



a health risk time bomb

Hearing Loss: Your Guide to the Facts

Based on recent research, learn about the social, psychological, and physical-health impacts of hearing loss — and how digital-hearing solutions fend off these high-risk consequences.

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Foreword

HEARING LOSS IS a national health-care crisis.

The scope is enormous, altering the lives of millions of Americans — and getting bigger every day.

The loss of hearing — the loss of effective communication — is not the only consequence. Others are crippling and turn lives upside down.

Every day at the Sertoma Speech & Hearing Center, I witness the negative consequences of hearing loss. But I also see the incredible benefits of modern, digital-hearing instruments on our patients.

Digital technology changes lives (some would say, saves lives) —and is the reason we prepared this report. Hearing loss profoundly alters your social life, cognitive performance, and physical well-being.

The facts we present in this report are from researchers at John Hopkins, Columbia, Harvard, Vanderbilt, and other top medical centers. These facts can be intimidating, but you need to know them so you can act if needed.

We hope this report helps you preserve your health and that of your family, friends, and colleagues.

—Michelle Morrison, Ed.D, Executive Director
Sertoma Speech & Hearing Centers

Introduction

HOW BIG IS the hearing-loss problem in the United States?

Large and growing

Fact: Almost two-thirds of Americans age 70 and older experience hearing loss. Add to this another fact: 10,000 Baby Boomers turn 65 every day in this country. This phenomenon started on 1 January 2011 and continues every single day until 2030. You get the picture.

But it's not only about the numbers

The health consequences of hearing loss are devastating. When you consider all the health problems associated with hearing loss — falls, cognitive decline, dementia, Alzheimer's, diabetes, and poorer physical functioning — the impact is vast. We'll examine these and other impacts later in this report.



Research confirms the challenge

Research by Frank Lin, M.D., Ph.D., and his team at Johns Hopkins University School of Medicine and the Johns Hopkins Center of Aging and Health reports the following:

- 1 in 5 Americans has hearing loss.
- Older or male subjects were more likely to have hearing loss and more prone to a severe loss compared to younger or female subjects.
- Being black appeared to be protective. For example, while about 64% of white subjects had hearing loss, only 43% of black subjects did.

The conclusion

- About 30 million Americans, or 12.7% of the population, have hearing loss in both ears.
- This number jumps to about 48 million, or 20.3%, for people who have hearing loss in at least one ear.
- The loss of hearing doubles with every age decade

No exaggeration, the impacts are enormous

The challenges of hearing loss are extensive, reaching far beyond the immediate struggle of communication. Effective communication is vital, of course, because we are social creatures.

Now, however, we know hearing impairment also diminishes our mental and physical well-being. It can, for example, destroy the very sense of who we are by robbing us of our memory. No doubt, future research will discover other ways that hearing loss affects our lives.

► SOURCE: *1 in 5 Americans has hearing loss*

www.eurekalert.org/pub_releases/2011-11/jhmi-oif110911.php

Types of Hearing Loss

HEARING LOSS CAN develop at any age and is classified in the following three ways:

Sensorineural

Damage to the inner ear or the hearing nerve itself produces a sensorineural hearing loss. The most common type of sensorineural damage is when hair cells within the cochlea break (they do not grow back, the loss is permanent).

Sensorineural loss is the most common. High-noise environments, aging, traumatic injury, disease, drugs toxic to the ear, and genetic background are sources of sensorineural hearing loss. Modern digital-hearing instruments that fine-tune the sound to individual needs restore sensorineural loss for many people.

One type of sensorineural hearing loss is sudden. If you experience an abrupt loss of hearing, see an otologist right away. Delay reduces the likelihood of effective treatment.

Conductive

A loss of hearing because of problems in the outer or middle ear — the conduit through which sound waves must travel to reach the inner ear — is conductive hearing loss.

The conductive loss stems from ear-wax buildup, structural abnormality, a foreign object wedged in the ear canal, fluid in the middle ear, or a damaged eardrum. Often, medicine or surgery are effective treatments.

Mixed

A combination of sensorineural and conductive loss classifies as mixed hearing loss. An example is an adult with a wax buildup and a loss of hair cells from occupational high-noise exposure.

In this case, the accumulated wax blocks sound from traveling to the inner ear (an office visit can eliminate this problem). And hearing instruments can restore hearing caused by the loss of hair cells.

