

# MoCA

COGNITIVE ASSESSMENT



THE NEW STANDARD IS HERE



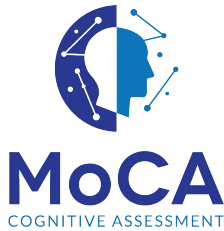
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[MOCATEST.ORG](http://MOCATEST.ORG)



WELCOME

TO BETTER  
PATIENT CARE



We are a part of an extraordinary time in healthcare history. Disease can be detected earlier, with more sensitivity, and with better data— improving patients’ lives more than we could have imagined.

Since its inception in 1996, the Montreal Cognitive Assessment (MoCA) has garnered worldwide recognition as a superior cognitive screening test for Alzheimer’s and other disorders, adopted by many of the greatest healthcare institutions in the world including Harvard, the Cleveland Clinic, Mayo Clinic, and the National Institute of Health.

Our mission has always been to provide the most sensitive mild cognitive impairment screening available. Now, to better serve our growing community, we’re pleased to announce a formal training and certification process, further strengthening the validity and accuracy of the test.

The move toward certification imagines a better future for cognitive testing: mastery-level proficiency that benefits raters, the test, and our patients.

On behalf of the MoCA team, clinical staff and the patients we all serve, we look forward to shaping healthier futures, together.

Warmest regards,

**Ziad Nasreddine MD, Neurologist**  
MoCA Copyright Owner  
Director of MoCA Clinic and Institute

# + A MORE PRECISE PICTURE

The earliest, most accurate  
cognitive impairment detection.

We have the ability to improve our patients' lives—sooner.

MoCA represents a breakthrough in the early, accurate detection of cognitive disorders that afflict millions of subjects each year. The most sensitive test available, MoCA can detect Alzheimer's disease up to two years earlier than other instruments, such as the MMSE.

Offered in both paper and app formats, MoCA quickly assesses a patient's cognitive abilities with 30 questions that analyze more areas of function than any other test. This capability helps detect disorder earlier, more accurately, and allows treatment decisions to happen faster.



**OVER 500 STUDIES HAVE SHOWN**  
that **MoCA** is superior to existing cognitive screening tools to detect Alzheimer's disease and 20 other disorders such as stroke, diabetes, high blood pressure, heart disease, sleep apnea, and kidney disease.



**MoCA**  
MONTREAL  
COGNITIVE ASSESSMENT  
TRAINING  
VERSION 8.1

**STEP-BY-STEP TOUR**

**Alternating Trail Making - Anatomy & Pathologies**



- Alzheimer's disease
- Frontal-subcortical vascular disease
- Frontotemporal dementia
- Lewy body dementia

Click on the desired zone to launch an explanation.

MONTREAL COGNITIVE ASSESSMENT (MoCA)





# WHAT CAN MoCA DETECT?

By evaluating several cognitive domains that others do not, MoCA is a proven, powerful cognitive screening tool that assesses:

- + Short term memory
- + Visuospatial abilities
- + Executive functions
- + Attention, concentration, and working memory
- + Language
- + Orientation to time and place



MoCA can uncover cognitive impairment associated with some of the most debilitating disorders, including:

