Test Battery Study #	Study	Speech Tests (listing by committee member)	Subject sample (age, number, groups)	Age effects/speech test	hrg loss effects/speech test	cognitive effects/speech test	possible confounding/speech test	Other observations	
1	Jarger J. Jarger S. Oliver, T. & Prezzolo, 5 (1989) Speech undertainding in the eldeny, Ear and Hearing, 12, 103-108.	DAL PAG Source text, SSI Lest, SPN Lest, LGS Lest, presentation love (or LGN S, Sur JGS PN werd SG) dBL me babble threshold of each ear, Iro SSI, MLCR = 40 dB, and CSN LGN = 40 dB, and CSN - Linetarity wire (or load area and SG dB serformance - 2 ad. babw mean; DSI: difference between ears > 10%	Teated 130 community-deeling, nondirical subjects, ranging in age from 51-01 years.	CAPD defined as abnormal performance on one way more of 3 specific masses, and this way <u>60%</u> . Tested only eldenly subjects to no compations groups resumably, positive CAPD musics related age personably, positive CAPD musics related age to the part pession of the part of the part pession of the the part pession of the pession of the part of the the part pession of the pession of the part of the second person of the pession of the pession of a SPR and the PESS and the pession of CAP and cognitive listics.	accommodated by presenting signal livel #3 000 Since bable https://doi.org/10.0000/ PTA(5,1,2,141)< 50.08 H kin ether ear. heading base analysity mits bornaders longing in heading base analysity mits bornaders longing in heading base analysis and the second signal signal second signal frequency sensorineural loss.	Neuropsychologial tatlery administered MAPI (NURS-R), Vechate Menory State, Boaton Neming Test, Spatial Ortentation Memory Test, Boatche Steckere Resiminist, Test, Smpth Autoury and Statestere Resiminist, Test, Smpth Autoury and saleptist dasafieta as Normal or Anormal, In bit 41% clasafieta as Anormal or Anormal, In bit abnormal CAPD states, 35 St also had abnormal cognitive status	Of 139 beach, 23% classifier as CAPD with normal cognitive status, however, these could have had some confounding due to high frequency heating in solid to the divergency heat of 130 beach, 27% classify had advormal cognitive findings and also may have had heating loss.	The larget category of absorded formings resulting in accessition of or OFD multiple findings (DSI + SPN and/or PB-SSI difference).	
2	Stach, E., Spretnjak, M., & Jerger, J. (1990). Ine prevalence of central preshycusia a clinical population. Journal of the American Academy of Audiology, 1, 109-115.	SSI and PAL PH-30 word lists, established PH-PB functions in adiet, SSI presented at 0 dB McCR. Central predycusis defined as : SSI rollover > 20%, PB scores - SSI scores > 20%, or absolute SSI score lower than normative boundary with same degree of hearing loss.	Netrospective analysis of data from 700 diracting patients, aged 50 years - with 100 subjectimal age decade (554, 55 58, 60-64, 65-69, 70-74, 75-78, 80+) and 138 nonclinical subjects (20)age group described above)	Prevalence of central presbycuss increased with age (17%, 50-54 yrs b 55%, 80+ yrs) (not broken down by test measure)	e because hearing increased with age, conducted a substayly to control for hearing loss with 20 Suhalf- decade, matched for degree of hearing loss based o PTA; even when degree of hearing loss controlled, prevalence of central presbyacuss increased with age. But greater prevalence of CAPD in hearing loss group, compared to non-clinical group (suggests confound)	not measured.	heaning loss and cognitive decline. However, authors mention that their methods of all dentifying CAPD are relatively immune to the effects of hearing loss. Didn't specify if S's were native speakers of English.	Significance of individual measures - unknown.	
