



**CDT**open

At-Home. Objective. Simple.  
Less Than \$1 Per Month.

Detect Early Signs of Dementia With  
Pen + Paper + Smartphone Camera

# The Diagnostic Process for Dementia is Fractured and Lengthy

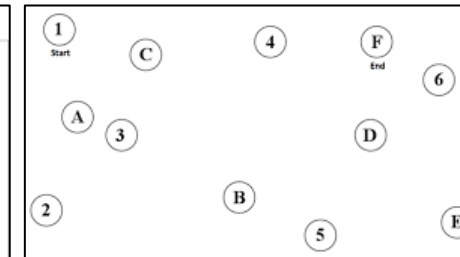
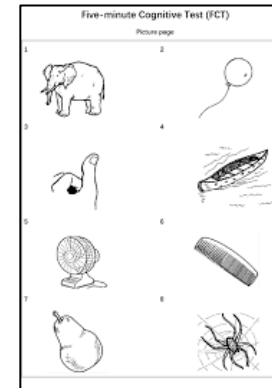
Current protocols are highly subjective and time-consuming...

Is this healthy aging or dementia?

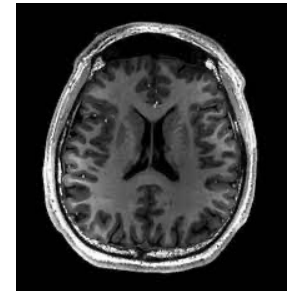
How can I detect early dementia at home?



## Verbal/Visual Tests



## MRI



Non-native English speakers dislike verbal reasoning tests for dementia.

It's hard to hear & pronounce:

- Rhinoceros
- Yacht
- Lacrosse



# Verbal Reasoning Tests Can Miss Early Alzheimer's in Women

Alzheimer's, the most common form of dementia, affects male brains differently than female brains. Research has shown that female brains can handle more Alzheimer's damage than male ones before verbal reasoning is affected. Thus, **a drawing test may be better than verbal reasoning tests for detecting Alzheimer's in women.**

Caldwell JZK, Berg JL, Cummings JL, Banks SJ; Alzheimer's Disease Neuroimaging Initiative. "Moderating effects of sex on the impact of diagnosis and amyloid positivity on verbal memory and hippocampal volume." *Alzheimers Res Ther*. 2017 Sep 12;9(1):72.

Caldwell JZK, Berg JL, Shan G, Cummings JL, Banks SJ; Alzheimer's Disease Neuroimaging Initiative. "Sex Moderates the Impact of Diagnosis and Amyloid PET Positivity on Hippocampal Subfield Volume." *J Alzheimers Dis*. 2018;64(1):79-89.

Lin K.A., Choudhury K.R., Rathakrishnan B.G., Marks D.M., Petrella J.R., Doraiswamy P.M. "Marked gender differences in progression of mild cognitive impairment over 8 years." *Alzheimer's Dement Transl Res Clin Interv*. 2015;1:103-110.

Liesinger A.M., Graff-Radford N.R., Duara R., Carter R.E., Hanna Al-Shaikh F.S., Koga S. "Sex and age interact to determine clinicopathologic differences in Alzheimer's disease." *Acta Neuropathol*. 2018;136:873-885.



# The Solution: An At-Home OBJECTIVE Drawing Test

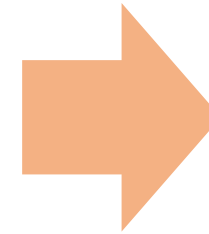
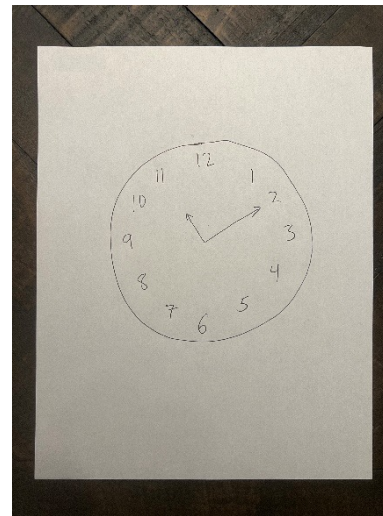
From your home or hospital, CDT Open can objectively measure hand-drawn clocks.

