

Hearing Loss



**CODY BUCHANAN, DO
NEUROTOLOGY FELLOW
SWEDISH NEUROSCIENCE INSTITUTE**



Prevalence of Hearing Loss



	Prevalence of Hearing Loss ^a > 25dB (Bilateral) % (95% CI) ^b						Prevalence of Hearing Loss ^a > 25dB (Bilateral & Unilateral) % (95% CI) ^b		
	Sex		Race/Ethnicity ^c			Total		Total	
Age, years	Female	Male	White	Black	Hispanic	Overall Prevalence	Number with Hearing Loss, millions	Overall Prevalence	Number with Hearing Loss, millions
12–19	0.42 (0–0.91)	0.20 (0–0.41)	0.26 (0–0.66)	0.48 (0.11–0.85)	0.43 (0.04–0.82)	0.31 (0.04–0.57)	0.10	2.3 (1.5–3.1)	0.76
20–29	0.35 (0–0.79)	0.48 (0–1.4)	0.43 (0–1.3)	0.63 (0–1.9)	0.35 (0–0.90)	0.42 (0–0.97)	0.16	3.2 (1.4–5.1)	1.2
30–39	0.79 (0–1.8)	2.5 (0.14–4.9)	1.8 (0–3.8)	1.7 (0–3.9)	1.6 (0.22–3.1)	1.6 (0.23–3.1)	0.68	5.4 (3.3–7.6)	2.3
40–49	4.5 (0.94–8.1)	8.7 (5.0–12.4)	7.4 (4.5–10.3)	1.3 (0–3.3)	7.3 (2.0–12.5)	6.5 (4.1–8.8)	2.8	12.9 (9.8–15.9)	5.6
50–59	6.1 (3.6–8.6)	20.3 (14.5–26.2)	14.5 (9.9–19.2)	7.1 (3.0–11.2)	13.8 (6.4–21.2)	13.1 (9.4–16.8)	4.4	28.5 (23.3–33.7)	9.6
60–69	16.8 (12.1–21.5)	39.2 (31.7–46.8)	26.6 (21.1–32.1)	15.9 (9.8–22.1)	28.9 (17.0–40.8)	26.8 (22.3–31.4)	5.7	44.9 (40.9–48.9)	9.5
70–79	48.5 (38.5–58.5)	63.4 (56.2–70.5)	55.8 (47.6–63.9)	39.0 (26.2–51.7)	66.8 (52.3–81.2)	55.1 (48.0–62.2)	8.8	68.1 (61.2–75.1)	10.8
80+	75.6 (69.7–81.5)	84.6 (79.0–90.3)	81.5 (78.5–84.5)	54.8 (40.6–69.0)	60.7 (34.8–86.6)	79.1 (76.0–82.2)	7.3	89.1 (86.1–92.0)	8.3
Estimated Total Number of Individuals with Hearing Loss, millions						30.0 ^d		48.1	

^aHearing defined by the average of hearing thresholds at 0.5, 1, 2, and 4 kHz tones presented by air-conduction.

^bAll values represent percent prevalence except for the column titled “Number with hearing loss, millions” which represents the number of prevalent cases.

^cPrevalence estimates by race/ethnicity are only presented for the three largest racial/ethnic groups. Individuals from all racial/ethnic groups are included in the overall prevalence.

^dNumbers do not sum to group total because of rounding.

Hearing Loss Prevalence in the United States. Lin, et al. Arch Intern Med, 2011.