3	Cooper, J.C. Jr., & Gates, G.A. (1991). Hearing in the defay-the Frankashan control (1983-1986). Part II. Providence of Campbolic and Campbolic Control (1987). Providence of Campbolic Control (1987). Control (1987). Providence of Campbolic Control (1987). Control (1987). Providence of Campbolic Control (1987). Providence	PIPB functions for C1D W-22, SSI-ICM (SSI presented at 60 all H, at MCPs 410, 0, 10, 2, 306, SSI theti at 60 dB SL 20%; SSW moderately and severely abnormal (and over- corrected) categories based on TEC analysis (total, ear, and condition error scores)	n = 1018 from the Framingham cohort who provided sufficien data.	1 4% of subjects failed PH-B rollover test (CAPD), 18.1% subjects failed PH-SS difference and vere classified as CAPD; 10.7% showed abnormal SSW results. Total preventience of CAPD in this group: 22.6%, abnormal performance increased with age. Accounted for ~15% of the variances and not considered a dominant factor in etiology of CAPD	not assessed directly, but assumed it was minimal	not assessed	cognitive decline, high frequency hearing loss (not reported). Dirth specify if subjects were native speakers of English.	Prevalence of CAPD in a nonclinical population was 23% among those > 63 yrs	
4	Leger, J., Jenger, S., & Piozzolo, F. (1991). Correlational analysis of speech analysis of spech analysis of spech analysis of spech analysis of spech analysis of special analogo and cognitive abilities in the elderly	Specie has is derived to those decided for #1 above damper et al. (1989) a derived he specier house (19, 58, 58, SPN kigs, SPN kies, DSI) by sensping the individual ear sources	n = 200 subjects, 80-91 yrs (same as subject recruitment in er)	For SSI hearing loss and age significantly contributed to performance. For other measures, age that not a spiftional predictor variable contributing to performance.	Predictor variable of hearing loss was significantly associated with PL (BN) variance scientific for other variables accounted for only 36% additional variance. For SIS hearing loss (42% MKP) and age (another 12% MF) significantly contributed to additional additional additional additional (MFF). For CISh Leneing loss (32% MKP) and digit symbol score (speed of mental processing: accounted for 13% of variance)) accounted for 43% of foat variance.	For USL hearing loss and dpt symbol score (speed of mental processing) accounted for 43% of variance	Appears that hearing loss was a variable contributing to most of performance among this group.	Considerable variations was not accounted for, for each of the tests. Tryunger subject wave tested to be a set of the set of the set of the set of the set of the possible to state that there were age effects (so pure age effects could not really be assessed. Decause it was an older group of participants). Of class were and def group of participants). Of class predictor variable for the 4 monote speech measures, but accounted for feas variance for the dictricit speech measure (ISI)	
5	van Rooj, JCGM, & Pleng, R. (1992), Auditve and cognitive factors in speech perception by elderly listeners III. Additional data and final discussion. JASA, 91, 1028-1033.	reduced battery to SRT in 0 and N, memory span and processing specific Tests administered on computer in S's home (NOT in the lab)	85 S's, 53-94 yrs, healthy volunteers, otoscopically inspected	None	Canonical correlations: Thresholds - 63% var, HL slope - 11% var	Canonical correlations: Digit span and memory scanning - 10% var			
6	Humes, LE, Watson, B.U., Christensen, LA, Cokely, C.G., Halling, D.C., & Lee, L. (1994). Factors associated with individual differences in clinical measures of speech recognition among the elderly. Journal of Speech and Hearing Research, 37, 465-474.	CUNY NST, CID W-22 in unshaped (W-22U) and spectrally haped (W-22) noise, R-SPIN; presentation level for all speech materials 70 and 90 dB SPL; SNR = +7 dB (using speech-shaped noise) (Ibtal of 20 mesures of speech recognition: 5 tests x 2 presentation levels x 2 noise conditions (Q & N)	n = 50, 63-83 yrs; air conduction thresholds show a mild-to- moderately severe hearing loss (on average)	Canonical analyses revealed that age was part of the set of predictor variables to predict speech scores at the lower presentation level (although weight was weak)	Canonical analyses identified hearing loss as the largest predictor variable to account for variation in a set of criterial variables (esp. the first speech variable: Speech scores at lower presentation level) among the elderly subjects. Canonical correlations: HL, 70-75% VAF	Canonical analyses showed that all cognitive variables were part of the set of predictor variables its predict speech scores (especially COG 5 - measures from WAIS-R), but low weights. Little or no additiona variance accounted for by cognitive or auditory- processing measures.	accounted for through PCA and Canonical Correlations - to examine controllution of these sources. Didn't specify if subjects were native speakers of English.	PCA's second speech component reflects speech perception in nice at a high signal level that was not accounted for by audibility (accounts for about 7 % of variance); source not identified	