Alzheimer's disease

Parkinson's disease

Huntington's disease

Lewy Body

VCI/Stroke

Fronto-temporal dementia

Brain metastasis

ALS

Sleep behavior disorder

Brain tumors

Multiple sclerosis

Head trauma

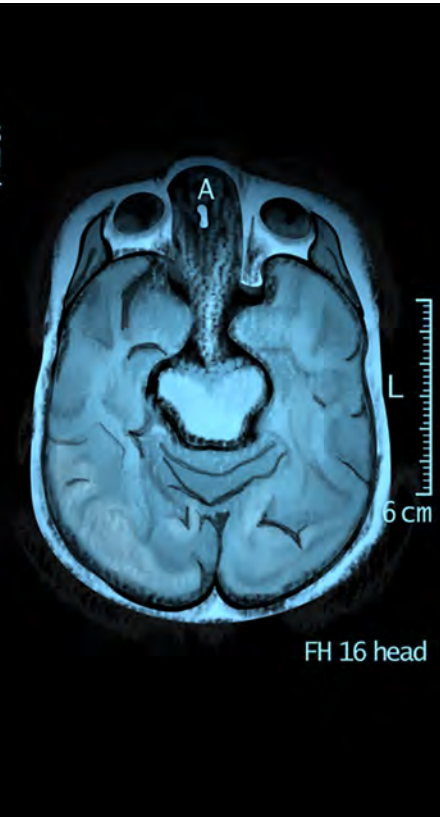
Depression

Schizophrenia

Heart failure

Substance abuse

HIV

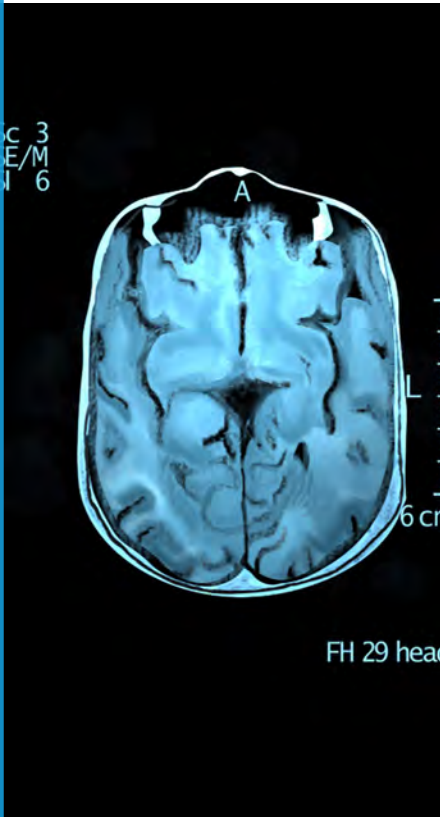


FH 16 head

Sc 3  
SE/M  
SI 5

# WHY USE MoCA SCREENING TOOL?

Sc 3  
SE/M  
SI 6



FH 29 head





- + **The Most Sensitive Cognitive Screening Test Available.** MoCA is the most sensitive test available for detecting Alzheimer’s disease and other disorders, measuring functions not presently considered by the MMSE.
- + **Early Detection, Better Treatment.** 25% of the population at age 75 suffers from Alzheimer’s disease or a related dementia. As MoCA detects cognitive impairment up to 2 years earlier than other tools, this helps clinicians, patients and their families coordinate more preventative treatments, greatly improving quality of life.
- + **More Accuracy and Validity.** The move to mandatory training and certification for administrators imagines a new landscape for testing: administrator confidence improves, the test is more valid, and patients receive better care. Liabilities and implications of misdiagnosis from improper scoring are diminished.
- + **Fully Automated Digital Application.** Test users can take advantage of a digital application that interprets results immediately and automatically, resulting in less room for error, less training needed and faster, more accurate results. With the app, users can:
  - Automatically score.
  - Review important instructions for each question.
  - Track patient processing speed and monitor progression long-term.
  - Integrate item-level responses with Excel and other digital patient management systems, useful for clinical monitoring and research analyses.
- + **Straight-forward and Simple to Begin.** The process to begin administering the test is quick.
  1. Create a MoCA account by visiting [www.mocatest.org](http://www.mocatest.org)
  2. Download the free paper versions or the app, depending on your operational needs.
  3. Take 1-hour online training and certification program (group certification available).
  4. Complete brief MoCA certification exam
  5. Interpret and track results.



# The MoCA App

## TECHNOLOGY SPOTLIGHT:

It's no secret, technology can be cumbersome, but it has its advantages. The MoCA App provides test raters with considerable benefits not available with the paper version, saving time, reducing error, and improving diagnosis.

### **DETAILED INSTRUCTION:**

Each item is presented on its own screen with complete instructions, compared to the paper version where instructions live within a separate 5-page document.

### **AUTOMATIC SCORING:**

Some items such as serial 7, Letter A tapping, Verbal fluency, MIS Score, Total score, Timed score are automatically scored by the app, which reduces scoring errors

## INTERPRETIVE ALGORITHM:

An interpretation algorithm is built-in, which helps the clinician identify different patterns of cognitive impairment, compared to an ECG report that summarizes findings.



## INTEGRATION:

Item-level data from the app are exportable as a PDF that can be uploaded to an EMR, or to excel for further research and analysis.



