

Multi-Ethnic Study of Atherosclerosis



CASI

Cognitive Abilities Screening Instrument

Participant Id#:

Acrostic:

Tech ID#:

Date: / /
Month Day Year

Testing start time: :
(hr:min)

SCRIPT: "In this next set of questions, we are asking you to perform a simple memory test. As people get older, it is common to have slight memory problems, and it may just be a normal part of getting older. Some of the questions I will ask you are very easy and may even sound a little silly. Some of the questions are very hard, and nobody gets all correct. I have to ask you ALL the questions, so just do the best you can".

1. Where were you born?

City/Town:

1 Correct 0 Error/Refused 9 Not Att/Disabled

CITY/TOWN OF BIRTH (from previous records): _____

State/Country:

1 Correct 0 Error/Refused 9 Not Att/Disabled

2. When were you born?

Year:

2 Correct 1 Missed by 1-3 years 0 Missed by > 3 years 9 Not Att/Disabled

Month:

1 Correct 0 Error/Refused 9 Not Att/Disabled

Day:

1 Correct 0 Error/Refused 9 Not Att/Disabled

DATE OF BIRTH (from previous records): ___/___/___

3. How old are you?

2 Correct 1 Missed by 1-3 years 0 Missed by > 3 years 9 Not Att/Disabled

AGE (from previous records): _____ years (as of today's date).

4a. How many minutes are there in an hour? (score 2 if either question answered correctly)

2 Correct → Skip 4b
 0 Error/Refused → Continue with 4b
 9 Not Att/Disabled

b. How many days are there in a year?

2 Correct
 0 Error/Refused
 9 Not Att/Disabled

5. In what direction does the sun set? (if confused, may provide 4 choices)

NOTE: *If the participant seems confused, provide the four choices "north, south, east, west". If the participant points, ask "Is that north, south, east or west?"*

- 2 Correct 0 Error/Refused 9 Not Att/Disabled

6. I am going to say 3 words for you to remember. Repeat them after I have said all three

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
Shoes	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
Blue	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
Charity	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9

NOTE: If participant can't answer the first time, elaborate and repeat up to a total of 3 times. Score last performance.

"Let me say the three words again. They are... SHOES - something to wear, BLUE - a color, and CHARITY - a good personal quality. Now say the 3 words again".

7. I shall say some numbers, and you repeat what I say backwards. For example, if I say 1-2, you say 2-1. Ok?
Remember, you repeat what I say backwards

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. 1-2-3 (If unable, coach for 3-2-1, but score 0):	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
b. 6-8-2 (If score is 0 in both A and B , score C 0)	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 9
c. 3-5-2-9	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 9

8. What three words did I ask you to remember earlier?

a. Shoes

- 1.5 Spontaneous recall
1 After: "one word was something to wear"
.5 After: "Was it shoes, shirt, or socks?"
0 Still incorrect
9 Not attempted/disabled

b. Blue

- 1.5 Spontaneous recall
1 After: "one word was a color"
.5 After: "Was it blue, black, or brown?"
0 Still incorrect
9 Not attempted/disabled

c. Charity

- 1.5 Spontaneous recall
1 After: "one word was a good personal quality"
.5 After: "Was it honesty, charity, or modesty?"
0 Still incorrect
9 Not attempted/disabled

NOTE: Unless recall is perfect, give another reminder of the 3 words.

"Next I'm going to ask you to do some mental subtraction".

NOTE: For the first error only, score 0, but provide the correct answer. If subject asks examiner to repeat answer from previous step, provide the answer but score 0 at that step. Discontinue after 2 consecutive 0's for any reason and score the remaining steps as 0.

		Correct	Error/ Refused	Not Att/Disabled
9 a. From 100, take away 3 equals how many? (97)	<input type="text"/> <input type="text"/>	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
b. And take away 3 from that equals? (94)	<input type="text"/> <input type="text"/>	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
(If A and B are both scored 0 , score C 0)				
c. Repeat "And take away 3 again equals? (91)	<input type="text"/> <input type="text"/>	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
(ask 3 more times)				
(88)	<input type="text"/> <input type="text"/>	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
(85)	<input type="text"/> <input type="text"/>	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9