Common Myths



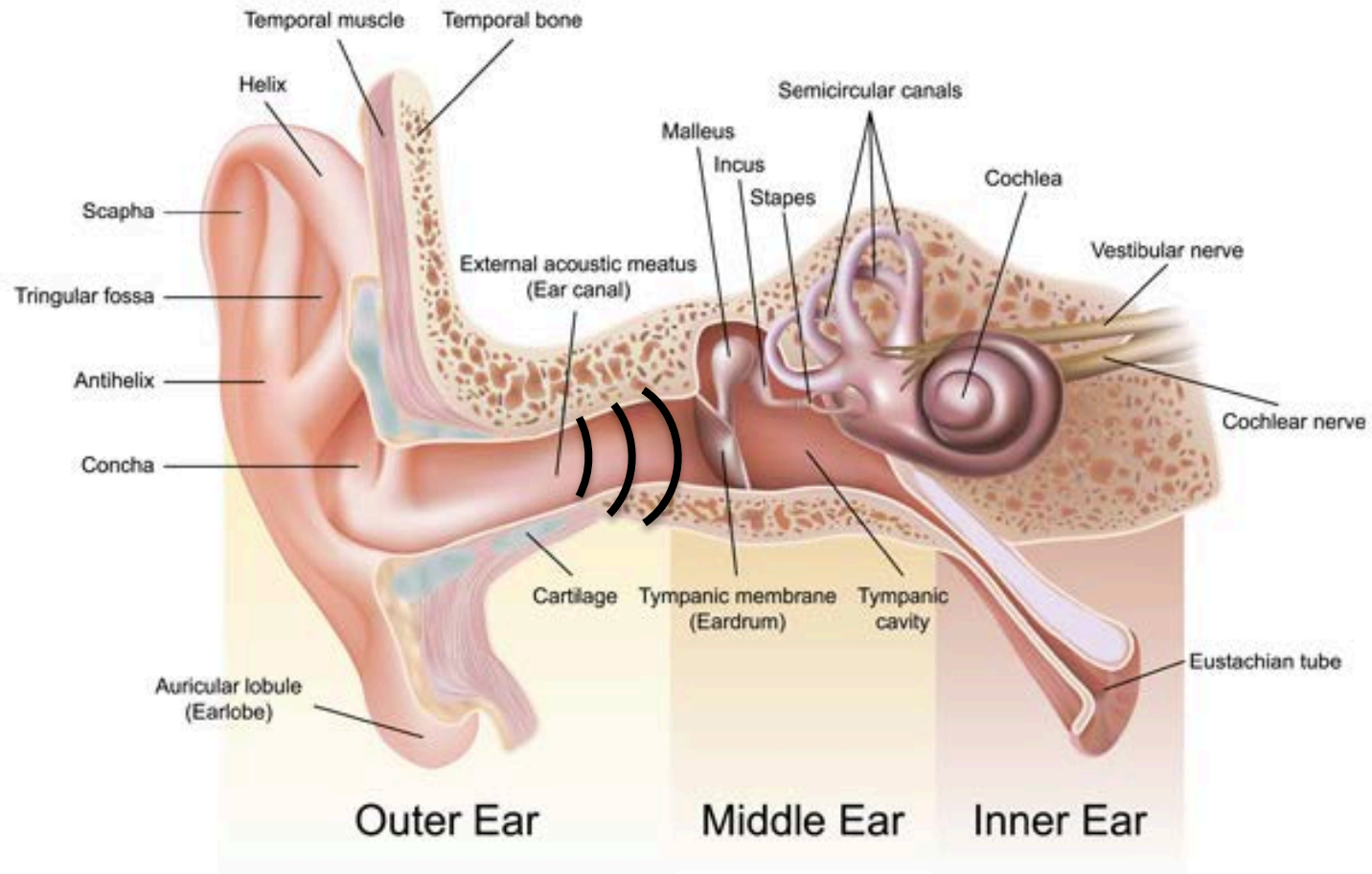
- **Hearing loss only affects old people**
- **My hearing isn't that bad**
- **I don't like the way hearing aids look**
- **Hearing aids are difficult to use**
- **Hearing aids are expensive**

Signs of Hearing Loss



- **Difficulty hearing with background noise**
- **Tinnitus**
- **Require frequent repetition**
- **Trouble hearing women and children**
- **Anxiety about straining to hear others**
- **Tendency to avoid social situations**
- **History of noise exposure or family history**
- **Taking ototoxic medications**