Causes of Hearing Loss

LET'S SURVEY the top eight.

Natural loss of hearing with aging

Called presbycusis, this type of loss is sensorineural. As we've learned, two-thirds of Americans over 70 have it but many more who are younger also experience presbycusis.

Persistent loud environments

What do sporting events, rock concerts, gas-powered lawnmowers, and high-noise work environments have in common? They all damage hair cells, a key element of hearing. Hair cells do not regenerate, however, so damaging them creates a permanent hearing loss. Acoustic trauma is another term for noise-induced hearing loss.

Heredity

Hereditary hearing loss accounts for 50% to 60% of hearing loss in babies. Genes and the environment can also interact in ways that cause hearing loss. Some medicines, for instance, can cause hearing loss, but this happens only in people with a particular gene mutation.

Disease

Diseases such as otosclerosis (which affects the middle ear) and Ménière's disease (which affects the inner ear) cause hearing loss. In the case of Ménière's disease, the hearing loss becomes permanent eventually.

Ototoxic drugs

Ototoxic drugs (e.g., streptomycin, neomycin, and others) and some chemotherapy drugs (e.g., cisplatin, carboplatin, and others) can cause hearing loss. Dr. Lin at John Hopkins believes the estimates of hearing loss from chemotherapy are grossly underestimated.

Radiation for head-and-neck cancer

This type of cancer, the sixth most common type worldwide, can cause hearing loss. The November 2010 issue of *Archives of Otolaryngology–Head & Neck Surgery* reported that some patients with head-and-neck cancer lost hearing because of radiation. When the hearing loss was untreated, these patients were more likely to feel lonely, depressed, worried, anxious, or paranoid and enjoy fewer social activities. They were also less able to process information about their surroundings.

► SOURCE: *Hearing loss common following radiation therapy for head and neck cancer*

www.eurekalert.org/pub_releases/2010-11/jaaj-hlc111110.php

Diabetes

The association of diabetes with hearing loss is substantial. According to a study funded by the National Institutes of Health, hearing loss is about twice as common in adults with diabetes compared to nondiabetics. Diabetes may lead to hearing loss by damaging the nerves and blood vessels of the inner ear. Autopsy studies of diabetic patients confirm this type of damage.

► SOURCE: *Hearing loss is common in people with diabetes*

www.eurekalert.org/pub_releases/2008-06/niod-hli061108.php

Traumatic brain injury (TBI)

As you can imagine, this is a significant challenge for our veterans.

► To learn more about hearing loss in adults, visit the *American Speech-Language Hearing Association*

www.asha.org/public/hearing/disorders/causes_adults.htm

Now let's turn our attention to the signs and symptoms of hearing loss.

Signs and Symptoms of Hearing Loss

TRY THIS: Ask yourself the following 11 questions developed by the National Institutes of Health. If you answer "Yes" to three or more items, you could have a hearing loss and should schedule a hearing check-up.

Yes	No	Questions to Ask Yourself
		Do I have a problem hearing on the telephone?
		Do I have trouble hearing when there is noise in the background?
		Is it hard for me to follow a conversation when two or more people talk at once?
		Do I have to strain to understand a conversation?
		Do many people I talk to seem to mumble (or not speak clearly)?
		Do I misunderstand what others are saying and respond inappropriately?
		Do I often ask people to repeat themselves?
		Do I have trouble understanding the speech of women and children?
		Do people complain that I turn the TV volume up too high?
		Do I hear a ringing, roaring, or hissing sound a lot?
		Do some sounds seem too loud?

► SOURCE: *National Institutes of Health*
www.nidcd.nih.gov/health/hearing/pages/older.aspx

The Consequences of Hearing Loss

DIFFICULT COMMUNICATION, changes in self-perception, and less personal safety affect everyone with hearing loss.

The struggle to be in life's conversation

Losing hearing means a lot more emotional and cognitive effort to communicate with family, friends, and new acquaintances. It's trying for everyone in the immediate family and extended social network. We treat loved ones with hearing loss differently. Our interactions are shorter and less frequent.

Life changes with hearing loss. You can be sure of this. Unfortunately for



some, it's only after
a loss that they

Communication holds us together.

realize how important and rewarding hearing is to experiencing all life's moments to the fullest.

