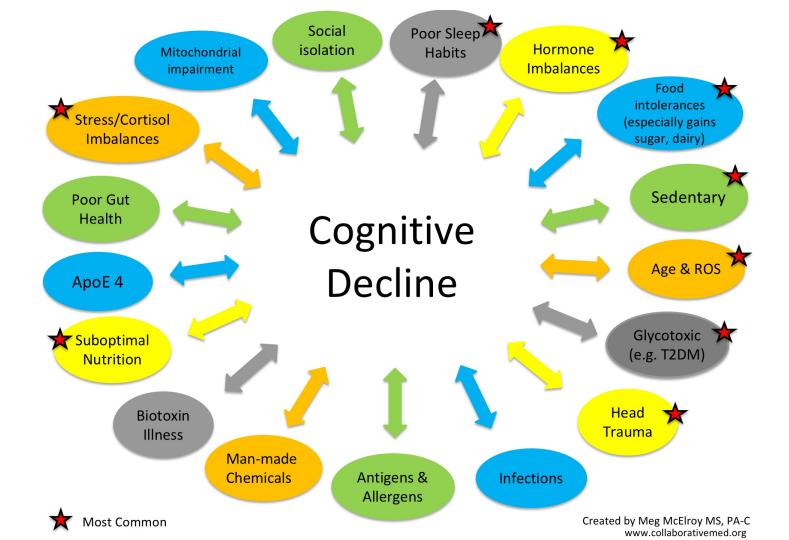
Preventing and Reversing **MEMORY LOSS** Aka "cognitive decline"

Meg McElroy MS, PA-C Presented by Dr. Weiss

Challenges in Diagnosing Cognitive Decline

- So many factors
- So many different diagnoses





COGNOSCOPY:

"..the combination of blood tests, genetic tests, simple online cognitive assessment, and MRI with an automatic computer assessment of brain volumes provides crucial clues to what is causing cognitive decline or putting you at risk for it."

-Dr. Dale Bredesen (The End of Alzheimer's)



Thorough Past Medical History

- a) Chronic sinusitis
- b) History of Head trauma
- c) Alcohol
- d) Oral health
- e) General anesthesia
- f) Hormonal health

- g) Sleep history
- h) Exposure to toxins
- i) Common medication ("dementigens")
- j) Diabetes
- k) Other?....



JAMA 2015: Best Cognitive Screening Tools

Mini-Cog (takes <5 minutes, doesn't evaluate language)

Mini-Cog@ Instructions for Administration & Scoring ID: Date: Step 1: Three Word Registration Look directly at person and say. "Please listen carefully. Lam going to say three words that Lwant you to repeat back to me now and try to remember. The words are laelect a list of words from the versions below! Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing). The following and other word lists have been used in one or more clinical studies.11 For repeated administrations use of an alternative word list is recommended. Version 1 Version 3 Version 5 Version 6 Bonono Leader Village Kitchen Biyer Contain Doughter Sunrise Season Nation Garden Heaven Chuir Table Baby Finger Distant Mountain Step 2: Clock Drawing

Say: 'Next, I want you to draw a clock for me. First, put in all of the numbers where they go.' When that is completed, say: 'Now, set the hands to 10 past 11.'

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

Word List Version: _____ Person's Answers: _

Scoring

Word Recall:	(0-3 points)	1 point for each word spontaneously recalled without cucing.
Clock Draw:	(0 or 2 points)	Normal clock - 2 points. A normal clock has all numbers pisced in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positionil with on on sizing or topicate numbers. I lands are point-ing to the 1 and 2 (1110) Aland larget is not accored. Instability or relaxed to down a clack glammatury of points.
Total Score:	(0-5 points)	Total score – Word Recall score + Clock Draw score. A cut point of 43 on the Mini Cog ⁺ has been valicited for dementia screening, built many individuals with chicadly incoming ful appairies impairment will score higher when greater sensibility is detrived, a cut point of 4 is recom- mended as it may include an end of turkner resultation of cognitive status.