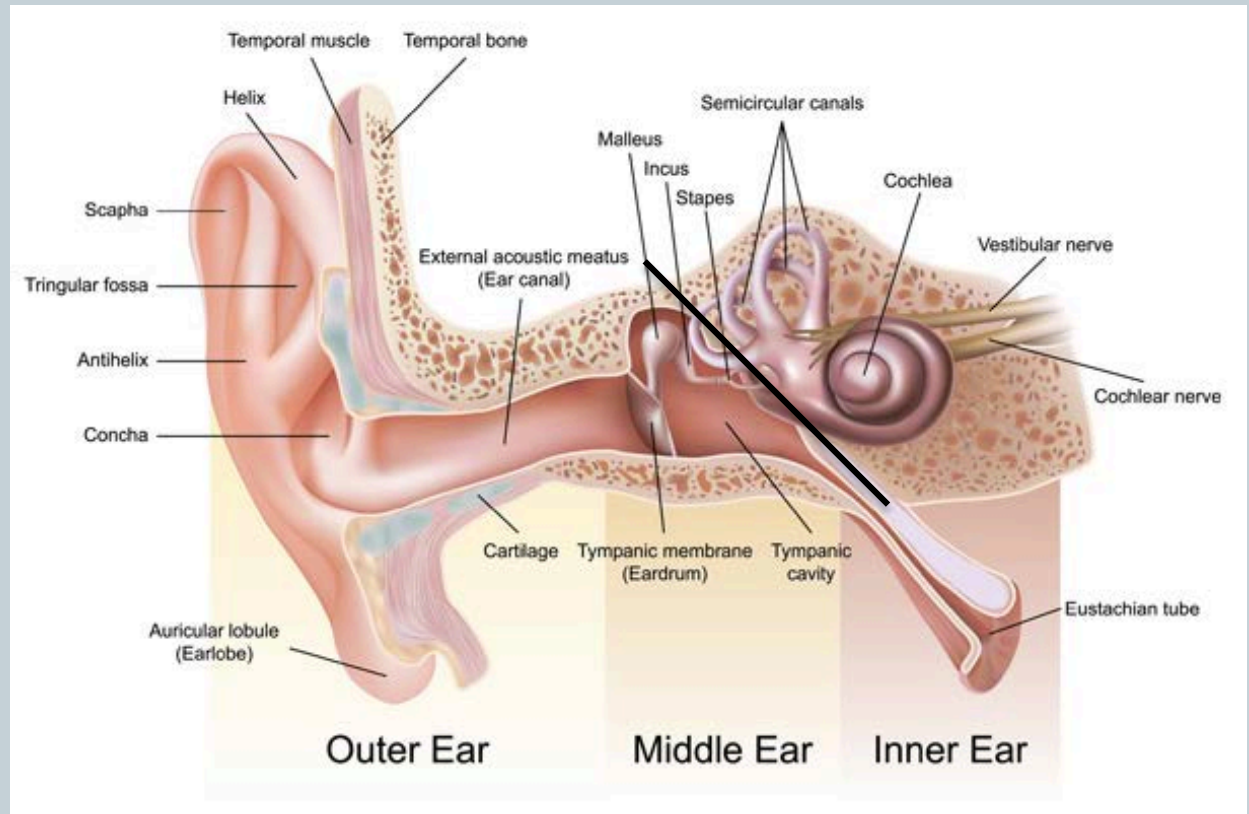
Anatomy of the Ear



Types of Hearing Loss



- Conductive
- Sensorineural

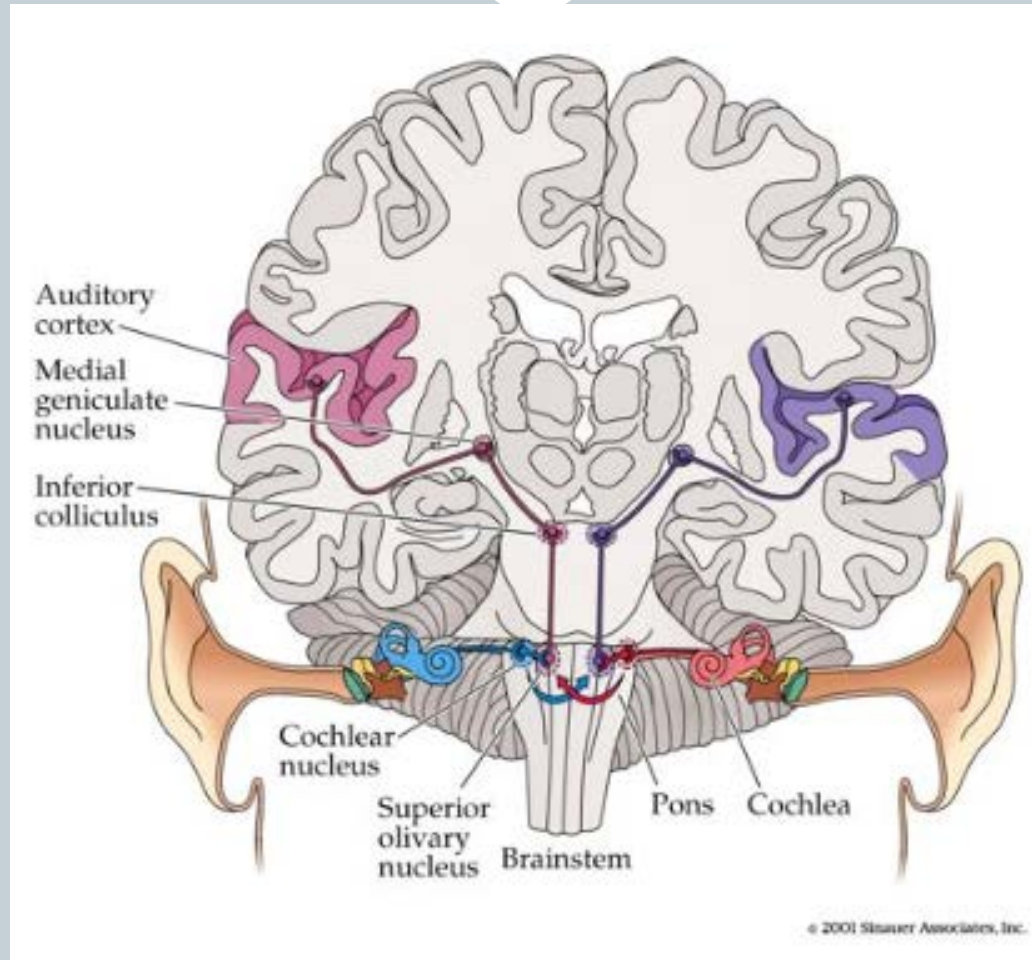


Causes of Hearing Loss



- Congenital malformation
- Genetic
- Middle ear fluid
- Infection
- Tumors
- Perforated ear drum
- Ear wax
- Otosclerosis
- Meniere's Disease
- Head Trauma
- Noise exposure
- Presbycusis
- Stroke
- Others

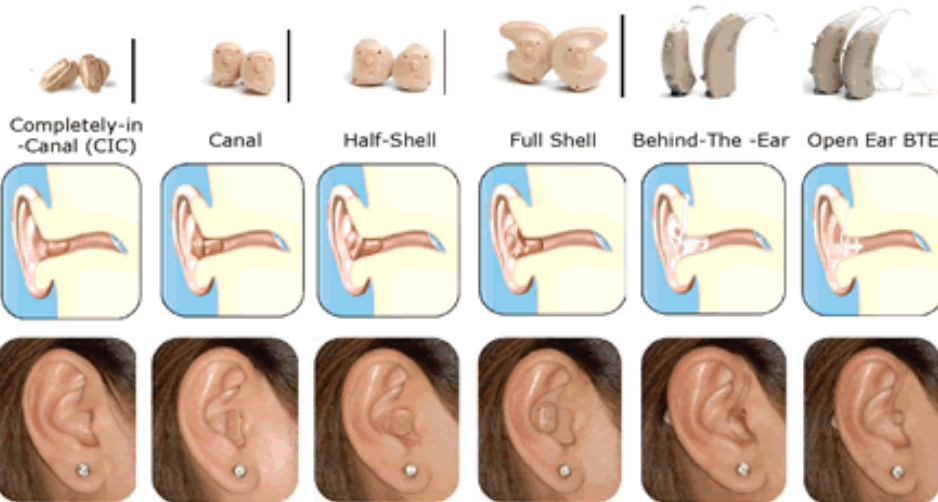