A professional challenge

We encounter the same challenges and frustrations with professional colleagues that we have with family and friends. But the consequences here can be financial, and the risk to personal safety much higher, especially working in dynamic, industrial environments. Professional-skills development is more challenging, too, risking advancement.

We perceive ourselves differently

Our sense of who we are changes. People who have lost hearing lose their confidence and often feel much older as if aging suddenly hit them.

With untreated hearing loss, the quality of life deteriorates. Untreated hearing loss can lead to social isolation, a substantial negative stress on human beings. Isolation creates intense feelings of loneliness, leading to depression, excessive worry, persistent anxiety, or even paranoia.

Feeling extreme loneliness can increase an older person's chances of premature death by 14%, according to the research of John Cacioppo, Ph.D., the Tiffany and Margaret Blake Distinguished Service Professor at the University of Chicago and Director of the University of Chicago Center for Cognitive and Social Neuroscience.

Safety

Our safety is affected too. For example, as pedestrians, a loss of hearing jeopardizes our ability to negotiate busy, crowded spaces skillfully. The challenge is more significant because so much of the auditory information we rely on to navigate and warn us of hazards is missing.

Likewise, driving with hearing loss is more challenging. We're more isolated, less tuned in to the sounds of the road and our vehicle.

Now let's review some other significant consequences of hearing loss, some that are devastating.

Other Effects of Hearing Loss on Well-Being

OVER THE LAST decade, there's been a significant increase in research on hearing loss and its ramifications — one reason for this: Baby Boomers.

There are 76 million American Baby Boomers (people born between 1946 and 1964). The oldest members began celebrating their 65th birthday on 1 January 2011. At the start of 2011 and continuing to the end of 2030, 10,000 baby boomers turn 65 every day.

The aging of this cohort of Americans — 26% of the total US population is Baby Boomers — increases demand for health care and treatment of hearing loss.

According to the World Health Organization, adult-onset hearing loss is the sixth most common disease burden in high-income countries.

Now let's take a look at some other consequences and health-related associations of hearing loss, namely

- Cognitive decline, dementia, and Alzheimer's disease
- Falling
- Diabetes
- Pain-relieving medications
- Obesity
- Hospitalizations

Cognitive decline, dementia, and Alzheimer's disease

Cognitive decline, dementia, and Alzheimer's disease

Research at Johns Hopkins and the National Institute on Aging suggests older Americans with hearing loss are significantly more likely to develop dementia than those who retain their hearing.

The findings offer a starting point for interventions — as simple as digital hearing instruments — to delay or prevent dementia.

Research summary

- People with mild, moderate, and severe hearing loss had twofold, threefold, and fivefold, respectively, the risk of developing dementia.
- In people 60 and older, more than 36.4% of the risk of dementia was accounted for by hearing loss.
- For Alzheimer's disease, the risk increases the following way: for every 10 decibels of hearing loss, the additional risk increased by 20%. In other words, *a mild loss of hearing* has a significant impact on risk.
- After the study accounted for other factors associated with the risk of dementia — diabetes, high blood pressure, age, sex, and race — a strong connection remained between hearing loss and dementia.
- The study concluded that hearing loss in older adults may be preventable and addressed with digital hearing aids.
- In another study, MRI evidence confirmed that the brains of people with hearing loss atrophied faster than those with normal hearing.

Dr. Lin concluded, "If you want to address hearing loss well, you want to do it sooner rather than later. If hearing loss is potentially contributing to these differences we're seeing on MRI, you want to treat it before these brain structural changes take place."

► SOURCES AND RESOURCES

- *Hearing loss and dementia linked in study*
www.eurekalert.org/pub_releases/2011-02/jhmi-hla021511.php
- *Hearing loss accelerates brain function decline in older adults*
www.eurekalert.org/pub_releases/2013-01/jhm-hla011713.php
- Hearing loss linked to accelerated brain tissue loss
http://www.eurekalert.org/pub_releases/2014-01/jhm-hll012214.php
- Frank R. Lin, M.D. Ph.D., www.linresearch.org
- *Baltimore Longitudinal Study on Aging*, www.blsa.nih.gov

Falling

Further research at Johns Hopkins indicates hearing loss is a risk factor for another huge (and growing) public health problem: falls.