# WHO CAN USE IT?

Health professionals from institutions worldwide have implemented MoCA as part of their standard practice for early cognitive impairment detection, including:

- **Neurologists**
- **Speech-Language Pathologists**
- **Geriatricians**
- **Occupational Therapists**
- **Family Practice Physicians**
- **Psychologists**
- **Nurses**



## WHICH INSTITUTIONS ADMINISTER **MoCA** TODAY?

The Cleveland Clinic

Harvard

UCLA

Oxford

National Institute  
of Health

National Institute  
of Aging

National Alzheimer's

Coordinating Centers

Alzheimer's Disease  
Centers

Unified Data Set  
ADNI (Alzheimer  
disease Neuro imaging  
Initiative)

The White House/  
Walter Reed Army  
Medical Center

Mayo Clinic

U.S. Veterans Affairs  
Hospitals (largest  
integrated hospital  
network in America)

Karolinska Institute

And many more



# MoCA

# MILESTONES:

## A History of Innovation

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### 1992

During residency at Sherbrooke University, followed by fellowship at UCLA, Dr. Nasreddine recognizes the need for a more comprehensive cognitive screening tool.

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### 1996

The first version of MoCA is released.

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### 2000

MoCA achieves its first validation-excellence in distinguishing impairment amongst consecutive patients and control groups.

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### 2003

A new study confirms the ability to distinguish normal controls from subjects with Mild Cognitive Impairment or Mild Alzheimer's disease. [1]

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### 2005

The MoCA Validation Study is identified by Thomson Reuters' Essential Science Indicators as one of the most cited papers in mild cognitive impairment research. [1]

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### 2006

MoCA is recommended by the NIH and Canadian Stroke Consortium for Vascular Cognitive Impairment.

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### 2007

The Canadian Consensus Conference for Diagnosis and Treatment of Dementia Guidelines for Alzheimer's Disease recommends MoCA.

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### 2013

MoCA is named in Canada's "Top Innovations in Alzheimer's Research" report. [2]

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### 2018

White House and doctors worldwide select MoCA as the preferred test for screenings.

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### TODAY

MoCA is used in almost every country in over 65 languages and dialects. The most reliable screening tool for early cognitive impairment with over 500 research papers showing its superiority over other tools.

[1] Nasreddine et al.(2005), JAGS

[2] Canadian Institute of Health Research



# MoCA vs. MMSE

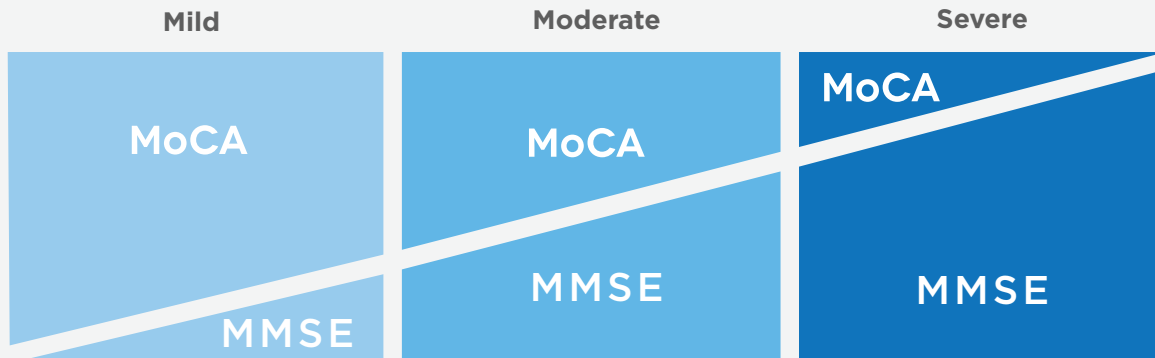
## + The Power in More Precision

Developed in 1975, the Mini-Mental State Exam (MMSE) is a 30-point questionnaire widely used to detect cognitive impairment in hospitals, clinical and research environments.