Hearing Loss and Stroke



Treatment Options



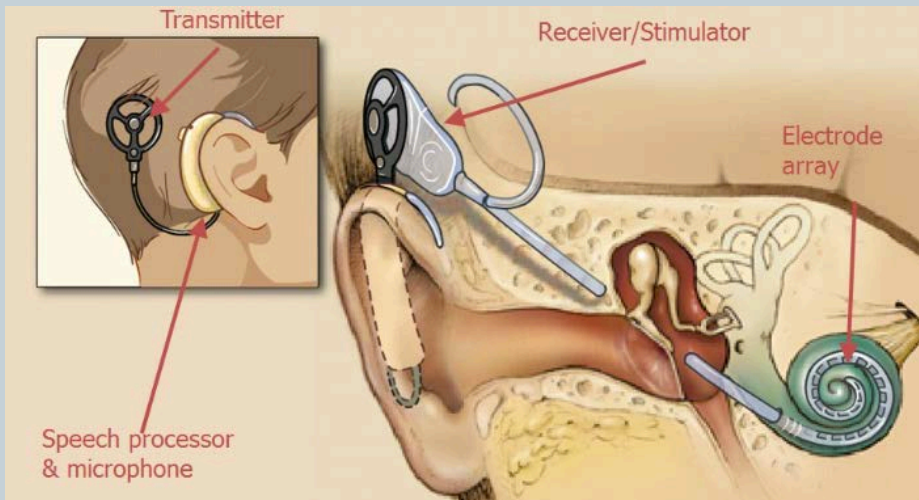
- Middle Ear Surgery
- Assistive Listening Devices
- Conventional Hearing Aids
- CROS, BiCROS Hearing Aids



Treatment Options



- Osseointegrated Devices
- Cochlear Implants



Conclusion



- **Hearing loss is common**
- **There is a hidden impact**
- **Association with dementia**
- **Many treatment options, tailor to fit each patient's needs**

Questions

