



Better Safe



WELCOA'S ONLINE BULLETIN FOR YOUR FAMILY'S SAFETY

Noise Pollution

A Different Environmental Problem

Your mother was right when she told you to turn down the volume. Too much noise not only pollutes the environment; it can permanently damage your hearing.

Some 22 million Americans between the ages of 20 and 69 have already permanently damaged their hearing by exposure to loud sounds. And research is finding that an ever-increasing number of young people have the hearing loss typically found in older adults.

It's easier than you think to permanently damage your hearing. The blast of a firecracker at close range can do it in an instant. Repeated exposures to loud engines like motorcycles or long hours spent listening to loud MP3 and other portable music players can erode hearing more slowly.

If you're a construction worker, farmer, factory worker or airline employee, harmful sounds may be a regular part of your job. Harmful noises at home include vacuum cleaners, gas-powered lawn mowers, leaf blowers and shop tools. Noisy recreational activities include target shooting and hunting, snowmobiling, riding go-carts, woodworking and other noisy hobbies. Even some children's toys produce sounds in the danger zone.

How Loud Is Too Loud?

Prolonged exposure to sounds louder than 85 decibels (dB) can cause gradual hearing loss.

A normal conversation is about 60 dB. Many personal stereo systems at maximum level are over 100 dB. Rock concerts and firecrackers can be 140 dB and higher.

**CONTINUED
ON NEXT PAGE**





Better Safe!



WELCOA'S ONLINE BULLETIN FOR YOUR FAMILY'S SAFETY

Noise Pollution

(Continued from previous page)

Protect Your Hearing!

- Know which noises can cause hearing damage.
- Wear earplugs, earmuffs or other protective devices when involved in a loud activity.
- Teach your children to lower the volume on their portable music players and to limit listening time.
- Be alert to hazardous noise in the environment.
- Protect children who are too young to protect themselves.
- Tell family, friends and colleagues about the hazards of noise.
- If you think you have hearing loss, see your doctor.

Noise-induced hearing loss usually happens slowly, with no pain. Right after exposure to noise, you may notice some “ringing” in your ears. You might have trouble hearing people talk. After several hours or even a few days, these symptoms may go away. However, when you are exposed to loud noise repeatedly, you could have hearing loss that lasts forever.

How Does Sound Damage Our Ears?

Exposure to loud sounds can damage or destroy the inner ear's sensory hair cells. Once damaged, the hair cells don't grow back. Scientists once believed that loud noises damage the hair cells by the pure force of the loud sound vibrations. Recent studies, however, have found that exposure to noise triggers the formation of molecules called free radicals that are known to kill off hair cells.

Scientists at the National Institute on Deafness and Other Communication Disorders (NIDCD) have shown that antioxidants such as aspirin and vitamin E, which can protect against damage caused by free radicals, can reduce hearing loss in guinea pigs when given as much as three days after noise exposure. Future studies will explore if this strategy works in humans.

One day, gene transfer may be used to help restore lost hearing. NIDCD-supported researchers transferred a gene involved in the regrowth of hair cells into deaf guinea pigs and restored hearing. This type of therapy, however, is still a long way from human use.

To protect your hearing, practice good hearing health in your everyday life. Turn down the volume on all household noise sources and wear hearing protection when you mow the lawn, vacuum, blow dry your hair or operate power tools. Encourage children to wear hearing protection in noisy environments and take the time to show them how to prevent hearing damage from MP3 and other portable music players. Make hearing health a part of your lifestyle.





Caring For Caregivers



The Hidden Victims of Long-Term Illness

People caring for a sick child, spouse or parent can find the emotional, physical and financial strains overwhelming. Other people thrive in the role of caregiver and feel a sense of well-being and greater meaning in life. Every situation is different, but research can help us better understand the causes of stress for caregivers and how best to help caregivers as they care for others.

The ranks of caregivers in our country are swelling. Americans are living longer, and the population is getting older as the baby boomer generation ages. Medical breakthroughs have also turned once fatal diseases into chronic illnesses that require a great deal of care. More than 50 million people—over 16% of the population—provide care for a chronically ill, disabled or aged family member or friend, according to the National Family Caregivers Association. Many of them have full-time jobs and other responsibilities on top of their caretaking duties.