7	Humes, L.E., Coughin, M., and Lilley, L. (1996). Evaluation of the use of a new compact disc for auditory perceptual assessment in the elderly. Journal of the American Academy of Audinology, 7, 419-427.	Uchoice nonsense sylables (simult and 90 ms tag), dichoice light, DSI, dichoice / segments (ucies in one easi- consonant in the other ear), binaural NU6 with high and low- pass filtering. NU6 with 45 and 85% TC; all presented at 80 dB SPL	n = 38 elderly subjects and 40 young adults; young adults had normal hearing; elderly subjects had hearing ranging from normal to moderate sloping high-fequency on hearing togs, elderly subjects divided into 2 subgroups: ENH (13) and EHI (25)	Age effects observed on Uicholic CVs (2 levels), vowels in 1 ear-consonants in the other, and Nu0 - filtered, NOTE little association between scores on 60 dB NL: PCA showed that alge was associated to 0 dB NL: PCA showed that alge was associated with dichotic-competition skills and auditory- pattern/temporal sequencing factor.	hearing loss was signif for 3/10 fests: dichote digts. DSI, NU6 lifered, NU6-45% and d5%T Cr. on effect of age was observed for Dichote Dights, DSI, and NU6 were stored with high freqV PTA. DESPTE presentation level of 90 dB SPL, HFPTA torong/ negatively associated with general speech understanding (PCA Factor 1)	not assessed	Didn't specify if subjects were native speakers of English.	Observed questionable test-re-test relationity for dichole NS and DSI; recommend 2 speech tests for auditory perceptual evaluation of elderly (al 90 dB test) of the other of the set consolution in the other) and dicholic nonsense-syllables with 90 ms lag.	
84	Divenyi, P., & Haupt, K.M. (1997). Audiological correlates of speech understanding defacts in ederly laterents with mid-to- -moderate hearing loss. I. Age and lateral asymmetry effects. Ear and Hearing. 18(1) 42-61.	SRT-CCT at 50 dB SL e PTA with contral white noise making at 4 30 BNR, low pass Bitterd speech at. 75 and 144tr, rapid alternating speech (RAS), IMT in reverberation at = 0, 48, 86, and 12.5 sec reversention time, SNI-CM SSW, Competing sentence lest at -5 dB SNR - monaural and binaral, NU& with TC32 and TC03, SPN at +4 dB SBR - monaural and 3 spatial conditions	in = 4.5 delayly subjects (60-81 yrs), pure-tone thresholds < 50 del HL at 5, 1, 8, 2, and 484z; and 16 young normal hearing control subjects.	Following ANEOVA to remove hearing loss effects, continued to see age effects for some tests, incl: RAS, CCT, TCS, RT 45 and 45 sec, and SPIN spatial separation measures	hearing loss effects seen on SSI. Contrat competing senteroe tests, TC 60, MRT without reverberation and in 1:2 sec reverberation and source of the SPN spatial non-spatial measures. (that is, different score between yourg and eid before ANCOVA and differences were not preserved after ANCOVA)	not assessed	Didn't specify if subjects were native speakers of English.	Robust age effects for reventerant speech. SPIN in spatial separation, sentence context-based facilitation of speech intelligibility (HP vs. LP SPIN)	
85	Divenyi, P., & Haupt, K.M. (1997). Audiological correlates speech understanding deficits in elevity laternes with mid-to- -moderate hearing loss. II. Correlation analysis. Ear and Hearing, 16(2) 100-113.	Same as 8a	same as 8a, without young control group	Age was expressed as the linear combin. of 4 predictor variables: pure tone slopes, SPN 38 mono (SPN 380 deg High + Low minus SPIN Monaural High + Low), SS, and biateral competing sentence test (but only accounted for 31.5% of variance); whe hearing loss removed, age predicted by UCT, SPIN SPT H+L and Auditory Filter Width (53.4% VAF)	observed a high canonical r between hearing sensitivity measures and 8 measures of speech understanding in non-optimal conditions (mostly SPN measures with and without capital sep) and speech in reverberation; and between hearing sensitivity and 7 measures of speech understanding in distortion or interference	not assessed	Didn't speaily if subjects were native speakers of English.	hearing loss acounts for 23 of variance in speech measures, beieve the remaining variance must be due to central mechanisms (csp. for babble-related and other interference measures and neverb); itsus, ability to perceptually segregate one speech signal from another - silf actor in older people when auditory sensitivity is controlled.	
