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Health

Now Hear This -- If You Can

Americans are amazingly tolerant of the noise that engulfs them at work and play. They shouldn't be. The din causes millions to lose their hearing, slowly but surely.

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Diane Russ of Evanston, Ill. never stays in the kitchen when the dishwasher is running. She wouldn't think of using power tools without wearing earplugs. And on weekends she keeps her windows closed. "Some mornings you can't walk outside because so many people are using their power mowers," she laments. "It's very noisy out there." Who would dispute it? From the roar of airplanes to the wail of sirens, the blast of stereos to the blare of movie sound tracks, noise is a constant part of American life. But few go to the lengths Russ does to avoid it. Noise is annoying and frustrating -- and accepted.

That tolerant attitude needs to change -- and fast. Increasingly, the racket that surrounds us is being recognized not only as an environmental nuisance but also as a severe health hazard. About 28 million Americans, or 11%, suffer serious hearing loss, and more than a third of the cases result from too much exposure to loud noise. Last week specialists testifying before a House committee documented an alarming new trend: more and more of the victims of noise-induced deafness are adolescents and even younger children. "We need to get people thinking the same way about protecting their ears as they now do about protecting their eyes," says Dr. James Snow Jr., director of the National Institute on Deafness and Other Communication Disorders. "There is so much noise we're exposed to that we tend to become complacent about it."

Much of the clamor is unavoidable because it fills work sites or public places. As many as 10 million Americans are exposed daily to on-the-job noise that could gradually cause some degree of permanent hearing loss. Sixty million Americans endure other noise, including the cacophony of city traffic, that is louder than the level the Federal Government deems safe, and 15 million live close to busy airports or beneath heavily traveled air routes. In some neighborhoods of northern New Jersey, more than 1,000 flights thunder overhead each day.

Much of the punishment, though, is voluntary. "Unfortunately," says Russ, an audiologist at Northwestern University's hearing clinic, "most of us unnecessarily increase the burden of noise we put ourselves under in our private lives." Homeowners endure the steady whine of everything from chain saws and power lawn mowers to vacuum cleaners and dishwashers. And the din of leisure activities can be just as dangerous as the roar from the factory floor. "We have laws to protect the hearing of workers in noisy workplaces," says senior scientist William Clark of the Central Institute for the Deaf in St. Louis. "But there are no laws covering recreational noises." The most hazardous pastimes by far are hunting and target shooting -- enjoyed by nearly 13% of the population. A single crack of gunfire can hit 130 decibels or more, easily exceeding the danger level of 85 decibels.

Children lead some of the most raucous lives of all. Noisy activities range from playing with cap guns to practicing with school bands to riding the school bus. Of greatest concern,

however, is youngsters' devotion to amplified music. Rock concerts can surpass 110 decibels, though they are more of a threat to musicians than to audience members, who endure the punishing pounding for only an hour or two.

The most endangered kids are those who wander around with cassette players blaring music into their skulls for hours. These personal stereos can funnel blasts of 110 decibels or more into the ear. "If you can hear the music from a Walkman someone next to you is wearing, they are damaging their ears," declares Dr. Jerome Goldstein of the American Academy of Otolaryngology. After years of such assaults, notes audiologist Dean Garstecki, head of the hearing-impairment program at Northwestern University, "we've got 21-year-olds walking around with hearing-loss patterns of people 40 years their senior."

The ear is an amazingly flexible organ, but it simply was not designed to withstand the strain of modern living. Hearing naturally deteriorates with advancing years, but not by much. Mabaan tribesmen in the Sudan, for example, who have never been exposed to industrial sounds, maintain their hearing into old age. Sudden intense noise, like a gunshot or dynamite blast, can damage hearing instantly by tearing the tissue in the delicate inner ear. Sustained noise from a jackhammer or disco music is more insidious. The prolonged barrage flattens the tiny hair cells in the inner ear that transmit sound to the nerves. As the hairs wilt, people often feel a fullness or pressure in the ears or a buzzing or ringing, known as tinnitus.

Such symptoms soon subside and the hairs regain their upright posture -- if the ear gets some rest. But unrelenting noisy assaults can eventually cause the hair cells to lose their resilience and die. They do not regenerate, and the result is a gradual loss of hearing.

Those who cannot escape exposure to loud or prolonged noise should wear ear protectors, which can muffle sound by about 35 decibels. National Institute on Deafness director Snow contends that such protective gear should be as commonplace for children as bicycle helmets and infant car seats. His institute and other organizations are launching programs to educate children about hazards to hearing. And musicians who have suffered hearing loss, including Pete Townshend of the Who, are helping spread the message about the price of high-decibel rock. "We teach kids to keep their hands off the hot stove," says Jeff Baxter of the Doobie Brothers. "Let's do the same with their hearing."

Efforts are also beginning to be made to attack unavoidable noise pollution. John Wayne International Airport in Orange County, Calif., boasts the toughest runway noise standards in the country. Observers can stand on the field and carry on conversations in normal tones, even as jets take off and land. Los Angeles International Airport has pledged to be equally quiet by the end of the decade.

Some communities are starting to enforce antinoise ordinances more vigorously. New York City, arguably the noisiest urban center in the country, issued 1,000 citations last year, up from 700 in 1988, primarily targeting air-conditioning equipment, discos, street construction machinery and horn blowing. In Southern California, police in National City and Redondo Beach have been empowered to confiscate big speakers installed in autos to make them what are known as "boom cars." Says officer Michael Harlan of National City: "If we hear a boom car 50 ft. or more away on a public street, we can cite the driver."

Noise is a low priority of the U.S. government. In fact, the Reagan Administration closed the Environmental Protection Agency's noise-control office in 1982 and dropped noise-emission labeling on such items as power tools and lawn mowers. Hearing experts call for a return of

noise-emission information as well as new warning labels on audio equipment that can produce dangerously high decibel levels.

The ultimate hope, says Dr. Patrick Brookhouser of Boys Town National Research Hospital in Omaha, is that people will realize "when you lose hearing you lose, to some degree, one of our most vital attributes, the ability to interact with our environment." In other words, Americans should be making the most noise about noise itself.

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