Understanding The Scope Of The Problem

Researchers are now developing a better understanding of the scope of the problem. One study funded by the National Institute of Nursing Research (NINR) at Oregon Health & Science University, for example, found that many caregivers felt emotionally or physically drained and financially stressed, and two out of three had problems sleeping.

**CONTINUED
ON NEXT PAGE**





DAY IN DAY OUT

WELCOA'S ONLINE BULLETIN FOR YOUR LIFESTYLE

(Continued from previous page)

Dr. Sharon L. Lewis of the University of Texas Health Science Center in San Antonio referred to caregivers in her talk as “hidden victims.” She explained that caregiving affects different people in different ways. Her group’s study of how people respond to their caregiving roles divided people into 8 groups by gender, age and ethnicity. The groups that are most stressed by their caregiving roles, they found, are white adult daughters and Mexican American wives. White male spouses, in contrast, were the least stressed.

Lewis’s group, with funding from NINR and the Department of Veterans Affairs, has developed a multifaceted program to help caregivers called the Stress-Busting Program for Caregivers. Small groups of caregivers meet every week for an hour and a half over eight weeks and focus on topics such as dealing with challenging behaviors, coping skills in changing relationships, grief, loss, depression and positive thinking. At each session, they also learn some type of relaxation therapy.

Caregivers for children with disabilities face many of the same problems as caregivers for adults, and some face very long periods of providing care. Dr. Peter Rosenbaum, co-director of the *CanChild* Centre for Disability Research at McMaster University in Canada, described their study of the families of 468 children with cerebral palsy between the ages of 6 and 16. The amount of stress the caregivers reported

was very high. Almost a third had three or more chronic physical health problems.

“Everything we looked at,” Rosenbaum said, “from allergies to ulcers, was reported significantly more often by the caregivers than by comparable Canadian adults.” He stressed, “We need to make a much broader attempt to help families as well as kids.”

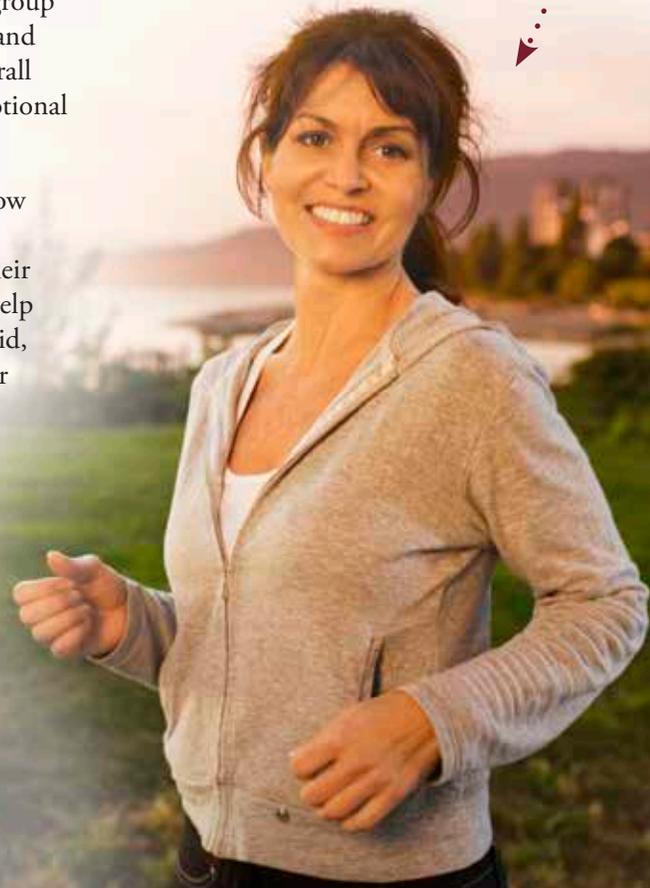
Support For Caregivers Is Critical

Another study by Rosenbaum’s group showed that family functioning and social support affect parents’ overall satisfaction, stress levels and emotional well-being.

