-Price/Mattel	2+	Hand-held	97.8	73
Kid Connection Alphabet Learning Center	Wal-Mart Stores, Inc.	2+	Table-top	97.8	74
Power Gear Assault Machine	SRM Entertainment Ltd.	5+	Hand-held	97	93
Electronic Robo Tender	Hilco Corporation	18 months+	Hand-held	96	85
Peek-A-Boom Farm	Wah Hing Toys Development Co.	1+	Table-top	92	84

**"Ear-Friendly Toys"**

Liberator Lights and Sound Military helicopter	Funrise Toy Corp.	3+	Hand-held	88	70
Fly & Learn Globe	Vtech Electronics	3+	Table-top	80	66

All measurements were taken with a calibrated sound level meter, A-weighted scale, fast-response.

According to Occupational Safety and Health Administration (OSHA) guidelines, continued exposure to noise over 85 dBA will eventually harm hearing. For instance, at 100 dB, the risk for potential hearing damage can occur in two hours. The National Institute for Occupational Safety and Health (NIOSH) has even stricter standards: levels at 100 dB can harm hearing in less than 15 minutes.

Until 2004, no regulations regarding the loudness of toys existed in the United States. A new acoustics standard (ASTM F963), adopted and revised in March 2004 by the American Society of Testing and Materials, states that a hand-held, table-top or crib toy cannot exceed 90 dB 25 cm (approx. 10 in.) from the surface of the toy. Compliance with the standard is voluntary.

Unlike with choking hazards and other injuries, there are no injury statistics on toys and hearing loss. That's because it's difficult to track when the damage occurs.

**Summary**

Our research indicates that, while none of the toys SHA tested pose an immediate risk for hearing damage, some toys could pose a risk for hearing loss if played with for a length of time and close to the child's body. Moreover, if the child is in an environment with background noise, such as at a daycare or preschool, the cumulative noise could increase the risk for hearing damage.

These results suggest the need for greater awareness on the part of the consumer (parents, relatives, anyone who purchases toys) to play with and listen to the toys in the store before they buy or give them to a child.