Research summary

- A 25-decibel hearing loss — a mild loss of hearing — triples the risk of falling.
- The risk increased with every additional 10-decibels of hearing loss, which increased the chances of falling by 1.4 times.
- After the researchers accounted for other factors linked with falling — age, sex, race, cardiovascular disease, and vestibular function — this finding still held.
- When participants with moderate to severe hearing loss were excluded from the analysis, the results did not change.

► SOURCE: *Hearing loss linked to 3-fold risk of falling*
www.eurekalert.org/pub_releases/2012-02/jhmi-hll022312.php

Hearing loss and diabetes

According to a new study funded by the National Institutes of Health, hearing loss is about twice as common in adults with diabetes compared to those who do not have the disease. Hearing loss is an under-recognized complication of diabetes.

Research summary

- People with diabetes should get their hearing tested. "Our study found a strong and consistent link between hearing impairment and diabetes using a number of different outcomes," Dr. Cowie observed.
- Adults with pre-diabetes (blood glucose higher than normal but not high enough for a diabetes diagnosis) had a 30% higher rate of hearing loss than those with regular blood sugar tested after an overnight fast.
- Diabetes may lead to hearing loss by damaging nerves and circulation of the inner ear. Autopsies of diabetes patients confirm such damage.

► SOURCE: *Hearing loss is common in people with diabetes*
www.eurekalert.org/pub_releases/2008-06/niod-hli061108.php

Pain-relieving medications increase risk

It's likely that analgesics damage your ears. A study at Brigham and Women's Hospital revealed that women who took ibuprofen or acetaminophen two or more days per week had an increased risk of hearing loss.

Research summary

- The more often women used these medications, the higher their risk for hearing loss.
- Women younger than 50 years of age experienced more significant hearing loss from ibuprofen and acetaminophen. This was especially true for women who took ibuprofen six or more days per week.
- There was no association between aspirin use and hearing loss.

► SOURCE: *Popular pain-relieving medicines linked to hearing loss in women* www.eurekalert.org/pub_releases/2012-09/bawh-pp091212.php

Obesity (women and adolescents)

Researchers uncovered a relationship between high, body-mass index values and the risk of hearing loss. They found a similar finding with larger waist circumferences. The study also discovered that women doing higher levels of physical activity had a lower risk of hearing loss.

Research summary

- For women with waist circumferences of 31.5-34.6 inches, the relative risk for hearing loss was 11% higher when compared to women with waist circumferences less than 28 inches.
- For women with waist circumferences greater than 34.6 inches, the relative risk was 27% higher when compared with women with waist



circumferences less than 28 inches.

Hear life to the fullest.

- The most physically active women showed a 17% lower risk of hearing loss. Walking two hours or more per week reduced risk by 15%.

► SOURCES:

- *Obesity associated with higher risk of hearing loss in women*
www.eurekalert.org/pub_releases/2013-11/bawh-oaw112513.php

- *Obesity associated with hearing loss in adolescents*
www.eurekalert.org/pub_releases/2013-06/cumc-oaw061713.php

Greater hospitalizations and overall poor health

We've learned that hearing loss is a chronic condition affecting two of every three adults aged 70 years or older in the United States. Confirming this general observation, Dane J. Genther, M.D., of Johns Hopkins University School of Medicine and colleagues investigated the association of hearing loss with hospitalization and the burden of disease in a nationally representative study of adults 70 years of age or older.

Research summary

People with mild hearing loss compared to those with normal hearing are more likely to have

- A history for cardiovascular risk factors.
- A history of hospitalization in the past year (23.8% vs 18.7%).
- More hospitalizations per year (1.5 compared to 1.2).
- Overall, mild hearing loss was linked to any hospitalization and number of them.
- More than 10 days of self-reported poor-physical health.
- More than 10 days of self-reported poor-mental health.

► SOURCE: *Hearing loss associated with hospitalization, poorer self-reported health*, www.eurekalert.org/pub_releases/2013-06/tjnj-hla060613.php

Solutions: Digital Hearing Aids

FOR THE VAST majority of people with sensorineural hearing loss, digital hearing instruments are an effective treatment. Compared to analog hearing aids (which only amplify sound, including background noise) and early versions of digital-hearing aids, digital hearing aids today are far superior. Here are the top five reasons.

1. Clarity

Modern digital-sound technology is substantially better at capturing sound and conveying it to your ears. What you hear is clear and sharp, not vague or mumbled.

