Take Control of your Cognitive Health

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100,000,000,000 neurons
1,000,000,000,000,000,000 connections
How can we quickly assess what’s happening under the hood?
Neurocognitive tests

Take scientifically validated neurocognitive tests...
...and turn them into interactive games.

Eagleman Neuroscience Laboratory Baylor College of Medicine
Neurocognitive tests

Take scientifically validated neurocognitive tests...

...and turn them into interactive games.

<table>
<thead>
<tr>
<th>Reaction Time</th>
<th>Memory</th>
<th>Spatial Orientation</th>
<th>Attention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>Balance</td>
<td>Executive Function</td>
<td></td>
</tr>
</tbody>
</table>
Assess cognitive function with rapid, interactive tests
Flanker Test

Which way does the center arrow point?

Information processing  Selective attention  Inhibitory control
Digit Symbol Substitution Test

Match the symbol to the number below.

Cognitive processing  Attention
Stroop Test

Select the word **BLUE**

- RED
- RED
- GREEN
- PINK
- PURPLE
- ORANGE
- PINK
- RED
- ORANGE
- GREEN
- PINK
- BLUE

**Reaction speed**  **Selective attention**  **Executive function**
Trail Making AB Test

Visual processing  Attention  Task switching
Balance Test

Place thumbs on the blue circles. Keep dot in the target area.
Ebbinghaus Illusion

Move the sliders until the center circles are the same size.

Long range axon connections  Visual processing
Memory Span Test

Copy the sequence you see.

Short term memory  Attention
Provides results on-the-spot
Provides results on-the-spot
Provides results on-the-spot
Provides results on-the-spot
Test-retest reliability
Clinically Validated

- Backed by 20 years of research in the Eagleman Neuroscience Laboratory at BCM
- Normative database of over 10,000 individuals from ages 10-90, tested in-person by researchers.
- Excellent reliability, minimal practice effect.
- Can't cheat the test.
- Sensitivity & specificity better than any current assessment tool.
- Research at Texas Medical Center hospitals.
- Paper in peer review.

FDA Clearance in Progress

- BrainCheck is currently a wellness product, not regulated by FDA
  - We assess cognitive performance by domain (e.g. reaction speed, memory...)
  - Track changes over time.
  - Not a diagnostic tool – results are for informational purposes only.

- We are voluntarily seeking Medical Device Clearance
  - Expand our claims and acquire more customers.
  - Results can be used to aid in clinical decision-making.
  - Quality management system is up and running.
**Easy to Implement**

 Superior Technology, Mobile first, Cross-platform, HIPAA compliant, Highly scalable

**Set up account in minutes**
- Organizations can add new users one by one or upload a list of test takers using our upload tool.

**Administer tests**
- Very little training necessary for clinic staff to “administer” test
- Choose a platform for testing - iPad, iPhone or PC.
- Patients complete tests in 10 minutes.

**Share testing platform and results**
- Test takers get their own login so they can take the tests at home.
- Results will be delivered to physicians to review remotely.

**Fully modular, customizable, & integratable**
- We have a bank of assessments & screeners that can be combined into batteries for any use-case of any length
- Our API makes it easy to integrate with EMR and third-party systems

**Leverage data**
- We collect detailed neurocognitive signatures that we analyze at the population level for novel insights
- Combine BrainCheck data with other data sources to reveal diagnostic and recovery trends
Neurocognitive testing

- Quantify performance
- Track recovery
- Provide usable information in an easy format
At-home assessments

● Continuance of care
● Track cognitive health regularly
● Flag problems
● Emphasizes and standardizes brain healthcare
Advantages of computerized tests

- Quantify and track cognitive performance
- Easy administration
- Fine measurement
- Tests built from peer-reviewed science
- Secure & HIPPA compliant
- Web portal for results
- Low cost
- Some tests unlock only if user performs poorly on other tests
The importance of education

WHAT IS DEMENTIA?
MEMORY LOSS SERIES, PART 1

DR. DAVID EAGLEMAN
Founder & CSO, BrainCheck
Connecting the care team

Organization Plan
- Senior living, hospitals, and physician practices can administer tests and manage users

Personal Plan
- Individuals can test at home and add additional family members
- Share data with their organizations or doctors
- Receive notifications when a test has been taken or when it’s time to take a test

Enabling the Care Team
- Family members and caregivers can log in to BrainCheck and collaborate on care
BrainCheck has been featured in:

TechCrunch
Inc.
mobihealthnews
TEDx
Houston Public Media
npr Marketplace
Bloomberg Radio
FOX Business
HOUSTON CHRONICLE
conomy
TechRepublic
Louisville Innovation Summit
Most of us will encounter a cognitive health problem at some point: A concussion during a game, dementia as we age, or the temporary impairment that comes after surgery or as a result of a drug or medication.

**CONCUSSION**  
4 million U.S. Concussion cases annually

**DEMENTIA**  
5 million U.S. Dementia cases (45M worldwide)

**HEALTHCARE**  
35 million U.S. hospital visits annually

**PHARMA**  
200 million Americans on prescription drugs
Vision

When you go to the doctor, there are thousands of tests for physical health, but very few for brain health.

Our vision is for cognitive health assessment to be a routine part of health care.

- This will enable individuals and their physicians to be aware of changes early and empower them to take action
- The data that we collect will help advance the science of cognitive health, leading to new products and treatments that help people.
Vision

Cognitive Health

Steps
Sleep
Diet
Vision
Discover your Brain

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