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Dealing with Chronic Pain as You Age

By Fran Kritz

David Lunzer, 58, a small-business owner in Los Angeles, has had chronic neck pain from a slipped disk for a decade. Opioid painkillers were effective, but he was concerned about addiction. Surgery helped somewhat. Now he uses a variety of approaches, including acupuncture, resting when he can, and avoiding things that aggravate his neck such as long car trips without stopping to change positions. “As I get older, and more stiffness sets in, I try to stick to my acupuncture schedule and cater to my neck to help prevent pain,” he says.

Lunzer is one of the 20 percent of adults who deal with chronic pain, according to a recent report from the Centers for Disease Control and Prevention. Physicians generally define chronic pain as pain that lasts more than three to six months. The rate of people affected grows as people age, according to the National Institutes of Health, which found that about 30 percent of people over age 65 suffer from chronic pain.

Untreated, Undertreated

“Chronic pain is one of the most common conditions encountered by healthcare professionals,

particularly among older patients,” says Dr. M. Carrington Reid, an associate professor of medicine at Weill Cornell Medical Center in New York City. A 2011 report by the Institute of Medicine found that chronic pain is often untreated or undertreated in older people because they may not seek help, their doctor isn’t sure how best to treat pain in older patients, or there is a concern that some treatments could exacerbate other problems — for example some strong painkillers can cause constipation.

But Reid and other experts say doctors have a wide array of options to treat chronic pain, and that the need for treatment is especially important as people age because pain can keep them from being active and enjoying their lives.

A study led by Reid and published in 2015 in the *British Medical Journal* found that pain in older adults can cause a host of other problems, including:

- Disability as a result of people who feel pain when walking
- Less activity as people try to avoid anything that might cause or exacerbate pain
- Falls because the pain can make people feel unsteady
- Depression and anxiety, which

New Technique Improves Hearing Within Two Weeks

By Sylvia Booth Hubbard

Can you hear me now? Maybe not if you're one of 48 million Americans who have some degree of hearing loss. And impaired hearing takes a heavy toll on our society, from lost productivity in the workplace to strain on relationships.

The physical losses are great as well. Studies show that nine out of 10 people with dementia have hearing loss, and those with severe loss increase their dementia risk fivefold. In addition, the National Health and Nutrition Examination Survey (NHANES) found that people with even very mild hearing loss tripled their risk of falls — and the odds increased as hearing deteriorated.

Most hearing advice concentrates on avoiding hearing loss, such as turning down the volume on personal listening devices, but offers little help for

restoring hearing once damage has occurred. Fortunately, an innovative system called AudioCardio has the potential to revolutionize the way hearing loss is treated, with the ability to restore loss caused by loud noises and aging. "Our objective is to help people protect and improve their hearing," said Chris Ellis, CEO and co-founder of AudioCardio. "Hearing loss is a tremendous problem," he told *Health Radar*. "Hearing aids are expensive — about \$6,000 — and they often aren't covered by insurance, so many people who need hearing aids don't get them. We want to reach those people."

Personalized Help

AudioCardio is a smartphone app that begins by determining a person's hearing ability, and then uses threshold sound conditioning (TSC) technology created by the company's co-founder Sam Kwak

to create personalized sound signals to stimulate the inner ear.

The cochlea is the spiral cavity in the inner ear that allows us to hear. It contains cells called cilia that translate raw sounds into signals that are sent to the brain. When exposed to loud sounds for too long, or through simple aging, the cilia cells die or become damaged and can't function properly, causing hearing loss.

"AudioCardio stimulates cilia hair cells that are alive, but damaged and not functioning," Ellis says. "They reactivate and generate connections to the cells near them, and create the auditory or neural pathway. By making these connections, sound signals get from outside of your body, through your ear and to the brain — it all has to be connected in order to work."

Ellis' interest in hearing was

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Unexpected Things That Cause Hearing Loss

You probably know that loud noises such as gunshots and jet engines can harm your hearing, but not-so-obvious causes can sneak up on you. They include:

Popping balloons. The bang from a balloon can be louder than a bullet fired from a 12-gauge shotgun, according to a study from Canada's University of Alberta. "It's amazing how loud balloons are," said researcher Dylan Scott. "Nobody would let their child shoot something that loud without hearing protection, but balloons don't cross people's minds."

