

# MEMORY

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# What is Memory?

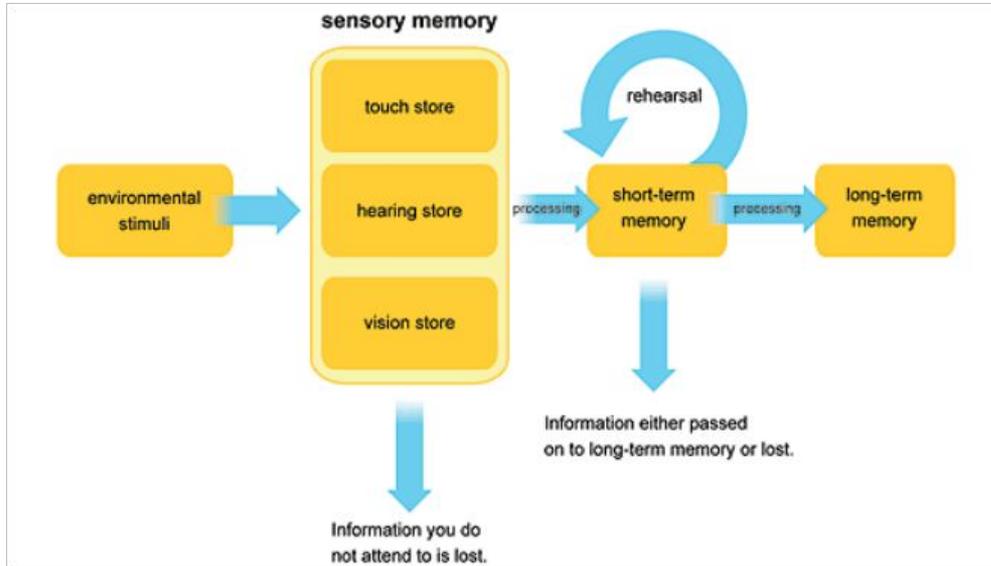
**Memory** is our ability to encode, store, retain and subsequently recall information and past experiences in the human brain

- A set of encoded neural connections in the brain. It is the re-creation or reconstruction of past experiences by the synchronous firing of neurons that were involved in the original experience.
- Typically no specific memories earlier than 3 years of age

**Collective Memory:** social group perpetuates itself through the knowledge that it transmits down the generations, either through oral tradition or through writing.

**External Memory:** computers, photos, digital styles

# How does it work?

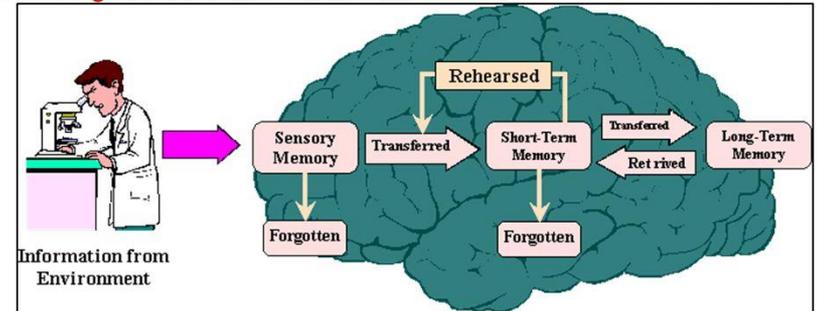
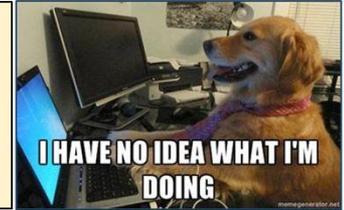