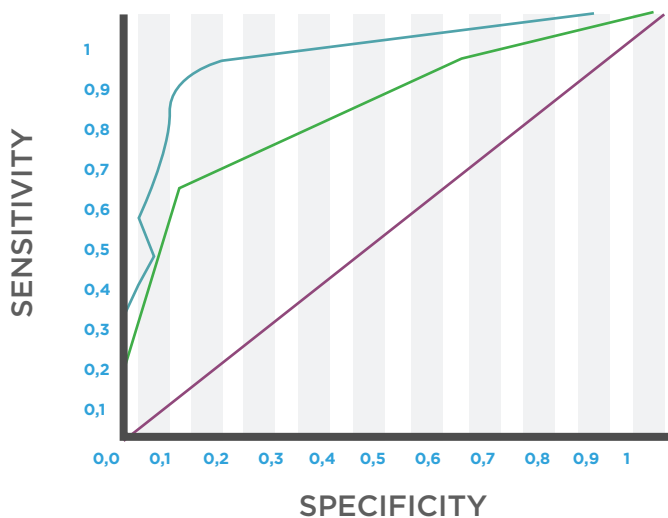
With more refined questioning than the MMSE, MoCA operates as a cognitive scan assessing multiple brain areas and functions, thereby rendering it more sensitive and more useful in the early and mild stages of progressive cognitive disorders. The MMSE can be complimentary to MoCA, as it assesses patients in the moderate to severe stage.

Certain elements make MoCA more sensitive than the MMSE, thus an ability to detect earlier and more mild impairments. These include:

## COGNITIVE IMPAIRMENT



- Memory testing that involves more words (5 instead of 3).
- Fewer learning trials (2 instead of up to 6).
- Longer delay before recall (2-3 min instead of 30 seconds).
- Executive functions assessed by MoCA and not by MMSE such as trail, clock, abstraction, letter fluency.
- Higher-level language abilities with complex sentences, repetition, naming, and letter fluency.
- Complex visuospatial processing (3D cube and clock drawings).



+

*“MoCA has a 90% accuracy rate (sensitivity) in detecting mild cognitive impairment, compared to 18% for the MMSE” (Nasreddine et al., 2005, JAGS).*

MoCA

MMSE

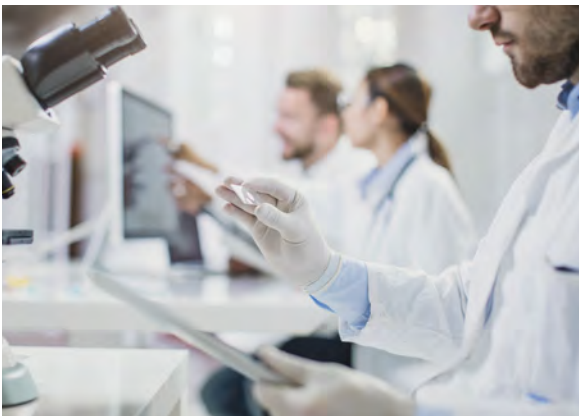


# MoCA WORLD MEMORY PROJECT

Your participation helps build the world's largest database for cognitive disorders.



MoCA has a vision to address cognitive impairment by creating a globally accessible database linked to demographic information and medical conditions from around the world, as well as their treatment, using automatic imports from MoCA's electronic versions.







By analyzing freely accessible encrypted data, researchers and clinicians around the world will be able to determine important environmental or medical conditions that could affect cognition. Preventative treatments can then be devised earlier, and with better efficacy.

Your participation in MoCA makes it possible to create a healthier global community.