Smoking. The chemicals in cigarette smoke, including formaldehyde and arsenic, can damage both the conductive mechanisms in the middle ear as well as the

cilia in the inner ear, according to a study from Western Michigan University. In addition, nicotine and carbon monoxide can impair oxygen supply to the ear.

Drugs. Many commonly used drugs, including diuretics, nonsteroidal anti-inflammatory drugs (NSAIDs), heart medications, oral contraceptives, hormone replacement therapy, and some antibiotics and mood-altering drugs, as well as erectile dysfunction drugs, can damage hearing. A study by Oregon Health & Science University found that hearing loss is a side effect in 61 percent of patients who are given platinum-based chemotherapy drugs.

Diabetes. About 40 percent of diabetics experience hearing loss, especially in the high frequencies.

New Approach to Reversing Hearing Loss

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sparked when his grandfather was diagnosed with dementia. “My grandfather had hearing loss but never treated it. He slowly isolated himself, got depressed, and then developed dementia.” When Ellis researched dementia, he realized there was a link with hearing loss.

Fast Results

The AudioCardio app strengthens damaged cilia cells in the ear by determining a person’s hearing ability in each ear and then playing sounds that are just below their level of hearing. The sounds are repeated until the user can hear them. At that point, the app is recalibrated so the sounds are once again barely audible, and the process is repeated. Ellis says that the app can be used for an hour each day, but the user can do other things during the session, such as listen to music or check email.

How much improvement can a person expect? “We say that 70 percent of people who use the app as directed have a minimum change in hearing by 10 decibels within two weeks,” says Ellis. “Some people have improved by 30 decibels — the equivalent of taking someone from severe hearing loss to the low-moderate to mild range. There’s as much as a 40 percent increase.”

A double-blind, randomized controlled trial at Stanford found that AudioCardio’s threshold sound conditioning “significantly” improved hearing. “People are hearing things they haven’t heard

in years,” Ellis explains. “This app could take someone who is on the borderline of needing hearing aids to perhaps not needing them. But AudioCardio can also complement hearing aids, and allow users to turn their hearing aids down.

“AudioCardio is a workout for your brain and ears,” adds Ellis. “It’s strength and conditioning. Athletes strengthen and condition their muscles, but we are strengthening and conditioning your auditory system. Like a physical workout, it takes a bit of dedication and time to see results. You don’t go to the gym on the first day of January and expect to see immediate results.

“Clinical tests of people ages 18 to 80 found it worked across the board, and equally well for males and females.”

Inexpensive Treatment

“I’ve been wearing hearing aids for more than a decade,” says Robert Faulkner, 74. “I had my doubts, but they offered a free trial and I thought, ‘What have I got to lose?’ In a couple of weeks, I was able to hear sounds that I haven’t heard for years, like a clock ticking. And the longer I use the app, the better I can hear. Most important, my understanding of speech is much better.”

Although other methods are being tested to restore hearing, including injecting drugs directly into the eardrum to stimulate cilia cells, AudioCardio is non-invasive, inexpensive, can be done at the user’s convenience, and is always under the user’s control.

Supplements That Aid Hearing

In addition to a healthy diet and regular exercise, specific supplements have been shown to help prevent hearing loss. They include:

Vinpocetine. This compound is derived from the periwinkle plant. “It improves microcirculation within the inner ear and reduces inflammation,” Dr. Russell Blaylock, author of *The Blaylock Wellness Report*, tells *Health Radar*.

Magnesium. This mineral has the ability to both prevent hearing loss and limit damage after exposure to noise or damage to the inner ear.

Ginkgo biloba. Some studies have shown that the herb ginkgo biloba can help repair damage caused by antibiotics.

Zinc. This mineral helps protect cilia cells in the ear, and studies have found that zinc supplements improve hearing in about a third of seniors who have a deficiency.

“Curcumin, quercetin, hesperidin, apigenin, and luteolin should all help as they reduce inflammation and stimulate repair,” said Blaylock.

Best of all, it’s available now. The app comes with a free trial with a monthly subscription of \$14.99 or \$99.99 a year for unlimited access to AudioCardio sound therapy.

“Finally, you can do something to improve your hearing,” says Ellis. “There are no doctor visits. All you need is a smartphone, headphones, and access to the Internet.

“I believe AudioCardio can truly make a difference in people’s lives.” □