	Divenyi, P., & Haupt, K.M. (1997). Audiological correlates of speech understanding deficits in elderly listeners with mild-to -moderate hearing loss. III. Factor representation. Ear and Hearing, 18(3) 189-201.	Same as 8a	same as 8a with control group	PCA extracted 6 factors, with the largest factor intepreted as speech understanding with interference; 2nd factor is hearing sensitivity (didn't really talk about "age effects" per se)	2nd factor extracted was hearing sensitivity in PCA	not assessed	Didn't specify if subjects were native speakers of English.	re-affirmed importance of evaluating perceptual segregation of simultaneous speech stimuli	
8c	Dubno, J.R., Lee, F.S., Matthews, L.J. & Mills, J. H. (1997). Age-related and gender-related changes in monaural speech recognition. J Speech Language Hearing Res. 40, 444-452.	NU6, SSI, IK-SPIR: generated PI fns for NU6 and SSI; for SSI, ICM, MCR was 0 dB. SPIN presented in standard mode (ed dB SNR); devel PB and PP and SR, SSI-Max, SSI-Max, SPIN-PH, SPIN-PL, and SPIN HFS (% hearing for speech)	n = 129 people with an heating loss (55-84 yrs); selected people within 10-year age ranges with equivalent thresholds (6544, 65-74, 75-84); final sample was 125 people; 250 ears)	found no significant age effects on any of the 8 speech measures, across the 3 elderly age groups; after score and age were adjusted for association with PTA, age effects on speech accrose soberved of males but not females (Pomax, SSI max, SPIN-PH)	Co-varied with the speech measures, hearing loss accounted for largest proportion of variance in speech recognition scores	not assessed	Didn't specify if subjects were native speakers of English.	gender differences noted on decline in speech recognition that were not accounted for by hearing sensitivity.	
	Jerger, J. & Chmiel, R. (1997) Factor analytic structure of auditory impairment in elderly persons. JAAA, 7, 269-276.	PB-50 word lists, SSI, DSI, at 2-3 SPLs (60, 80, 100); DSI with free report (FR) and directed report (DR)	n = 180 elderly Sts > 60 hearings with high-frequency sensitivity loss (at 1, 2, and 4kHz) > 15 dB HL; normal score on MMSE (>24)	1 factor was general speech-understanding ability (word recog in both ears - not strongly related to audibility); othern factors - separate ears-specific dichotic performance - interpreted as a central processing factor. No effects of age per se.	2 hearing loss factors accounted for 40% variance in the data (low-frequency sensitivity loss and high- frequency sensitivity loss)	assessed measures of cognitive function but not reported in this study	Didn't specify if subjects were native speakers of English.		
