

Healthy People 2020: NIDCD Efforts to Prevent, Diagnose, and Treat Communication Disorders

James F. Battey, Jr., M.D., Ph.D.

Director, National Institute on Deafness
and Other Communication Disorders, NIH

February 22, 2018



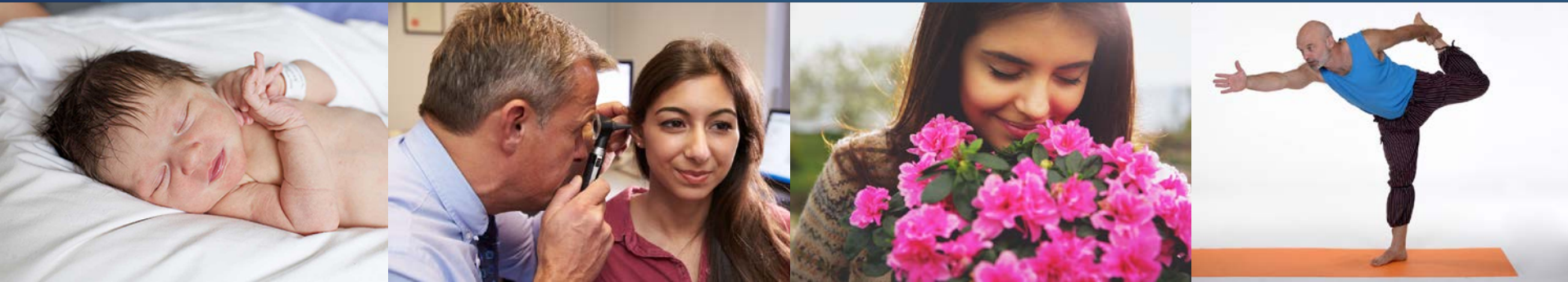
Office of Disease Prevention
and Health Promotion



National Institute on
Deafness and Other
Communication Disorders

The NIDCD's Mission

Healthy People
2020



To support research and research training to prevent, detect, diagnose, and treat conditions in **hearing** and **balance**, **taste** and **smell**, and **voice**, **speech**, and **language**.

We seek to improve the lives of **more than 65 million people** in the United States who have a communication disorder.



ODPHP

Office of Disease Prevention
and Health Promotion



National Institute on
Deafness and Other
Communication Disorders

Objectives 1.1, 1.2, 1.3

Newborn Hearing Screening

- Before 1993, fewer than 1 in 10 newborns in the U.S. were screened for hearing loss.
- In 2000, the NIDCD supported a multicenter study that established the necessary technologies to screen newborns for hearing loss. These noninvasive tests are still used today.
- **Today**, about 90% of infants are screened for hearing loss during the first month of life and 98% during their first year.



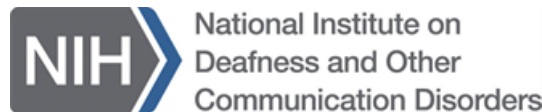
NOTE: https://www.cdc.gov/ncbddd/hearingloss/2014-data/2014_ehdi_hsfh_summary_h.pdf [PDF - 437 KB]

Objectives 1.1, 1.2, 1.3 Newborn Hearing Screening

Healthy People
2020

New Law Strengthens Early Hearing Screening Program

- October 2017 – President Trump signed the Early Hearing Detection and Intervention Act.
- It reauthorizes the NIH, the CDC, and HRSA to continue a long-standing partnership to coordinate and advance a national program for the early identification and diagnosis of hearing loss and intervention services for newborns, infants, and young children.



