general assessment series

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Best Practices in Nursing Care to Older Adults

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Mental Status Assessment in Older Adults: Montreal CognitiveAssessment: MoCA© Version 8.1

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WHY: The incidence of mild cognitive impairment (MCI) increases with age ranging from 15% to 20% of those individuals aged 65 years and older (2017 Alzheimer's Disease Facts and Figures, 2017). An average of 32% -38% of older adults with MCI develop dementia within five years (2017 Alzheimer's Disease Facts and Figures, 2017). Currently, there are no U.S. Food and Drug Administration approved medications to treat MCI. Medication approved to treat symptoms of dementia have not demonstrated lasting benefit in the delay or prevention of MCI progressing to dementia (2017 Alzheimer's Disease Facts and Figures, 2017).

BEST TOOL: The Montreal Cognitive Assessment (MoCA© Version 8.1) was developed as a quick screening tool for MCI and early Alzheimer's dementia. It assesses the domains of attention and concentration, executive function, memory, language, visuoconstructional skills, conceptual thinking, calculation, and orientation. The MoCA has been tested extensively for use in a variety of disorders affecting cognition such as HIV, Huntington's chorea, Multiple Sclerosis, Parkinson's disease, stroke, vascular dementia, and substance abuse in addition to the well older adult. It has been translated and tested in 53 different languages; 15 languages have more than one version with the Chinese language having nine versions (Nasraddine, 2018). The MoCA has been tested in ages ranging from as young as 49 in two reports to old-old (85+) with a variety of education levels. The total possible score is 30 points with a score of 26 or more considered normal. To better adjust the MoCA for lower educated individuals, add 2 points to the total MoCA score for those with 4-9 years of education and 1 point for 10-12 years of education (Malek-Ahmadi et al., 2015). The score range for MCI is 19-25.2 and for Alzheimer's dementia 11.4-21 (Malek-Ahmadi et al., 2015). While the score ranges overlap, differentiation between the conditions is dependent upon associated functional impairment. A modified version, MoCA-B, was developed and is used in those with visual impairments. There is also an electronic version for use on tablets which captures changes over time (Nasraddine, 2018).

TARGET POPULATION: The MoCA can be used in a variety of settings from primary care to acute care. It may be used in culturally diverse populations, a variety of ages, and differing educational levels (Malek-Ahmadi et al., 2015; Nasraddine, 2018).

VALIDITY AND RELIABILITY: The MoCA detected MCI with 90%-96% sensitivity and specificity of 87% with 95% confidence interval. The MoCA detected 100% of Alzheimer's dementia with a specificity of 87% (Nasraddine, 2018).

STRENGTHS AND LIMITATIONS: The MoCA takes approximately 10 minutes to administer. It is accessible via the MoCA© website, http://www.mocatest.org with clear administration and scoring instructions (refer to website for copyright information). There is online training and certification available. All these items, test, instructions, and scoring are available in 53 languages. There is some research suggesting that lowering the threshold score to 23 may prevent over identification of normal individuals. The MoCA has been tested in a variety of settings and populations and displayed accuracy in identification of MCI and Alzheimer's dementia (Malek-Ahmadi et al., 2015; Nasraddine, 2018).

FOLLOW-UP: Two major organizations, the Canadian Task Force on Preventive Health Care (CTFPHC) (Canadian Task Force on Preventive Health Care, 2016) and U.S. Preventative Services Task Force (USPSTF) (U.S. Preventive Services Task Force, 2014) do not recommend routine cognitive screening in asymptomatic community-dwelling older adults. In contrast, the Alzheimer's Association and the American Geriatrics Society recommend incorporation of assessment of cognitive impairment into the Medicare Annual Wellness Visit (AWV). The Center for Medicare Services has included routine cognitive screening as a required component of the Medicare AWV (Cordell et al., 2013). The American Academy of Neurology (2017) supports the incorporation of cognitive assessment into the Medicare AWV. The American Academy of Family Physicians recommends that health care providers be alert for cognitive and functional decline in older adults for early stage recognition of dementia. Annual screening is a required component of the Medicare AWV. These professional organizations recommend the use of a valid and reliable instrument ((2017 Alzheimer's Disease Facts and Figures, 2017; Canadian Task Force on Preventive Health Care, 2016; U.S. Preventive Services Task Force, 2014).