2. Noise control

Background noise used to be a problem with amplified hearing. But today, digital hearing technology cleans the sound of busy ambient noise, filtering out annoying distractions before it gets to your ears. In other words, in a bustling space like a restaurant, you can now make out the voices in your group without interference.

3. Fidelity

Another significant advantage is the improvement in the fidelity of sound. Fidelity describes how authentic the sound you hear is compared to the source. For example, you will hear a loved one's voice with the character of his or her voice accurately preserved.

4. Responsive

Now, audiologists can fine-tune digital hearing instruments to respond to their patients' hearing loss. Audiologists call this "fitting" hearing aids. Like custom-made clothing, digital technology tailors to individual needs with great precision.

5. Connectivity to other electronics

With Bluetooth technology, you can hear your calls through your hearing aids. Some models even allow you to adjust the setting of your hearing

aids with your cell phone. You can also stream audio from an MP3 player, computer, or TV for a much better audio experience.

Benefits from treating hearing loss

Digital hearing instruments can put people back in the conversation of life. They enable people to once again to

- Hear the full soundtrack of life.
- Communicate with family, friends, and colleagues with ease.
- Walk, run, hike, cycle, and drive with greater safety, awareness, and confidence.
- Open doors to a fuller life — enjoy a more optimistic outlook and better physical health.

Treat hearing loss, and you will benefit

Today, you can't make a valid case for not treating hearing loss. This is especially true when you know the far-reaching effects — a mild loss is all you need to double your risk dementia. Based on Lin's research at John Hopkins, he recommends using hearing instruments to help avert cognitive decline and prevent needless falls.

If you have an untreated loss of hearing or suspect one, get professional help by calling 708-599-9500 and scheduling an appointment. Delaying treatment risks permanent changes in brain structures and perilous consequences to your mental and physical health.

Why Choose Us?

1. Trust

We are an efficient, modern healthcare organization that earns its way. But as a 501 (c)(3), we are structured to concentrate on you, our mission since 1978.

When you choose Sertoma Speech & Hearing Centers, the money you invest in professional services is recycled directly into our operations. Not a single penny goes to sales commissions, sales contests, or bonuses.

The same goes for gifts of money, grants, and other sources of income. We invest in advanced training, new technologies, and help the less fortunate receive the professional services they need to live productive, satisfying lives.

2. Clinical Skill

If you're shopping for speech or hearing services, be sure to compare our clinical team's credentials and experience with those of other candidates.

For example, in Illinois, you do not need to be an audiologist to dispense hearing aids. But only audiologists have the clinical skills to fit and fine-tune hearing aids. The same is true for diagnostic services: Only audiologists have the training and clinical experience to perform and interpret the results of screenings and hearing evaluations.

Many hearing-aid franchises employ an audiologist who travels from store to store. You will only see them once, probably, the rest of the time, a technician.

Sertoma Speech & Hearing Centers does not employ technicians or hearing-aid dispensers. When you visit one of our offices, you will always see your audiologist or speech-language pathologist.

3. Choice of Hearing Aid Brands



Because we partner with the top digital, hearing-instrument designers we offer you choice.

Why is choice important? It ensures that you get the right hearing instrument for your hearing challenges.

In comparison, we're not a manufacturer's hearing-aid franchise that offers only one brand, substantially risking that you'll get the precise hearing technology you need. The sales pitch may sound good, but the fact is no single brand of hearing aids provides a universal solution. Don't be fooled. Your choice of hearing-aid brands is vital.

We also partner with the finest suppliers of earmolds (Westone, Microsonic, Etymotic) and other essential technologies, ensuring your comfort and sustained hearing performance.

4. No deceptive Sales or Pricing

We don't run advertisements announcing, "Wanted: 30 people with hearing loss to evaluate new digital hearing aids!" If you are in your 60s, you get these come-ons every week in the mail.

We take another approach: We respect you. You're welcome to try our hearing-aid brands and models any time you want.

You'll never experience bate-and-switch with us, a sales technique that has sullied the reputation of the for-profit hearing-aid franchises.

If you have a hearing loss that needs treating (not all do), your Sertoma Speech & Hearing Centers' audiologist will discuss all your treatment options with you to find the best solution that fits your budget.

5. Value

We offer you value unmatched by competitors.