10. What is today's date? / /
 month day year

TODAY'S DATE: ___/___/_____

- | | | |
|---|--|--|
| a. Year | b. Month | c. Date |
| 4 <input type="radio"/> Accurate | 2 <input type="radio"/> Accurate or within 5 days | 3 <input type="radio"/> Accurate (of the month) |
| 2 <input type="radio"/> Missed by 1 year | 1 <input type="radio"/> Missed by 1 month | 2 <input type="radio"/> Missed 1 or 2 days |
| 1 <input type="radio"/> Missed by 2-5 years | 0 <input type="radio"/> Missed by 2 or more months | 1 <input type="radio"/> Missed by 3-5 days |
| 0 <input type="radio"/> Missed by 6 or more years | 9 <input type="radio"/> Not attempted/disabled | 0 <input type="radio"/> Missed by 6 or more days |
| 9 <input type="radio"/> Not attempted/disabled | | 9 <input type="radio"/> Not attempted/disabled |

11. What day of the week is today? 1 Correct 0 Error/Refused 9 Not Att/Disabled

DAY OF THE WEEK: _____

12. What season of the year is it? 1 Accurate within 1 month 0 Missed by > 1 month 9 Not attempted/disabled

SEASON: _____

NOTE: Use chart to assist in correct response. If not immediately provided, say "Is is Spring, Summer, Fall or Winter?"

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
13 a. What <u>State</u> are we in ?	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 9
b. What <u>City/Town/Village</u> are we in ?	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 9
c. Is this place a clinic, store, or home?	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9

NOTE: If the participant gives no response in 10 seconds and there are still at least 10 seconds of remaining time, gently remind him only once "What (other) animals have 4 legs?". For the first incorrect answer, remind the participant "I want you to name four-legged animals".

14. What animals have 4 legs?
Tell me as many as you can. (30 seconds)

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total correct responses

" The next set of questions is about how 2 things are alike. For example, an orange and a banana - the way that they are alike is that they are both fruit.

15. An orange and a banana are both fruit. (pause for 2 sec., then ask:)
(coach for correct answer if needed for "a" only)

a. An arm and a leg are both... ?

- 2 Body parts, limbs, extremities
1 Long, bend, muscles, bones, etc.
0 Incorrect/Don't Know
9 Not attempted/disabled

RECORD RESPONSE HERE: _____

c. Eating and sleeping are both... ?

- 2 Necessary bodily functions
1 Other correct answer
0 Incorrect/Don't Know
9 Not attempted/disabled

RECORD RESPONSE HERE: _____

b. Laughing and crying are both... ?

- 2 Expressions of feelings/emotions
1 Other correct answer
0 Incorrect/Don't Know
9 Not attempted/disabled

RECORD RESPONSE HERE: _____

- 16a. What actions would you take if you saw your neighbor's house catching fire? (prompt "What else might you do? once only, if necessary)

NOTE: Score 1 point (up to 2) for each correct responses: call 911, alert fire/police department, save/alert residents, help put out fire, safeguard your own property/family, alert neighbors, try to help.

No. of appropriate actions: 0 1 2

- b. What actions would you take if you lost a borrowed umbrella?
(1 point for each category of actions)

- Inform/Apoloige 1 Correct 0 Error/Refused 9 Not Att/Disabled
Replace/Compensate 1 Correct 0 Error/Refused 9 Not Att/Disabled

- c. What would you do if you found an envelope that was sealed, addressed and had a new stamp?

- 2 Mail
1 Try to locate the owner
0 Inappropriate action
9 Not attempted/disabled

17. Repeat exactly what I say:

a. "He would like to go home."

- 2 Correct
- 1 1 or 2 missed/wrong words
- 0 3 or more missed/wrong words
- 9 Not attempted/disabled

NOTE: For each part of 17b, score 1 only if repeated exactly as given

b. Now repeat ...

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
"This yellow circle	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
is heavier than	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
blue square"	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9

18. Please do this: (Point to statement "Raise your Hand")

- 1.5 Raises hand without prompting → "Thank you, you can put it down now"
- 1 Raises hand after prompting
- .5 Reads correctly, but does not raise hand
- 0 Neither reads nor obeys
- 9 Not attempted/disabled

19. Let me have a sample of your handwriting. Please write: (He) would like to go home. (1 min.)
(may dictate 1 word at a time if necessary)

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. would	<input type="radio"/> .5	<input type="radio"/> 0	<input type="radio"/> 9
b. like	<input type="radio"/> .5	<input type="radio"/> 0	<input type="radio"/> 9
c. to	<input type="radio"/> .5	<input type="radio"/> 0	<input type="radio"/> 9
d. go	<input type="radio"/> .5	<input type="radio"/> 0	<input type="radio"/> 9
e. home	<input type="radio"/> .5	<input type="radio"/> 0	<input type="radio"/> 9