95% accurate in identifying normal vs abnormal clocks. When done monthly, can detect early signs of dementia.

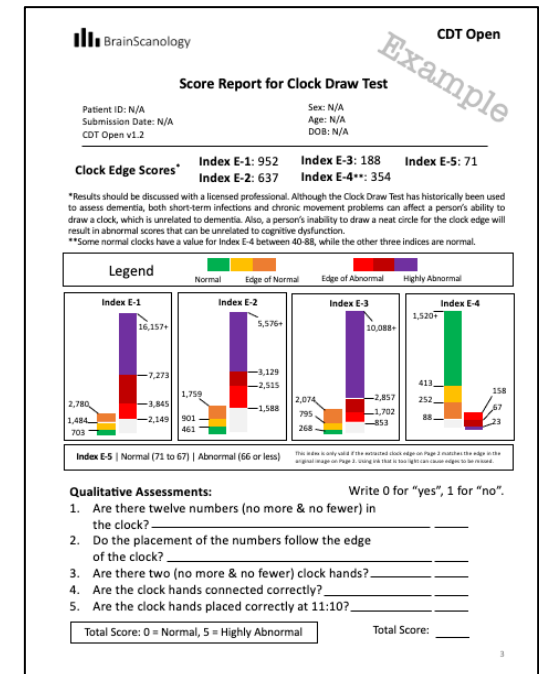
**Pen + Paper + Smartphone**

The image shows three hand-drawn clocks. The first is a standard, well-drawn clock labeled 'Healthy'. The second is a distorted, irregularly shaped clock labeled 'Alzheimer's'. The third is a clock with a very small, tight circle and a single hand, labeled 'Parkinson's'.

Upload Picture



Get an **OBJECTIVE** Score Report





# Benefits of Early Detection

## Prevention

- Cooking Accidents
  - Fire & Oil Burns
  - Knife Cuts
- Getting Lost After Shopping
  - Hypothermia
  - Car Accidents at Crosswalks
  - Muggings
- Falling & Breaking Bones
  - Dementia Affects Depth Judgement



# BrainScanology's Three CDT Products

## CDT Open

- For individual users.
- One clock analysis per 30 days.
- Must download and store each month's report.
- Can assign their account to their doctor's CDT Plus account.
- FREE

## CDT OpenMax

- For individual users.
- One clock analysis per 30 days.
- Can view and download ALL your past reports; including graphs of your scores over time.
- Can assign your account to your doctor's CDT Plus account.
- \$9.99/year (Less Than \$1/Month!)

## CDT Plus

- For clinicians and medical centers.
- View graphs of each patient's historical clock scores.
- Automated tracking that sends email & text alerts when patients' scores reach abnormal ranges.
- 3 Tiers: \$59.99/month to \$199/month

# Extra Benefits of Subscribing to OpenMax for Less Than \$1/month

1. All Your Clock Reports Are Stored in Your Account

2. Your Clock Scores Are Graphed Over Time For You to See

3. Monthly Handwriting Analysis to Detect Neurological Changes (Like for Parkinson's Disease)

BrainScanology CDT Open Feb  
 Score Report for Clock Draw Test  
 Patient ID: N/A, Submission Date: N/A, Sex: N/A, Age: N/A, DOB: N/A

BrainScanology CDT Open March  
 Score Report for Clock Draw Test  
 Patient ID: N/A, Submission Date: N/A, Sex: N/A, Age: N/A, DOB: N/A

BrainScanology CDT Open April  
 Score Report for Clock Draw Test  
 Patient ID: N/A, Submission Date: N/A, Sex: N/A, Age: N/A, DOB: N/A