11	Humme, L.E. (2005) Do 'Auditory Processing' Tests Measure Auditory Processing in the Elderly? Ear and Hearing. 28, 109-119.	Pf functions, to determine PFPB rollover, dichotic CVs with 90 ms lag, NUB at 45% TCR	213 debt/s subjects 60-88 yrs (mates and females); blat, symm sensorineural heating loss (compared performance to young norms)	older listeners performed much poorer on NUBTC and dicholic CVs than comparative norms (not examined directly, though): Dicholic CV identification age was a second signif predictor variable accounting for performance but multiple correlation was low;	NU8 TC speech scores - accounted for by high- frequency hearing loss (nonverbal IQ also identified - but n.s.)	IQ was the first signif predictor variable for dichotic CV per (although VAF was kw);for TC speech - with hearing loss partialled out, increases in age and decreases in IQ associated with decreases in TC speech (associations were weak)	Didn't specify if subjects were native speakers of English.	most subjects showed no PI-PB rollover; results indicate that many measures of auditory processing in the elderly may reflect individual differences in cognitive function - but this needs to be verified with parallel tasks in different modalities	
12	Golding, M., Tayloz, A.: Cupples, L., & Mitchell, P. (2006). Odds of demonstraining autitory processing abnormality in the average older adult. The Blue Mountains hearing study. Ear and Hearing, 27, 129-138.	Macquire SSI (MSSI), Macquire DSI (MDSI)PB zores: deviced CAP teachourse that were + to CAPD: poore than expected perf for Right MSSI max, Left MSSI Max, Right MSSI. Left MDSI, MOSI Diff score, Right PB - MSSI max, Left PB 4KSB max	n = 1192 participants, 54-89 yrs, PTA < 50 dB HL and no ear asymmetry	effects of age seen for all tests except R1MDSI score	C lið nöt study hesting loss per se but excluded individuals with 2008 He. 45, 1, 2 4 tit zan dany asymmetry in PTA- 30 dB. Lið nöl richude a messurur of henting sa fastor hestause subsample had good hesting (PTA-2008 HL), also think hat sustuls form seitencie based CAP metalitika are results form seitencie based CAP metalitika are results form seitencie based CAP metalitika are substanting for a seitencie based CAP metalitika are for a seitencie based CAP metalitika are substanting for a seitencie bare	Izcreened for MMSE - tooked for normal performance > 24): odds of demonstrating CAP abnormality Increased by 24% with every 1-unit decrease in MMSE score (Hus, strong r between cognition and CAP findings)	possible that high frequency hearing loss could have influenced performance on the speech measures, native languagedialect of participants not specified	Irecommend testing for CAP abnormality and cognitive screening noutinely in auditor suscessment of older adults, also observed gender differences in dichotic MDSI set (men higher odds of CAPD than women), also observed ear difference with age effects on dichotic measures seen for LE and less for RE	
13	Vaughan, N., Storzbach, D., & Funkawa, I. (2006). Sequencing versus nonsequencing working memory in understanding of rapid speech by older listeners. JAAA, 17, 506-518.	IEEE sentences and anomalous sentences - line compressed at 0.405,060, and 05% (TCR); also conducted extensive neuropsychological battery that included working memory tests, speed-of-processing tests, and tests of attention	n = 178 speakers of American English, 80-75 yrs; hearing thesholds in noval, midi, moderate, or mod-sev range; screened for normal cog function for age	Removed effects of age using ANCOVA: hence, age as a variable was not examined in relation to the speech recognition tests	Did an ANCOVA to remove hearing loss effects, so hearing loss want considered a variable that could influence performance	PCA showed that nonsequential VMA accounted for 22.4% of variance in spech scores: Processing Speed accounted for 19.6% of variance, and sequential VMA accounted for 19.2% of variance after partialing out age - sequential VM had most robust assoc with speech recognition followed by nonsequential VMA.		Dish't conduct a multiple regression or factor analyses to examine how much of the variance in TC speech is due to hearing sensitivity, age, and cognition.	