HAND USED TO WRITE SENTENCE: _____ *right* _____ *left*

20. Please copy this: (show pentagons - 1 minute)

NOTE: For right-handed persons, present the sample on their left side. For left-handed persons, present the sample on their right side.

a. Left Pentagon

- 4 5 approx. equal sides
- 3 5 but un-equal (>2:1) sides
- 2 Any other enclosed figure
- 1 2 or more lines but without closure
- 0 Less than 2 lines
- 9 Not attempted/disabled

b. Right Pentagon

- 4 5 approx. equal sides
- 3 5 but un-equal (>2:1) sides
- 2 Any other enclosed figure
- 1 2 or more lines but without closure
- 0 Less than 2 lines
- 9 Not attempted/disabled

c. Intersections

- 2 4 cornered
- 1 Not 4-cornered enclosure
- 0 No enclosure
- 9 Not attempted/disabled

21. Take this paper with your:

NOTE: For question 21, do not repeat any part of the command. (Use non-dominant hand)

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. (left)/(right) hand	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
b. fold it in half, and	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9
c. hand it back to me	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 9

22. What three words did I ask you to remember earlier?

a. Shoes

- 1.5 Spontaneous recall
- 1 After: "one word was something to wear"
- .5 After: "Was it **shoes, shirt, or socks**'?"
- 0 Still incorrect
- 9 Not attempted/disabled

b. Blue

- 1.5 Spontaneous recall
- 1 After: "one word was a color"
- .5 After: "Was it **blue, black, or brown**"?"
- 0 Still incorrect
- 9 Not attempted/disabled

c. Charity

- 1.5 Spontaneous recall
- 1 After: "one word was a good personal quality"
- .5 After: "Was it **honesty, charity, or modesty**"?"
- 0 Still incorrect
- 9 Not attempted/disabled

23. What do we call this part of the face/body? (2 seconds each)

NOTE: Ask this while pointing to the appropriate part on your own body. Do not repeat.

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. forehead	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
b. chin	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
c. shoulder	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
d. elbow	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
e. wrist	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9

24. What is this? (show one at a time)

NOTE: Present one item at a time and ask the participant to name it. If the participant cannot name an object in 2 seconds, put it in the participant's hand and ask "*What do you call this?*" If he/she still cannot name it, wait 4 seconds, say (for key) "*It is a key... say key*".

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. spoon	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
b. coin	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
c. toothbrush	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
d. key	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9
e. comb	<input type="radio"/> .3	<input type="radio"/> 0	<input type="radio"/> 9

Total number of objects either named spontaneously or repeated perfectly after coaching:

(max. 5)

25. Remember these 5 objects. (Wait for 5 sec., cover, then ask "*What 5 objects did I just show you?*". Any order is OK)

NOTE: Terminate testing when the participant has reported 5 objects (including incorrect names) or when the participant cannot recall any additional item in 5 seconds.

	<u>Correct</u>	<u>Error/ Refused</u>	<u>Not Att/Disabled</u>
a. spoon	<input type="radio"/> .6	<input type="radio"/> 0	<input type="radio"/> 9
b. coin	<input type="radio"/> .6	<input type="radio"/> 0	<input type="radio"/> 9
c. toothbrush	<input type="radio"/> .6	<input type="radio"/> 0	<input type="radio"/> 9
d. key	<input type="radio"/> .6	<input type="radio"/> 0	<input type="radio"/> 9
e. comb	<input type="radio"/> .6	<input type="radio"/> 0	<input type="radio"/> 9

26. Once again, where were you born? (**If this matches with Q1**, assume it is correct)

1 Correct 0 Error/Refused 9 Not Att/Disabled

" Those are all the questions we have on this examination. Thank you for completing them for us".

Finish time (hr:min):

		:		
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Duration (minutes)

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VALIDITY OF SCORE

- 1 Valid
- 2 Probably invalid: poor hearing
- 3 Probably invalid: poor eyesight
- 4 Probably invalid: impaired motor control
- 5 Probably invalid: language barrier
- 6 Probably invalid: impaired alertness and attentiveness
- 7 Probably invalid: significant physical/mental discomfort
- 8 Probably invalid: other reasons

specify:

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RAISE YOUR HAND