He explained that their center now operates with some simple but important principles based on their research. Effective programs to help children and their families, he said, recognize that parents know their children best and want the best for them. They understand that families are different and unique. And they acknowledge that a supportive family and community are important for the whole family, not just the child. To be sure, research is showing how important it is to help caregivers as well as the people they’re caring for.

Self Care For The Caregiver

- Reward yourself with mini-breaks.
- Attack the problem, not the person.
- Don’t be afraid to ask for help. It shows that you are problem-solving.
- Use every tool you can find—local groups, web-based support networks, reading materials and anything else that can help.
- Block out negative thoughts. Think “want to,” not “have to.”
- Your goal is to never say, “I should have” or “I would have.” Make sure you’ll be able to say, “I did it.”
- Exercise.





Aches In Your Legs

Understanding Peripheral Arterial Disease

If you're past age 50, you may have resigned yourself to feeling a few more aches these days. However, if you've had pain or cramping in your legs when you're walking that goes away when you stop, don't shrug it off. It might be an early warning signal of a serious and sometimes-silent disorder called peripheral arterial disease (PAD).

Just like arteries in the heart, those in the lower legs can become clogged with fatty deposits. Imagine your arteries are a complex highway system. Fatty deposits, also known as plaque, are the traffic jams that limit blood flow. Clogged arteries—blood-flow traffic jams—anywhere in the body increase the risk of heart attack and stroke.

How Common Is PAD?

Between 8 million and 12 million people over age 50 have PAD. Many never notice any symptoms. PAD symptoms include heaviness in your legs, awakening at night with pain in your lower legs, and pain or cramping in the legs when you're walking that seems to lessen with rest. A lot of people who have these symptoms don't tell their doctors. They simply accept the discomfort as part of growing older. Another sign of PAD that people may notice but dismiss is a change in the color of their feet.

Who's At Risk?

Those most at risk for PAD are people over age 50, especially African Americans. Smokers and former smokers, and people who have diabetes, high cholesterol or high blood pressure are also at risk. Those who have had vascular disease, heart attack or stroke, or have a family history of those disorders should also be on the lookout for PAD.

Arterial

Related to arteries, the series of tubes that carry blood from the heart throughout the body.

Vascular Disease

A disease of the vascular system, the system of vessels that circulate blood throughout the body.

CONTINUED
ON NEXT PAGE



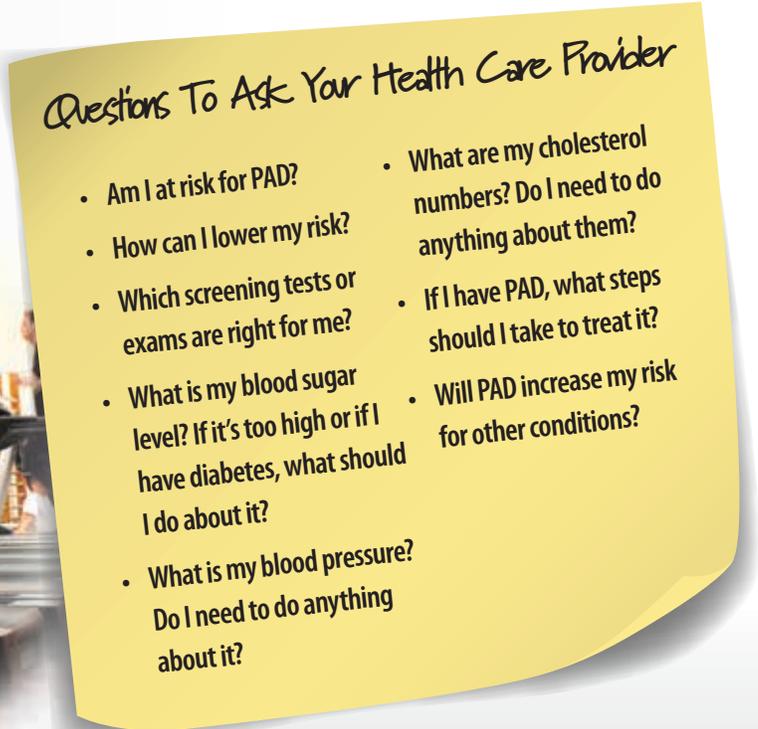
(Continued from previous page)

Diagnosing & Treating PAD

If you're over 50 or otherwise at risk, ask your doctor about being tested for PAD. A simple test called the ankle brachial index (ABI) can identify the problem. The ABI compares the blood pressure in your arm with blood pressure in your legs. Reduced blood flow in the legs could signal artery disease.