- Early, in-depth consultation so we get to know each other.
- Team of audiologists and speech-language pathologists.
- Clinical diagnosis and discussion of all treatment options.
- Counseling and support of individuals and families.
- Technical services for hearing-aid fitting, performance fine-tuning, on-site repairs.
- Wide choice of digital-hearing brands and models to solve your challenges.
- 45-day trial period of all hearing aids
- Access to your professional clinician when you need it.
- Product-and-service pricing to fit your budget.

This combination of benefits defines the value we offer every day to all our patients, with no exceptions.

Advocate

Please help us reach others

Now that you know the dangerous consequences of hearing loss — and the benefits of digital hearing technology — we hope you're motivated to tell your family, friends, and colleagues.

We make it easy

Let *Hearing Loss: Your Guide to the Facts* tell the story for you. Forward a copy to them or send your family, friends, and colleagues a link to our website, where they can download a copy. Once they're informed, we're confident they'll spread the word too.

Another way you can lend a hand

If you would like a professional from the Sertoma Speech & Hearing Center to speak to your group, club, church, or professional organization, please contact me. Let's set up a presentation at your location. There's no charge, part of our nonprofit mission.

We're counting on you

You are essential to helping your family, friends, and colleagues learn about the effects of hearing loss. With you showing the way, more people will live healthier lives by avoiding the tragic health consequences of hearing impairment.

—Michelle Morrison, Ed.D, Executive Director
mmorrison@sertomacenter.org

Resources

To learn about hearing screenings

[Visit our website](#)

To schedule a free, hearing screening

Call 708-599-9500

For directions to our two office locations

- [Crest Hill IL](#)
- [Palos Hills IL](#)

To learn more about our fundraising initiatives

- [Email Dr. Michelle Morrison](#) or call Michelle at 708-599-9500.



References

1 in 5 Americans has hearing loss. Retrieved March 1, 2014, from http://www.eurekalert.org/pub_releases/2011-11/jhmi-oif110911.php

Baltimore Longitudinal Study of Aging I. Retrieved March 1, 2014, from <http://www.blsa.nih.gov>

Causes of Hearing Loss in Adults. Retrieved March 5, 2014, from http://www.asha.org/public/hearing/disorders/causes_adults.htm

Frank R. Lin, MD PhD. Retrieved March 1, 2013, from <http://www.linresearch.org>

Hearing Loss and Older Adults. Retrieved March 8, 2013, from <http://www.nidcd.nih.gov/health/hearing/pages/older.aspx>

Hearing loss accelerates brain function decline in older adults. Retrieved February 8, 2013, from http://www.eurekalert.org/pub_releases/2013-01/jhm-hla011713.php

Hearing loss and dementia linked in study. Retrieved February 8, 2013, from http://www.eurekalert.org/pub_releases/2011-02/jhmi-hla021511.php

Hearing loss associated with hospitalization, poorer self-reported health. Retrieved February 8, 2013, from http://www.eurekalert.org/pub_releases/2013-06/tjnj-hla060613.php

Hearing loss common following radiation therapy for head and neck cancer. Retrieved February 9, 2013, from http://www.eurekalert.org/pub_releases/2010-11/jaaj-hlc111110.php

Hearing loss is common in people with diabetes. Retrieved April 21, 2014, from http://www.eurekalert.org/pub_releases/2008-06/niod-hli061108.php

Hearing loss linked to 3-fold risk of falling. Retrieved March 1, 2013, from http://www.eurekalert.org/pub_releases/2012-02/jhmi-hll022312.php

Hearing loss linked to accelerated brain tissue loss. Retrieved January 23, 2014, from http://www.eurekalert.org/pub_releases/2014-01/jhm-hll012214.php

Loneliness is a major health risk for older adults. Retrieved February 18, 2014, from http://www.eurekaalert.org/pub_releases/2014-02/uoc-lia021214.php

Obesity associated with hearing loss in adolescents. Retrieved April 16, 2013, from http://www.eurekaalert.org/pub_releases/2013-06/cumc-oaw061713.php

Obesity associated with higher risk of hearing loss in women. Retrieved April 16, 2013, from http://www.eurekaalert.org/pub_releases/2013-11/bawh-oaw112513.php

Popular pain-relieving medicines linked to hearing loss in women. Retrieved April 16, 2013, from http://www.eurekaalert.org/pub_releases/2012-09/bawh-pp091212.php