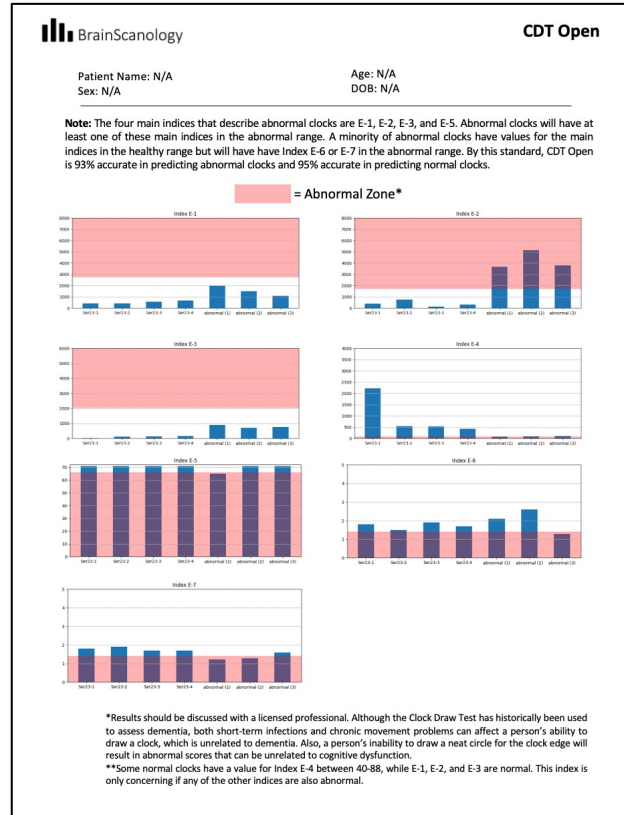
BrainScanology CDT Open May  
 Score Report for Clock Draw Test  
 Patient ID: N/A, Submission Date: N/A, Sex: N/A, Age: N/A, DOB: N/A

**Legend**  
 Normal (Green), Edge of Normal (Yellow), Edge of Abnormal (Red), Highly Abnormal (Dark Red)

**Index E-1**: 1,500 (Normal)  
**Index E-2**: 1,500 (Normal)  
**Index E-3**: 1,500 (Normal)  
**Index E-4**: 1,500 (Normal)  
**Index E-5**: 1,500 (Normal)  
**Index E-6**: 1,500 (Normal)  
**Index E-7**: 1,500 (Normal)

**Qualitative Assessments:**  
 1. Are there twelve numbers (no more & no fewer) in the clock?  
 2. Do the placement of the numbers follow the edge of the clock?  
 3. Are there two (no more & no fewer) clock hands?  
 4. Are the clock hands connected correctly?  
 5. Are the clock hands placed correctly at 11:10?

**Total Score:** 0 (Normal), 5 = Highly Abnormal



BrainScanology (Print on 8.5 in x 11 in Paper) Last Updated 01-14-23

**Instructions:**  
 • Print the number above each box inside of the box.  
 • Stay within the boxes.

**Handwriting Scores Will Also be Graphed Over Time For You to See**

**Legend:** = Abnormal Zone\*

**Results:** Handwritten numbers 1-11 are shown in boxes. Corresponding bar charts show scores for each index. Some indices (E-1, E-2, E-3, E-5) show red bars, indicating abnormal scores.

**\*Results should be discussed with a licensed professional. Although the Clock Draw Test has historically been used to assess dementia, both short-term infections and chronic movement problems can affect a person's ability to draw a clock, which is unrelated to dementia. Also, a person's inability to draw a neat circle for the clock edge will result in abnormal scores that can be unrelated to cognitive dysfunction.**  
**\*\*Some normal clocks have a value for Index E-4 between 40-88, while E-1, E-2, and E-3 are normal. This index is only concerning if any of the other indices are also abnormal.**

# Questions?

[clock@BrainScanology.com](mailto:clock@BrainScanology.com)

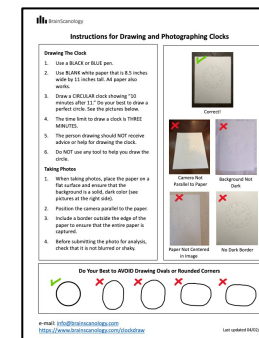
## Visit Our Website to Watch Video Tutorials:

- How to draw and submit clocks
- How CDT Open works
- Downloading instructions that were translated into different languages
- [Links to download the app on the App Store or Google Play Store](#)

<https://www.brainscanology.com/clockdraw>



Get Links to CDT Open on the App Store  
and Google Play Store.  
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Download Instructions for  
Drawing Clocks Correctly