Once PAD is detected, your doctor will offer several treatments to help clear out the blockages before they lead to more serious problems. Your doctor may tell you to get more exercise, if you don't have an active lifestyle. Recent results from a study of people with PAD showed that daily physical activity improves survival rates. Your doctor may also recommend changes to your diet and other efforts to lower high cholesterol and high blood pressure. Medications and surgery are also treatment options that can improve blood flow in the vessels.

What's most important is to take those aches seriously and seek help from your doctor.



Questions To Ask Your Health Care Provider

- Am I at risk for PAD?
- How can I lower my risk?
- Which screening tests or exams are right for me?
- What is my blood sugar level? If it's too high or if I have diabetes, what should I do about it?
- What is my blood pressure? Do I need to do anything about it?
- What are my cholesterol numbers? Do I need to do anything about them?
- If I have PAD, what steps should I take to treat it?
- Will PAD increase my risk for other conditions?

Secrets To A **Longer, Healthier Life**

Studying Exceptionally Long-Lived Families

People who live in good health for 100 years and longer aren't just lucky. Researchers have found that those who live an exceptionally long and healthy life often have company... in their very own families. Scientists are now aiming to better understand the genes, lifestyle or other factors that make these people so unique. Hopefully, we can all benefit from their findings.

What Research Tells Us

Recent studies have revealed that, as a group, people who lived to be 100 years or more (centenarians) were healthier at younger ages than their peers. The findings suggest that unique "protective" factors against disease and disability may have been at work throughout their lives, not just at very old ages. If the factors that lead to exceptional survival begin working much earlier in life, and if they could be found, they might point the way toward interventions to lengthen

healthy lives. So what exactly is it that protects these people and contributes to their extraordinary survival?

Genetics may play a role. Studies of very old people and their families in specific populations—such as those in Iceland and Okinawa, and in Ashkenazi Jewish, Mormon and Amish communities—have shown that exceptionally long life runs in families. Other studies show that centenarians' siblings have a mortality risk at any age throughout their adult life of about half that of the general population. Centenarians' children tend to be healthier than their peers, too.

**CONTINUED
ON NEXT PAGE**



(Continued from previous page)

They have lower mortality rates from cancer and heart disease, and fewer age-related diseases such as heart disease, hypertension, diabetes and stroke.

More specific findings support the idea that genes contribute to exceptional survival. For example, one form of a gene called apolipoprotein E seems to be associated with longer life, while another form has been linked to an increased risk of heart disease, stroke and Alzheimer's disease.

Understanding The Secrets To Longevity

While genes likely play a role in exceptional survival, non-genetic factors that tend to run in families, such as lifestyles, can also contribute. For example, a family's eating and exercise habits, smoking habits and other factors have an effect on how long family members live.

The National Institute on Aging (NIA) is funding a variety of studies to better understand the factors that lead to exceptional longevity. A major research effort called the Longevity Consortium was begun by NIA in late 2000. It has brought together leading scientists from

more than 30 institutions to exchange ideas about longevity research and develop new collaborations.

Another study, the Comprehensive Assessment of Long-term Effects of Reducing Intake of Energy (CALERIE), aims to understand the effects of eating fewer calories over time. Several animal studies have shown that restricting calories can extend the average life span of some laboratory animals and delay age-related problems.

Wise Choices

Tips For A Healthy, Long Life

We already know about some things that can help your chances of living a healthy, long life. You're probably already familiar with them from when you were a kid:

- Eat your fruits and vegetables.
- Don't smoke.
- Rest enough.
- Exercise several times a week.
- Monitor your health.
- See your doctor regularly.