I bini itog (6.5. Basson, Ali rights reserver. Hepothed with permission of the arrhor solely for division and educational purposes. May not be modified or used for commercial, marketing, or research purposes without permission of the author (soubdrowedu). • v. 0.1.91.b

MoCA (Montreal Cognitive Assessment): Best test for MCI (score 19-26)

MANE

MONTREAL C	OGNITIVE ASSE	SSMEN	T (MOCA) Edu	Sex :		Date of birt DAT		
VISUOSPATIAL / E End Begin D	(COTIVE (A) (B) (2) (4) (3)		F	Copy cube	Draw (3 pel	(CLOCK (Ten past ele	ven)	POINTS
0	[]			[]	[] Contos	ir Nu] mbers	[] Hands	_^
PAR		A	- A.		S.	Y			_/:
MEMORY	Read list of words, subje must repeat them. Do 2 Do a recall after 5 minut	trials. 1	FA st trial sd trial	CE VEL	VET CI-	IURCH	DAISY	RED	No
ATTENTION	Read list of digits (1 digi		bject has to re bject has to re				[]218		
Read list of letters. Th	te subject must tap with I	is hand at e		c M N A A J		KDEA	AJAMOR	AAB	_
Serial 7 subtraction s	tarting at 100 [] 93	[] 86	[] 1		[] 72	[]		_/
LANGUAGE	Repeat : I only know the The cat always	t John is the	one to help to	oday. []					/
Fluency / Name	maximum number of wo					[]_	(N ≥ 11 W	ords)	_/
ABSTRACTION	Similarity between e.g. t	anana - oraz	nge = fruit [] train - bi	cycle []	watch -	uler		_/
DELAYED RECALL	Has to recall words WITH NO CUE	FACE []	VELVET	OHUROH	DAISY []	RED	Paints for UNCUED recall only		_/!
Optional	Category cue Multiple choice cue								
ORIENTATION	[] Date [Month	[]Year	[]D:	ay [] Place	[]0	ty	_/
	Version November 7, 2004	Month	[]Year		ay [mol 2 26/30	TOTA			_/3

ACE-R: Most Sensitive, but takes up to 20 min

	Name: Date of Birth: Hospital No. or Address:			Date of testing:/_/ Testine's name: Age at leaving full-time education: Occupation: Handedness:				
ATTENTION								
Ask: What is the	Day	Date	Month	Year	Season	Atlenti Score 0		
Ask: Which	No./Floor	StreetHospital	Town	Courty	Country	Attenti (Score C		
ATTENTION								
 Tell: 'Tm going to g After subject repeat Score only the first Register number of 	ts, say 'Try to re trial (repeat 3 tr	member them be	cause I'm go			Attent (Score 0		
 Ask the subject: "Or number until I tall yr E subject makes a r (e.g., 90, 64, 77, 70 Stop after five subt MEMORY 	ou to stop." mistake, do not i 0, 63 - score 4).	stop them. Let the	subject car	y on and check su		Attenti (Score 0		
> Aak: Which 3 wo	rðs did 1 ask y	ou to repeat and	i remember	*		Sicore 0		
Lefters Say: "I'm going to give y beginning with that left could give me words that Do you understand? Are	r, but not names a "cat, cry, clock	of people or place and so on. But,	es. For example, you can't give	ipie, if I give you to me words like Co	te letter "C", you therine or Canada.	2 18 2		
						8.12 6.7 2.3 2.3 5.1 0 0 0 0 0 0 0 0 0 0 0 0 0		
						Fluer		
> Animals Say: 'Now can you nam	e as many anim	uls as possible. I	l can begin v	th any letter."		800m 0 -		