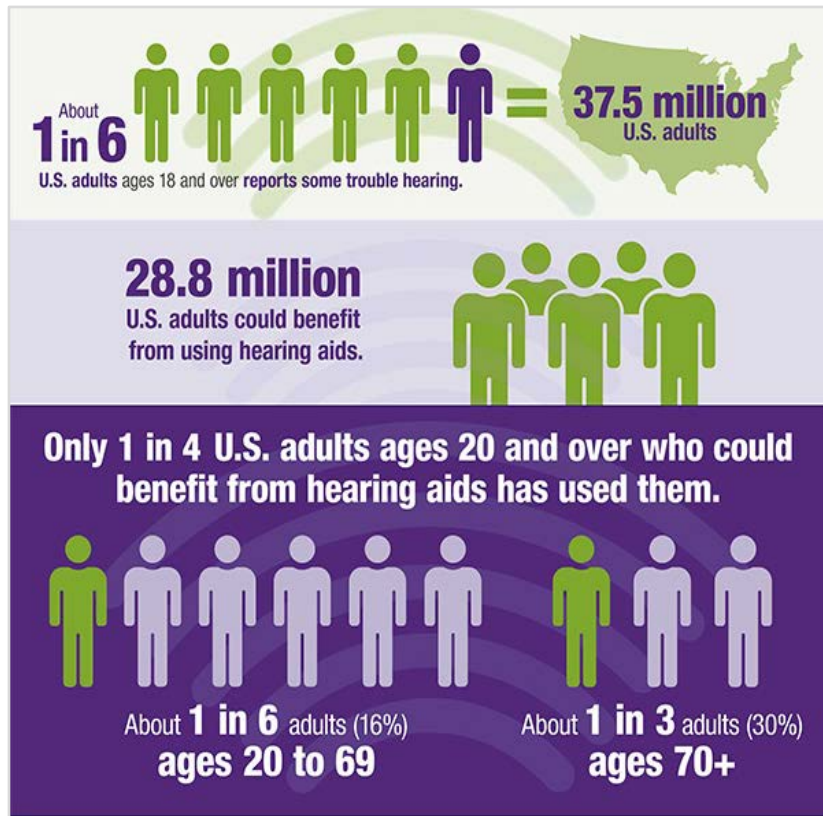
Office of Disease Prevention
and Health Promotion



Objectives 3.1 and 3.3

Hearing Aid Use in Adults

Low Use of Hearing Aids



- 2009 – The NIDCD began supporting research on accessible and affordable hearing health care.
- Two reports stress the need for improving hearing health care access and affordability:
 - October 2015 – President’s Council of Advisors on Science and Technology
 - June 2016 – National Academies of Sciences, Engineering, and Medicine
- August 2017 – President Trump signed law authorizing the FDA to develop guidelines for a class of over-the-counter hearing aids.

NOTE: <https://www.nidcd.nih.gov/shareable-images/infographic-hearing-loss-and-hearing-aid-use>

Objective 7

Noise-Induced Hearing Loss in Adolescents

Healthy People
2020

Campaign to Prevent Hearing Loss

- The NIDCD's *It's a Noisy Planet. Protect Their Hearing.*® public education campaign is aimed at preteens (children ages 8 to 12), their parents, and other educators on the causes and prevention of NIHL.
- Launched in 2008, the campaign has reached about 6 million people.
- About 827,000 materials in English and Spanish have been distributed.
- Since 2010, about 20,000 students in the Washington, DC, area have been reached through school presentations.

○ <https://www.noisyplanet.nidcd.nih.gov>



ODPHP

Office of Disease Prevention
and Health Promotion



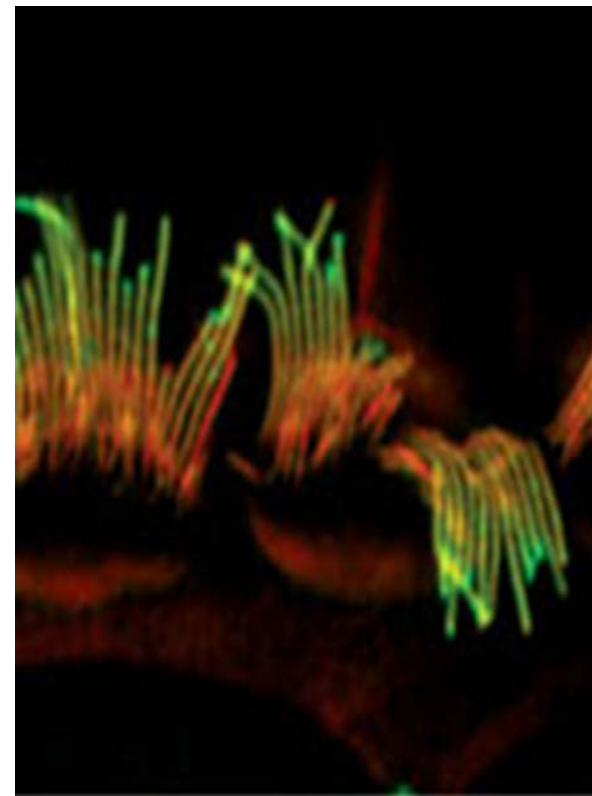
National Institute on
Deafness and Other
Communication Disorders

Objective 8

Noise-Induced Hearing Loss (NIHL) in Adults

Healthy People
2020

- As many as 24% of American adults under age 70 may have hearing loss due to noise exposure.
- The NIDCD's research on NIHL includes:
 - Identifying gene mutations that make individuals more susceptible to NIHL.
 - Studying cellular mechanisms that lead to noise-induced hearing damage.
 - Understanding ways that the ear protects itself from noise damage.
 - Developing molecules/drugs that can prevent or treat noise-induced hearing damage.