MORE ON THE TOPIC:

Best practice information on care of older adults: https://consultgeri.org.

MoCA© website: http://www.mocatest.org

2017 Alzheimer's Disease Facts and Figures. (2017). *Alzheimer's & Dementia, 13*, 325-373. doi: https://doi.org/10.1016/j.jalz.2017.02.001

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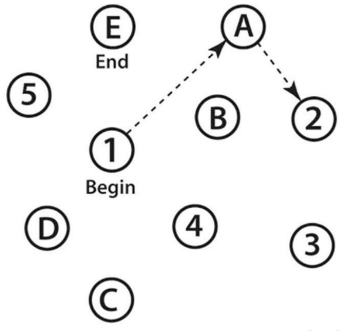
MONTREAL COGNITIVE ASSESSMENT (MOCA®)

Version 8.1 English

Name:
Education: Date of birth:
Sex: DATE:

VISUOSPATIAL / EXECUTIVE



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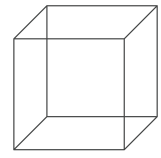


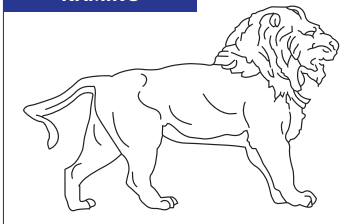
[ ]

Draw CLOCK (Ten past eleven)
(3 points)

[ ] Contour [ ] Numbers [ ] Hands

POINTS __/5

NAMING



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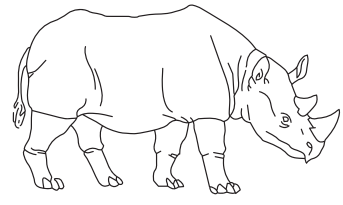

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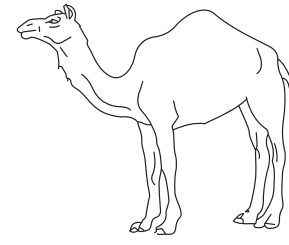

[ ]

__/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1ST TRIAL					
2ND TRIAL					

NO POINTS

ATTENTION

Read list of digits (1 digit/ sec.).

Subject has to repeat them in the forward order. [ ] 2 1 8 5 4

Subject has to repeat them in the backward order. [ ] 7 4 2

__/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[ ] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B

__/1

Serial 7 subtraction starting at 100. [ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65

4 or 5 correct subtractions: **3 pts**, 2 or 3 correct: **2 pts**, 1 correct: **1 pt**, 0 correct: **0**

__/3

LANGUAGE

Repeat: I only know that John is the one to help today. [ ]

The cat always hid under the couch when dogs were in the room. [ ]

__/2

Fluency: Name maximum number of words in one minute that begin with the letter F. [ ] _____ (N ≥ 11 words)

__/1

ABSTRACTION

Similarity between e.g. banana - orange = fruit [ ] train - bicycle [ ] watch - ruler

__/2

DELAYED RECALL

Memory Index Score (MIS)

(MIS)	Has to recall words WITH NO CUE	FACE [ ]	VELVET [ ]	CHURCH [ ]	DAISY [ ]	RED [ ]	Points for UNCUED recall only
X3							
X2	Category cue						MIS = ____ /15
X1	Multiple choice cue						

__/5

ORIENTATION

[ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City

__/6

www.mocatest.org

Administered by: _____

Training and Certification are required to ensure accuracy

MIS: /15
(Normal ≥ 26/30)
Add 1 point if ≤ 12 yr edu

TOTAL __/30

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