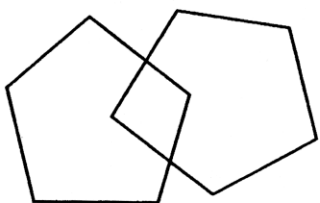


Mini-Mental State Examination (MMSE)^{1,2}

Make the patient comfortable and establish rapport.
Ask questions in the order listed. Total possible score is 30.

Maximum Score	Score		
		ORIENTATION	
5	()	What is the (year) (season) (date) (day) (month)?	
5	()	Where are we (state) (country) (town or city) (hospital) (floor)?	
		REGISTRATION	
3	()	Name 3 common objects (eg, "apple," "table," "penny"). Take 1 second to say each. Then ask the patient to repeat all 3. Give 1 point for each correct answer. Then repeat them until he/she learns all 3. Count trials and record. Trials : _____	
		ATTENTION AND CALCULATION	
5	()	Serial 7's backwards. Stop after 5 answers. Alternatively, spell "WORLD" backwards. The score is the number of letters in correct order (D_L_R_O_W_).	
		RECALL	
3	()	Ask for the 3 common objects named during registration above. Give 1 point for each correct answer. (Note: recall cannot be tested if all 3 objects were not remembered during registration.)	
		LANGUAGE	
2	()	Name a "pencil" and "watch"	(2 points)
1	()	Repeat the following: "No ifs, ands, or buts"	(1 point)
3	()	Follow a 3-stage command: "Take a paper in your right hand, fold it in half, and put it on the floor."	(3 points)
1	()	Read and obey the following: CLOSE YOUR EYES.	(1 point)
1	()	Write a sentence	(1 point)
1	()	Copy the following design:	(1 point)



Maximum Total Score 30	Total Score ___	Suggested guideline ³ for determining the severity of cognitive impairment:	
		Mild : MMSE ≥ 21	Moderate : MMSE 10-20
			Severe: MMSE ≤ 9
Expected decline in MMSE scores in untreated mild to moderate Alzheimer's patient is 2 to 4 points per year. ⁴			

References: 1. Folstein MF, Folstein SE, McHugh PR. "Mini-Mental State": a practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res.* 1975;12:196-198. 2. Cockrell JR, Folstein MF Mini-Mental State Examination (MMSE). *Psychopharm Bull.* 1988;24:689-692. 3. Ferris SH, Mackell JA, Mohs R, et al. A multicenter evaluation of new treatment efficacy instruments for Alzheimer's disease clinical trials: overview and general results. *Alzheimer Dis Assoc Disord.* 1997;11(suppl 2):S1-S12. 4. Doraiswamy PM. Current cholinergic therapy for symptoms of Alzheimer's disease. *Primary Psychiatry.* 1996;3:56-68.

CLOCK DRAWING TASK

Instructions

Scoring

Although various methods for scoring the Clock Drawing Task (CDT) have been described,^{1,2,3} a 0-4 point method⁴ is presented here, which is brief, sensitive, and easy to apply¹.

Draws closed circle:	Score 1 point
Place numbers in correct positions:	Score 1 point
Include all 12 correct numbers:	Score 1 point
Place hands in correct positions:	Score 1 point

Interpretation

Certain errors, such as grossly distorted contour or extraneous markings, are rarely produced by cognitively intact persons.³ **Clinical judgement must be applied, but a low score indicates the need for further evaluation.** It is important to note that any cut-off score is subjective and arbitrary, and classification errors may occur. However, it is unlikely that a perfectly drawn clock will be drawn by a cognitively impaired person. When in doubt, multiple sources of evidence should be examined.³

Examples of Clock Drawing

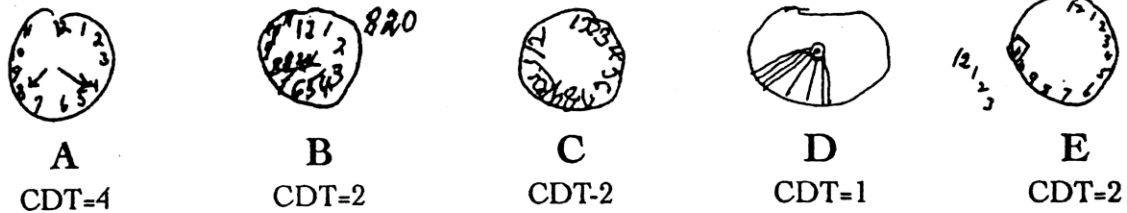


Figure: Examples of clock drawing by a normal elderly control (A) and patients with dementia (B-E). For these examples, patients were instructed to draw in the hands at twenty minutes after eight.

Next Step

Performance on this brief screening test does not establish criteria for dementia, but can be useful in determining whether further cognitive evaluations are necessary.⁴ If performance on clock drawing is impaired, a complete diagnostic evaluation for dementia (eg, DSM-IVTM⁶ criteria) should be considered.

References: 1. Tuokko H, Hadjistavropoulos T, Miller JA, et al. The Clock Test: a sensitive measure to differentiate normal elderly from those with Alzheimer disease. *J Am Geriatr Soc.* 1992;40:579-584. 2. Mendez MF, Ala T, Underwood KL. Development of scoring criteria for the Clock Drawing Task in Alzheimer's disease. *J Am Geriatr Soc.* 1992;40:1095-1099. 3. Nolan KA, Mohs RC. Screening for dementia in family practice. In *Alzheimer's Disease: A Guide to Practical Management, Part II*. Richter RW, Blass JP, eds. St. Louis, Mo: Mosby-Year Book, Inc; 1994:81-95. 4. Data on file. Pfizer Inc, New York, NY. 5. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. 4th ed. Washington, DC: American Psychiatric Association; 1994:142,143.