## How Does Memory Work?

### encoding, storage, & retrieval

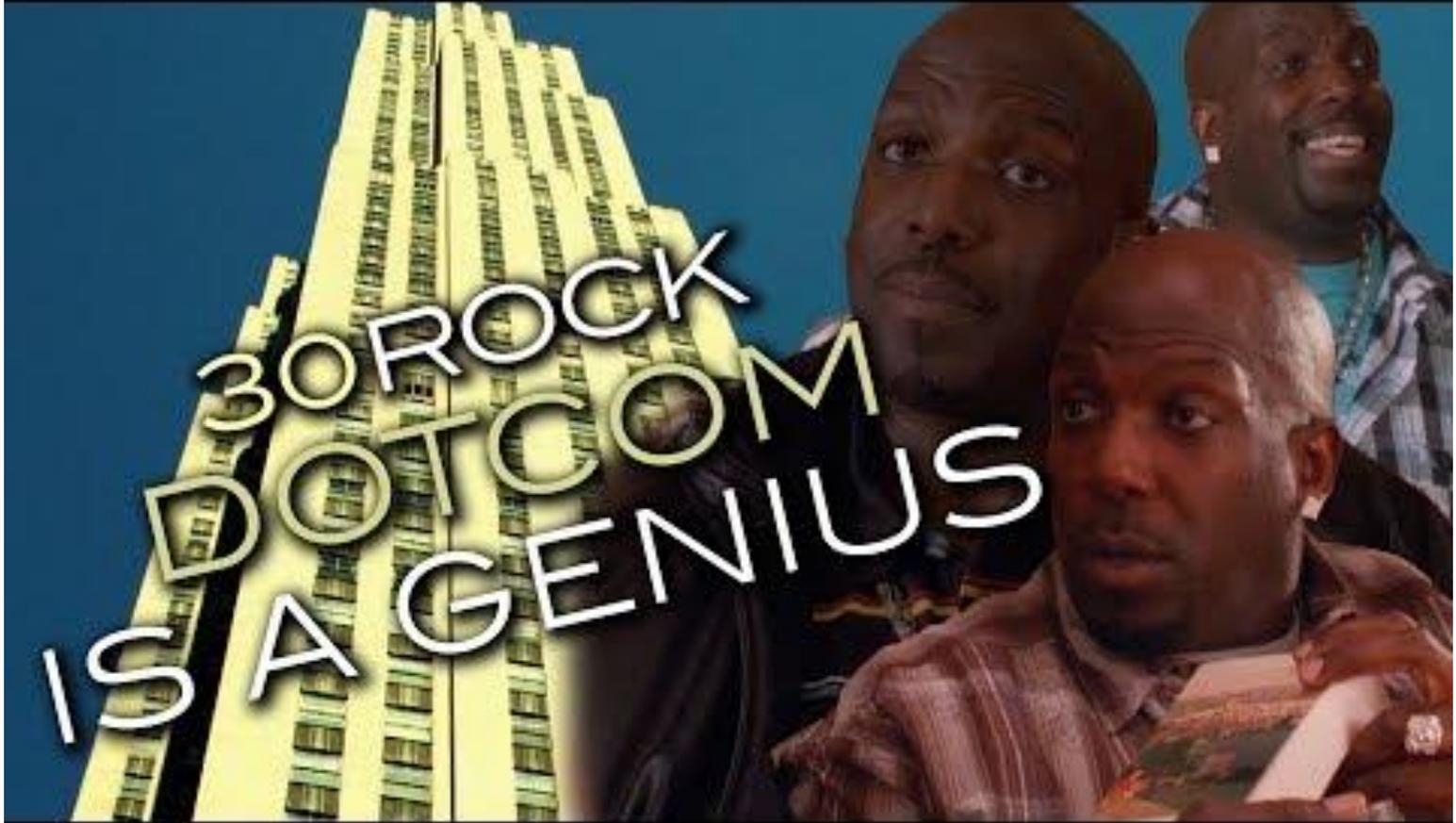
These are the processes by which we:

- get info in - **encoding**
- hang on to it - **storage**
- get it back out - **retrieval**



# Application

Henry



IS D30R0CK  
IS DOTCOM  
A GENIUS

Let's take a test...

(928) 603-2081

Here's another one....

# Last one, for now

Write what you hear and then turn the paper over

# Discuss...

Which did you remember best?

What was the hardest?

Do your results match up with what you know about yourself and how you learn best?

# Mandela Effect

Is this what you remember?

The image shows the logo for 'The Berenstain Bears'. The text 'The Berenstain Bears' is written in a teal, cursive font on a yellow background. A registered trademark symbol (®) is located at the end of the word 'Bears'. Below the text, the tops of several purple circles are visible, which are part of the characters' heads in the original logo.

*The Berenstain Bears*®

# Memory Enhancement

Bing

# Memory Enhancement



memory enhancement



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## Top Brain Boosting Supplements | Expert Reviews & Tips

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## Is Memory Enhancement Possible? 12 Simple Methods That Actually ...

<https://www.lifehack.org/809831/memory-enhancement>



## Memory enhancement

**Memory** improvement is the act of improving one's **memory**. Medical research of **memory** deficits and age-related **memory** loss has resulted in new explanations and treatment techniques to improve **memory**, including diet, exercise, stress management, cognitive therapy and pharmaceutical medications.

[Memory improvement - Wikipedia](#)  
Wikipedia

**Acupuncture** It is around one and half inches away from the eyebr... [▼](#)

# The Market

The market was valued at USD 2.3 Bn in 2015, and is expected to reach USD 11.6 Bn by 2024, expanding at a CAGR of 19.6% from 2016 to 2024.

- online stores held the largest market in the global brain health supplements market

## Drivers:

- Aging demographics in developed countries (i.e. Japan)
- Easy accessibility to digital markets
- Increasingly competitive environment for students, entrepreneurs, etc...