14	Cox, L.C., McCoy, S.L., Tun, P.A., & Wingfield, A. (2008). Monicia auditory processing disorder tests in the older adult population. Journal of the American Academy of Audiology, 19, 293-308.	Lowpass filtered speech (JPS's, cubit 750 Hz), CSIN, SSI- (USA MIORe of H.O., -10 and -20 B, Time-compression sentences and words - at 40 and 60% time compression; presentation level did not exceed 80 dB HL.	n = 45 doler adults. 14 doler normal, 15 with high frequency hearing loss, 15 with low and high frequency hearing loss (PTA < 50 dB HL through 4000 Hz); 3 groups similar in cognitive measures	Only TC Speech at 60% in the hearing loss group (inition) would be considered + for APC (scores < 2 s.d. from norms), age did not emerge as an imp. factor in APD performance	Hearing was a sign! ME for TC sentences and words, LPFS, INM Heg analysis - sp. Frequency hearing measures significantly predicted LPFS, SSI (10 MCR), TC sent and words (60% TCR), high frequency hearing loss NOT a sign! 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 half the effect, the only speech APD lest that was not degraded by peripheral hearing loss was 63NB BUT SSI-NM, LPFS, and Toosty when there by 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. Ear and Hearing. 29(6), 885-874.	W-22 at 90 dB HL or max comfort level.SSH-LM(0 dB McC S) DSI-free report. DDT (Uchotic Digits Test) - free report. 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%	SSHCM scores adjusted for PTA declined from 38 to 1.8% yrd depending on ear and gender; DDT showed small age effect after adjustment for PTA in men (RE: 3yy) and women (LE:92/y)	not examined but adjusted age regressions for PTA .	not examined, but S's were screened for cognitive function	doesn't indicate if native language was English	concludes that CAPD dysfunction, beyond changes in peripheral nycut, is a major component in prestyrcusis in people > 70 yrs. SSI-ICM showed more rapid decline with age than the two dichotic tests: flux, recommend routine clinical assessment of CAP with SSI-ICM test (but need to have adequate memory)	
16	George A. Catter, Melisa L. Anderson, M. Patrick Feener, Susan M. McCurry, Eric B. Larson, (2006) Central Audion Dysfunction in Older Persons With Memory Impairment or Alzheimer Dementia. Arch Otolaryngol Head Neck Surg. 134, 771-777.	CD W-22 at 99 dB HL, SSI-HCM (d dB MCR), DSI, DDY (same as study #15 above)	n = 313 volunteers; 3 groups: controls without memory loss, individuals with indemory loss without dements; memory, impaired individuals with dementia; otherwise, otheria 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 groups scores. Distest showed largest difference between the 3 groups controls > miki memory > dementia dementia groups; SSI-100, showed largest difference between mid memory and dementia groups (SSI may be sensitive to progression in memory impairment)	doesn't indicate if native language was English	finding suggest strong association between memory loss and tests of central auditory thatricion. Not a surprising result given DSI stresses memory and uses free report as the mode of reports exiection; tests of perception should minimize memory and motor components of the task.	
17	Vaughan, N., Skozbach, D., & Funkawa, I. (2008). Investigation of potential cognitive tests for use with older adults in audiology clinics. Journal of the American Academy of Audiology, 19, 533-541.	IEEE sentences and anomalous sentences - IC at 0, 40, 50, 60, and 65% TCA at 0, and constraints of the elements neuropsychological battery that included working memory less, speed of proc tests, and tests of attention, presented at 90 dB SPL	in = 225 native speakers of English, 50/75 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: nonsequential WM, are 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 29% of variance in compressed sentence performance	sequential WM - significantly correlated with performance on the compressed sentence tasks; highest r's with compressed speech were for LNS, fail-scale IQ and wetak IQ (when controlling for age and hearing loss); approximately 13% of total variance in compressed speech was attributable to cognitive variables, especially LNS		titolal variance accounted for by age, hearing loss, and cognitive measures was 41.8% (< half of sentence score variance).	
18	Gates GA, Gibbors L, McCurry S, Crane P, Fenery MP, Larson E. (2010). Securitive Dystancina and Preshyusito Older Persons with and without dementia. Cognitive and Behavioral Neurology. 23, 218-23.	SSHOM, DSI free mode, DDT (as described in #15 above)	n = 313 solutinters (71-99 yrs); 3 groups: controls without memory loss, individuals with mill amenyo loss without dementia, memory-impaired individuals with dementia; ofherwise, criteria are same as in study #15 above (Gates et al. 2006)	among control group with normal cognitive function. Deserves abnormalis in 40–45%. Reported as controlled, but not assessed as a separate factor.		defined 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 explained worse SQL and 16% variance of worse DOT (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-tim memory, task- shifting, and attention-to-task), recommend that elderly patients with substantial CAPD be referred for neuropsych eval.	