Cognitive Tests to Detect Dementia. JAMA Intern Med. 2015;175 (9): 1450-1458

Patient and Spouse/Family Reported Symptoms

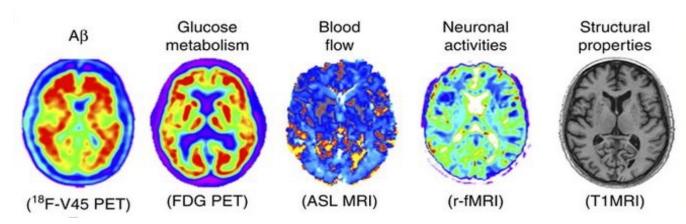
- Loss of important information that he or she would previously have recalled easily. (Exp. Appointments, conversations or recent events.)
- Loss of the ability to make sound decisions, judgement in time or not knowing how to complete a complex task from start to finish
- Loss in visual perception
- Increasingly overwhelmed by making decisions, planning, or interpreting instructions
- Impulsiveness or increasing poor judgement
- Depression, anxiety, apathy, irritability and aggression
 C.INDTONS

Tests

- Neurological exams reflexes, eye movements, walking and balance
- Lab tests- Blood test (helps rule out physical issues that effect memory, B12 deficiency or underactive thyroid gland)
- **Brain Imaging** MRI or CT scan (to rule out brain tumor, stroke or bleeding)
- Mental Status testing 10 minute short forms for mental status. Also questions, tasks, following written instructions. Longer forms can help with additional information about mental function

Imaging...

- Dr. Alan Evans 2016 Paper: First physiological sign of AD is a decrease in blood flow to the brain, not an increase in amyloid protein
 - 7,700 brain images from 1,171 people with various stages of AD progression (MRI and PET, blood/CSF, subject's level of cognition)

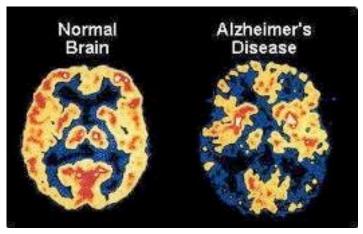


Iturria-Medina Y, et al. Early role of vascular dysregulation on late-onset Alzheimer's disease based on multifactorial data-driven analaysis. Nat Commun. 2016;7:11934.

Imaging...

- MRI with NeuroQuant
 - Write "with NeuroQuant" next to "MRI of brain" (no contrast)
 - CPT code 76377
 - Amyloid PET or FDG PET
 - SPECT (in place of PET)

MRI with NeuroQuant



Neuropsychological Evaluation

 If cognitive screening is abnormal, a more detailed evaluation is recommended with a neuropsychologist

Attention and processing speed

Motor Performance

Mood, Temperament

Judgement/Problem Solving

Abstract Thinking

Executive Functions

Language

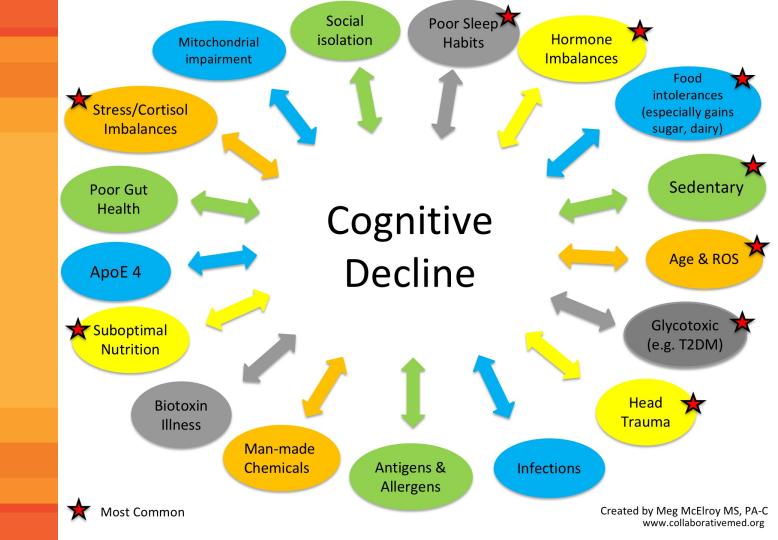
Visuospatial Analysis

Working, Learning Memory

Thank You

Comments or suggestions? Please Take Our Survey







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Meg McElroy MS, PA-C Presented by Dr. Weiss



To watch the full version of



Preventing and Reversing Cognitive Decline



mmLearn.org

Thank You!