Noise-damaged hair cells of the inner ear.

NOTE: <https://www.nidcd.nih.gov/health/noise-induced-hearing-loss>

Objective 9.2

Tinnitus

- Approximately 10% of U.S. adults has had tinnitus lasting at least 5 minutes in the past year.
- NIH-supported clinical trials of treatments for tinnitus:
 - A study of a device to stimulate the vagus nerve to rewire brain connections
 - Brain stimulation studies



Setup pairing Vagus Nerve Stimulation (VNS) with tones. The inset shows the electrode lead wrapped around the vagus nerve. A pulse generator is implanted under the chest wall. *Image courtesy of MicroTransponder, Inc.*

NOTE: <https://www.nidcd.nih.gov/health/statistics/quick-statistics-hearing>

Objective 15.1

Balance and Dizziness

Healthy People
2020

- About 15% of American adults (35 million) reported having a balance or dizziness problem during the past year.
- The NIDCD is supporting a clinical trial to develop tools that can help hospital emergency room physicians better diagnose balance problems.



NOTE: <https://apha.confex.com/apha/2017/meetingapp.cgi/Paper/384250>.



ODPHP

Office of Disease Prevention
and Health Promotion



National Institute on
Deafness and Other
Communication Disorders

Objective 16

Chemosensory (Taste and Smell) Disorders

Healthy People
2020

- Roughly 12% (13 million) of Americans aged 40 or older had an impaired sense of smell. As the population ages, more people will likely be affected.
- Effective, evidence-based ways to prevent or treat taste and smell disorders have not been developed. More clinical research on these disorders is needed.
- To address this need, the NIDCD is dedicated to building a critical mass of clinical researchers to conduct patient-oriented studies and develop treatments for taste and smell problems.



NOTES: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5033684/>



ODPHP

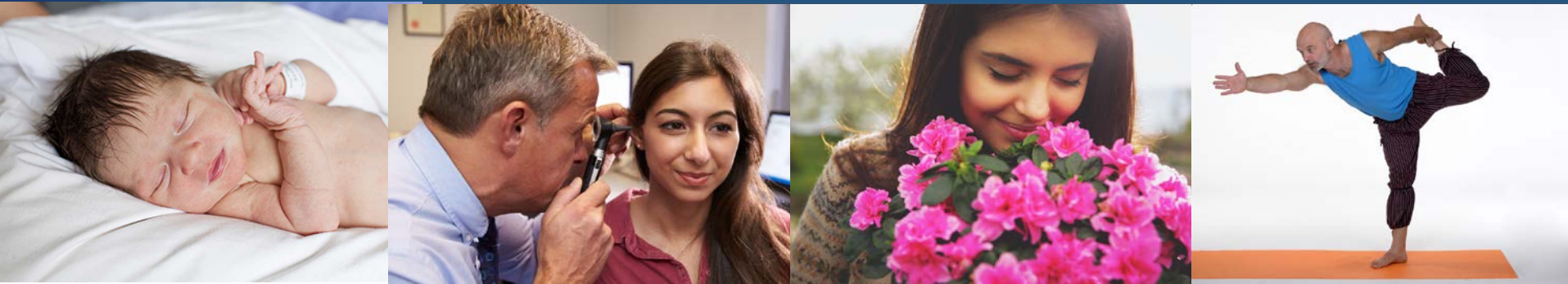
Office of Disease Prevention
and Health Promotion



National Institute on
Deafness and Other
Communication Disorders

Connect With the NIDCD

Healthy People
2020



The NIDCD would like to thank NCHS.



Web: <https://www.nidcd.nih.gov>



Twitter: <https://twitter.com/nidcd>



Facebook: <https://www.facebook.com/NoisyPlanet>

Content Syndication: <https://www.nidcd.nih.gov/content-syndication>

NIDCD Information Clearinghouse:

- Voice: (800) 241-1044
- Email: nidcdinfo@nidcd.nih.gov



ODPHP

Office of Disease Prevention
and Health Promotion



National Institute on
Deafness and Other
Communication Disorders