

Cognitive Screening Assessment (MoCA-Aligned, Self-Adapted AI Version)

Purpose: Screen for possible cognitive difficulties

Domains: Attention, Memory, Executive Function, Language

Time frame: *Right now / today*

Nature: Screening only – NOT diagnosis

Instruction to user:

The following tasks check attention, memory, and thinking skills.

There are **no right or wrong results**.

Please answer to the best of your ability.

SECTION 1: Attention & Concentration

Q1. Sustained attention (number repetition)

Please repeat the following number sequence exactly as shown:

7 – 2 – 9 – 4

Options:

- **1** – I repeated the sequence correctly.
 - **0** – I could not repeat the sequence correctly.
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Q2. Mental focus (backward sequence)

Now repeat this sequence in reverse order:

5 – 1 – 8

Correct answer: **8 – 1 – 5**

Options:

- **1** – I repeated the sequence correctly in reverse.
 - **0** – I could not repeat the sequence correctly.
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Q3. Selective attention (target detection)

Please count how many times the letter “A” appears in the sequence below:

F – A – B – C – A – D – E – A – G

Options:

- **1** – My answer was correct (3 times).
 - **0** – My answer was incorrect.
-

SECTION 2: Executive Function (Thinking & Flexibility)

Q4. Category switching

Which option best completes the pattern?

Dog → Cat → Dog → Cat → ?

Options:

- **1** – Dog
 - **0** – Any other answer
-

Q5. Logical sequencing

Which comes next in the series?

2 → 4 → 6 → 8 → ?

Options:

- **1** – 10
 - **0** – Any other answer
-

SECTION 3: Memory (Short-Term Recall)

Q6. Word learning (presentation)

Please read and remember these words:

Apple – Chair – River – Train – Coin

No scoring here — used for later recall.

Q7. Delayed recall (after other questions)

Which of the following words do you remember seeing earlier?

Options (select all that apply):

- Apple
- Chair
- River
- Train
- Coin
- Book
- Phone

Scoring:

- **1 point per correct word recalled / 0 points for incorrect selections {Max: 5 points}**

SECTION 4: Language

Q8. Object understanding

Which word best describes both a bicycle and a car?

Options:

- **1** – Vehicle
 - **0** – Any other answer
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Q9. Sentence comprehension

Which sentence makes the most sense?

Options:

- **1** – “The child drank water because they were thirsty.”
 - **0** – “The child drank water because it was sleeping.”
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SECTION 5: Orientation (Awareness)

Q10. Date awareness

What is today's date?

Options:

- **1** – I answered correctly.
 - **0** – I answered incorrectly or was unsure.
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Q11. Place awareness

Where are you right now?

Options:

- **1** – I correctly identified my location (home, office, city, etc.).
 - **0** – I could not clearly identify my location.
-

Scoring Logic (AI-Ready)

Total Cognitive Screening Score = Sum of all item scores

Maximum Score = 12

Interpretation (SCREENING ONLY)

Score Range Interpretation

- | | |
|----------|--|
| 10–12 | No significant cognitive difficulty detected |
| 7–9 | Mild cognitive difficulty – monitor |
| ≤ 6 | Possible cognitive concern – recommend professional assessment |

This does NOT diagnose dementia, MCI, or neurological disease.

Mandatory AI Safeguards

AI must:

- **✗** Never say “cognitive impairment”
- **✗** Never mention dementia or disease
- **✓** Say:

“Your responses suggest possible difficulty with attention or memory. This is only a screening result.”

- Escalate **only if**:
 - Score ≤ 6 **and**
 - User reports functional difficulty

How AI Uses This (Real Value)

- Detect **attention issues** (students, burnout)
- Detect **brain fog** (stress, depression, sleep loss)
- Track **cognitive changes over time**
- Decide whether to suggest:
 - Sleep screening
 - Depression screening
 - Neurology / psychology referral

Panel-Ready One-Liner

“We use a self-adapted, MoCA-aligned cognitive screener to flag possible attention and memory difficulties, strictly for screening and referral, not diagnosis.”