# A FOUNDATION FOR TRAINING

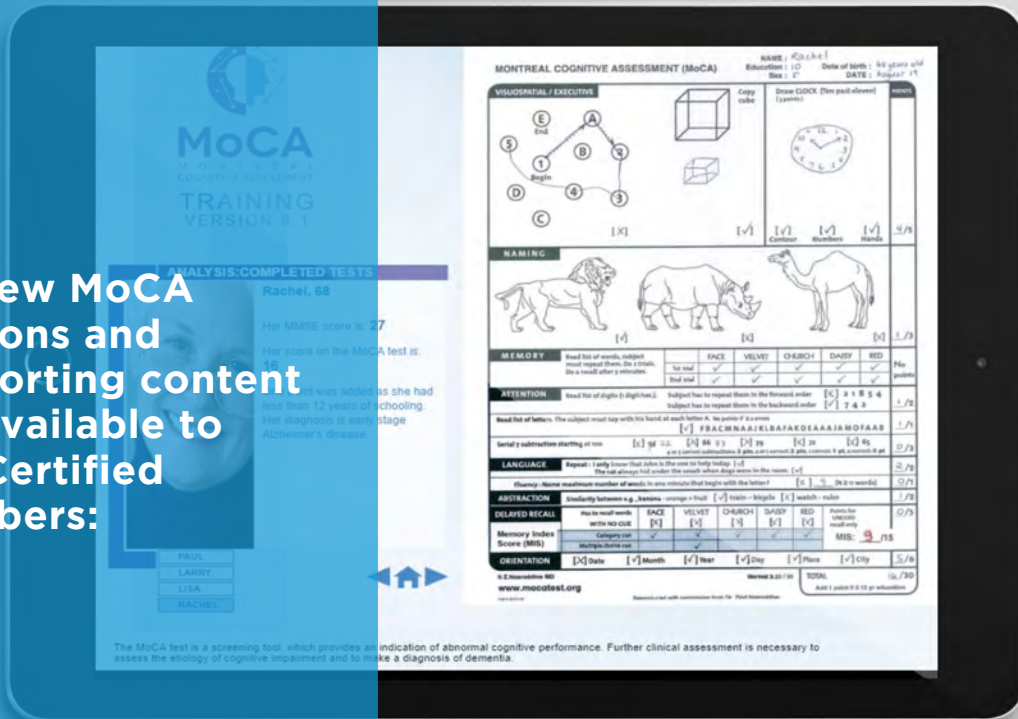


Professional certification furthers our commitment to excellence and quality for our growing community of test users. Training and certification instills confidence in administrators, which improves the validity of the MoCA test and elevates the level of care provided to your patients.

***Become a Trained  
and Certified MoCA  
Member Today***

# Training is administered online and can be completed in about 1 hour

All new MoCA versions and supporting content are available to our Certified Members:



- New training content & best practices
- Digital versions
- Cultural adaptations
- Updated versions for subjects with visual or hearing impairment, or illiteracy
- Mini-MoCA version in development
- MoCA Drive Project, predicting fitness to drive a vehicle.
- MoCA ACE, providing normative data for Age, Culture, and Education.

**Thank you for supporting our research and development of cognitive impairment assessment solutions.**





# A FOUNDATION FOR GREATER RESULTS



## FEES:

- + **Training, Certification, and Access to all MoCA Variations:** \$ 150 per person
- + **Free for Students, Faculty Members, and Academic Researchers**
- + **Reduced Rates for Groups**
- + **Digital MoCA App:**  
free to download; 30 days free;  
\$10 per rater/month

# Reduced Rates **FOR GROUPS**

Preferred rates are available for qualified institutions to facilitate training and certifications for their personnel:

- 10% reduced rate for 10 to 99 participants
- 15% reduced rate for 100 to 499 participants
- Please contact us for 500 or more participants
- Prices and rates may vary in the future

## Students, Faculty, Academic Researchers: **FREE FOR ACADEMIA**

Available to students, residents, fellows, professors, and academic researchers at no cost. Visit our website to submit required proof of status.

## MANDATORY **CERTIFICATION**

In order to maintain test validity and excellence in administration, training and certification is required to access and administer all paper and digital versions of MoCA.



**DECADES OF INNOVATION,  
LEADERSHIP, AND DEDICATION**

# OUR FOUNDER



Dr. Ziad Nasreddine is a board-certified neurologist and graduate of the University of Sherbrooke, Québec. He completed a fellowship in Cognitive Neurology/ Neurobehavior at UCLA.

In 1992, during his residency, Dr. Nasreddine recognized the need for a more comprehensive cognitive screening tool that could better serve clinical settings. He began the journey of creating his own, more responsive test. In 1996, Dr. Nasreddine released the first version of a more specialized screen that could directly support specialty clinics with a high volume of patients: the Montreal Cognitive Assessment.

Today, MoCA created by Dr. Nasreddine is used in almost every country and is available in nearly 100 languages and dialects, in hospitals, research facilities, and clinical settings around the world.



## WE LOOK FORWARD TO HEARING FROM YOU

The MoCA team is committed to serving its growing community of hospitals, research facilities, and institutions who make a difference in the lives of their patients, every day.

Please feel free to contact us any time with questions regarding MoCA, to discuss training and certification, group licensing or any general inquiries.

**info@mocatest.org**  
**mocatest.org**

**4896 Taschereau Blvd | Suite 230**  
**Greenfield Park, Québec**  
**Canada J4V 2J2**

