

14	Cox, L.C., McCoy, S.L., Yun, P.A., & Wingfield, A. (2008). Monotic auditory processing disorder tests in the older adult population. <i>Journal of the American Academy of Audiology</i> , 19, 293-308.	Low pass filtered speech (LPFS, cutoff 750 Hz), Q-SIN, SSI-ICM at MCRs of +10, 0, -10 and -20 dB. Time-compressed sentences and words - at 40 and 60% time compression, presentation level did not exceed 80 dB HL.	n = 45 older adults: 14 older normal, 15 with high frequency hearing loss, 16 with low and high frequency hearing loss (PTA < 80 dB HL through 4000 Hz). 3 groups similar in cognitive measures	Only TC Speech at 60% in the hearing loss group (hi/low) would be considered + for APD (scores < 2 s.d. from norms); age did not emerge as an imp. factor in APD performance	Hearing was a signi/ME for TC sentences and words, LPFS; in Mult Reg analysis - sp. Frequency hearing measures significantly predicted LPFS, SSI-ICM (10 MCR). TC sent and words (60% TCR); high frequency hearing loss NOT a signi predictor	cognitive measures were negligible in analyses; verbal ability was a significant predictor for TC words only		hearing loss in the speech range played an imp. role in APD performance, but age had little effect; the only speech APD test that was not degraded by peripheral hearing loss was Q-SIN; BUT SSI-ICM, LPFS, and TC sp. influenced by peripheral hearing loss (but mostly when there is hearing loss in low + high frequency range in mild to moderate category)
15	Gates, G.A., Feeney, M.P., & Mills, D. (2008). Cross-sectional age changes of hearing in the elderly. <i>Ear and Hearing</i> , 29(6), 865-874.	W-22 at 90 dB HL or max comfort level; SSI-ICM (0 dB MCR); DSI - free report; DDT (Dichotic Digit Test) - free report; SSI, DSI, and DDT presented at 50 dB SL re PTA. Tested until asymptotic performance	n = 241 subjects with normal cognitive abilities (based on screen), PTA < 47 dB HL, word rec > 70%	SSI-ICM scores adjusted for PTA declined from .88 to 1.1 (N/A) depending on ear and gender; DDT showed small age effect after adjustment for PTA in men (RE: -.3%) and women (LE: -.92%)	not examined but adjusted age regressions for PTA	not examined, but 5% were screened for cognitive function	doesn't indicate if native language was English	concludes that CAPD dysfunction, beyond changes in peripheral input, is a major component in presbycusis in people > 70 yrs. SSI-ICM showed more rapid decline with age than the dichotic tests; thus, recommend routine clinical assessment of CAP with SSI-ICM test (but need to have adequate memory)
16	George A. Gates, Melissa L. Anderson, M. Patrick Feeney, Susan M. McCurry, Eric B. Larson. (2008) Central Auditory Dysfunction in Older Persons With Memory Impairment or Alzheimer Dementia. <i>Arch Otolaryngol Head Neck Surg</i> , 134, 171-177.	CID W-22 at 90 dB HL, SSI-ICM (0 dB MCR), DSI, DDT (same as study #15 above)	n = 313 volunteers, 3 groups: controls without memory loss, individuals with mild memory loss without dementia; memory-impaired individuals with dementia; otherwise, criteria are same as in study #15 above (Gates et al., 2008)	two memory groups were older than the control group, hence, age was factored out of analyses	two memory groups had poorer hearing than control group; hence, hearing was factored out of analyses	adjustment for pure tone thresholds and age was used in evaluating group scores; DSI test showed largest difference between the 3 groups controls > mild memory > dementia dementia groups; SSI-ICM showed largest difference between mild memory and dementia groups (SSI may be sensitive to progression in memory impairment)	doesn't indicate if native language was English	findings suggest strong association between memory loss and tests of central auditory function. Not a surprising result given DSI stresses memory and uses free report as the mode of response selection; tests of perception should minimize memory and motor components of the task
17	Vaughan, N., Storzbach, D., & Furukawa, I. (2008). Investigation of potential cognitive tests for use with older adults in audiology clinics. <i>Journal of the American Academy of Audiology</i> , 19, 533-541.	EEE sentences and anomalous sentences - 1c at 0, 40, 50, 60, and 65% TCR; also conducted extensive neuropsychological battery that included working memory tests, speed of proc. tests, and tests of attention; presented at 90 dB SPL.	n = 225 native speakers of English; 50.7% yrs, pure tone thresholds in mild range (low frequencies) and moderately-severe range (high frequencies); normal performance on cognitive screening tests	PCA results not adjusted for age showed 3 components: non-sequential WM, sequential WM, and Processing Speed (81% VAF); sentence PCA with 2 sentence types at 50% and 60% TC -> 1 component (80% VAF)	hearing loss + age accounted for 28% of variance in compressed sentence performance	sequential WM - significantly correlated with performance on the compressed sentence tasks; highest 1's with compressed speech were for LNS; full-scale IQ and verbal IQ (when controlling for age and hearing loss); approximately 13% of total variance in compressed speech was attributable to cognitive variables, especially LNS		total variance accounted for by age, hearing loss, and cognitive measures was 41.6% (< half of sentence score variance)
18	Gates GA, Osborne L, McCurry S, Crane P, Feeney MP, Larson E. (2010). Executive Dysfunction and Presbycusis in Older Persons with and without dementia. <i>Cognitive and Behavioral Neurology</i> , 23, 218-23.	SSI-ICM, DSI free mode, DDT (as described in #15 above)	n = 313 volunteers (71-96 yrs); 3 groups: controls without memory loss, individuals with mild memory loss without dementia; memory-impaired individuals with dementia; otherwise, criteria are same as in study #15 above (Gates et al., 2008)	among control group with normal cognitive function, observed abnormal central auditory results in 40-45%. Reported as controlled, but not assessed as a separate factor.		derived an exec function score from neuropsych tests: trail making, clock drawing, Stroop color and word test; Executive function score was associated with PTA after controlling for sex, age, and educ; Executive function score was significantly associated with all 3 CAP speech tests; Executive function explained worse DSI, and 16% variance of worse DDT (lower for better ear). Trails B was most strongly associated with auditory outcomes		confirm an associate between CAPD in aging and cognition (CAP tests require short-term memory, task-shifting, and attention-to-task); recommend that elderly patients with substantial CAPD be referred for neuropsych eval