# Can Supplements Really Boost Memory

Common supplements: B vitamins (folic acid, B6, and B12), antioxidants (vitamins C and E, coenzyme Q10), herbal supplements (huperzine A, ginkgo biloba), and nutraceuticals (fish oil, curcumin, coconut oil)

Vitamin industry is not as regulated as the pharmaceutical

- No clear data that shows memory improvement from these substances

High doses of vitamin E have been shown to modestly help people who already have moderate dementia

- Side effects... Vitamin E at doses higher than 400 international units (IU) per day is risky for people with active cardiovascular disease or risk factors for it

# A Scam?

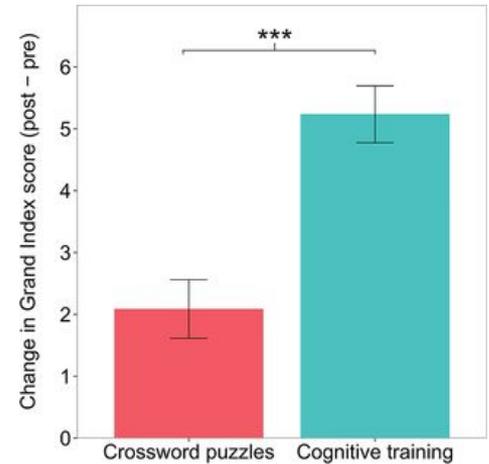
Even with limited evidence that supports supplements will enhance memory, companies are still aggressively marketing to customers on supplements that may not even work (or be detrimental). Should the FDA impose higher standards of testing for memory enhancement supplements?



# Brain Training

Does it actually work?

- While these brain-training programs may lead to short-term improvements in whatever task or specific game you've been practicing, they don't appear to strengthen or improve overall intelligence, memory, or other cognitive abilities.



# Other Approaches:

Zzzzz

Related search

good for memory

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Berries



Turmeric



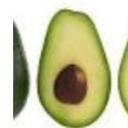
Dark  
chocolate



Broccoli



Blueberry



Avocado



Walnut

- sleep as a brain state optimizing memory consolidation, in opposition to the waking brain being optimized for encoding of memories.
- Consolidation originates from reactivation of recently encoded neuronal memory representations, which occur during SWS and transform respective representations for integration into long-term memory

Exercise improves mood and sleep, and reduces stress and anxiety. Problems in these areas frequently cause or contribute to cognitive impairment.

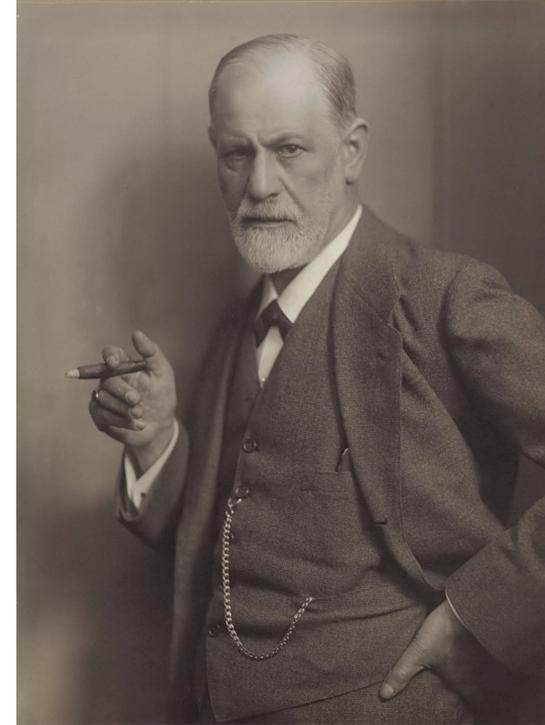
Diet: (NIH) “western diet is rich in saturated fat and refined carbohydrates... associated with reduced global cognitive function, cognitive decline, and dementia”

# Memory Repression

Henry

# Freud's idea of memory repression; controversy

- Freud's idea was basically: you repress memories of bad things, and your preventing these memories from coming back causes emotional, mental, or physical distress
- Has led to lots of scandals in the realm of court cases
  - Therapists helping patients "recall" memories → used in court cases but then turned out to be bogus



Sigmund Freud

Has anyone here identified yourselves as potentially having repressed memories? Have you ever actively tried to repress certain memories? How did you do so? Did it work?

Illness

# Dementia vs Alzheimer's

Dementia: the umbrella term for a decline in memory faculties that interfere with daily life

Alzheimer's:

- A progressive disease
- Begins with general memory issues
- Progresses to much more serious symptoms including the loss of speech
- Unclear exactly what happens, but the brain cells begin to malfunction

# Amnesia

**Amnesia** is a deficit in memory caused by brain damage, disease, or psychological trauma and can also be caused temporarily by the use of various sedatives and hypnotic drugs

- Typically problems with short term memory
- Caused by injury, alcohol, psychological trauma
- Similar symptoms to dementia, but not necessarily progressive
- Can return with time, but not always

# Implications of Memory

Sterling

# Memory and History



# Discussion

How do you believe memory and history are connected, if at all?

What about individual history? Thinking about diseases such as Alzheimer's or Dementia, how does the loss of memory change a person's identity?

What is legacy? How do you define it?

# References

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[http://www.human-memory.net/intro\\_what.html](http://www.human-memory.net/intro_what.html)