

Memory & Forgetfulness

We're back with another issue of Positive Pulse, the e-newsletter for everything to do with healthy living. This month's theme is memory.

- There are multiple types of memory that help us recall different kinds of information.
- There are many reasons why we forget information and ways to prevent this from occurring,

• Some simple tips and tricks can help us improve our memory over time.



Types of Memory

Sensory Memory

- There are three types of sensory memory: iconic, which is obtained through sight; echoic, which is auditory; and haptic, which is through touch.
- Typically your sensory memory only holds onto information for brief periods. Remembering the sensation of a person's touch or a sound you heard in passing is sensory memory.
- Sensory memory allows you to remember sensory information after the stimulation has ended. Researchers who classify memory more as stages than types believe that all other memories begin with the formation of sensory memories.
- When a sensory experience keeps recurring, and you start to attach other memories to it, the sensory experience stops living in your sensory memory. It might move to your short-term memory or more permanently to your long-term memory.

Short-term Memory

- As the name implies, short-term memory allows you to recall specific information about anything for a brief period.
- Short-term memory is not as fleeting as sensory memory, but it's also not as permanent as long-term memory. Short-term memory is also known as primary or active memory.
- Research estimates that short-term memories only last for about 30 seconds. When you read a line in a book or a string of numbers that you have to recall, that's your short-term memory at work.
- You can keep information in your short-term memory by rehearsing the information. For example, if you need to recall a string of numbers, you might keep repeating them to yourself until you input them. However, if you are asked to recall those numbers about 10 minutes after inputting them, you'd most likely be unable to.

Working Memory

- Working memory is a type of memory that involves the immediate and small amount of information that a person actively uses as they perform cognitive tasks.
- While some experts view working memory as a fourth distinct type of memory, working memory can fall under the classification of short-term memory and, in many cases, is even used interchangeably.

Long-term Memory

We store a vast majority of our memories in our long-term memory. Any memory we can still recall after 30 seconds could classify as long-term memory. These memories range in significance—from recalling the name of a friendly face at your favorite coffee shop to important bits of information like a close friend's birthday or your home address.

There is no limit to how much our long-term memory can hold and for how long. We can further split long-term memory into two main categories: explicit and implicit long-term memory.

SOURCE: <u>https://www.verywellmind.com/different-types-of-memory-and-their-functions-5194859</u>



Why Do We Forget?

Two Possibilities

- For years, researchers have attempted to adjudicate between two possibilities. The first is that forgetting occurs because, like colors that fade, memories decay over time. The second possibility is that similar memories interfere with one another. For instance, when meeting many new people on the same day, we might forget some of the faces because we have many similar memories of faces interfering with one another.
- Recent scientific evidence has shown that forgetting can occur either due to decay or due to interference, depending on the brain structure supporting memory. The hippocampus, a structure important for memory, has unique properties which enable it to distinguish between similar memories.
- Memories relying on the hippocampus are not likely to interfere with one another. However, these memories fade and decay quickly.
- Another structure which supports memory, the Perirhinal cortex, does not have a good ability to distinguish between similar memories. Therefore, memories relying on this structure are more likely to interfere with each other.

Common Example: Names

- Why do we forget people's names right after being introduced? The cause of that forgetting is likely due to inattention.
- We're so familiar with the "procedure" of an introduction that we start to "tune out" or stop paying attention, even before the other person has said their name.
- This is why strategies such as repeating the person's name back to them are recommended during interviews—repeating a name will increase the likelihood that you attend to it, helping you remember it later.

Common Example: Parked Car

- The cause of that forgetting is likely interference. Every day, you park your car in a particular location, maybe having to change it depending on available spaces.
- Your brain forms a link or an association between the car and the location. When you next think of your car, your brain retrieves, or brings to mind, many of those past associations. You then have to sift through all of those associations to find the right one, making it more difficult to remember.
- This process can be made more challenging—if not impossible—if you didn't pay attention to the location when you first parked the car, analogous to the introduction example. If you didn't form that association in the first place, it won't even be there to retrieve.

Common Example: Past Knowledge

• Finally, why do you forget things that you used to know? We know we went to grade school, and surely at some point had to remember a few things in order to

pass tests and graduate, but why can't we remember those things now?

- It's a great question, but a really tricky one to answer. Is the original memory gone, or is that you just can't access it? You might have forgotten your 4th grade teacher, but if you went back to your elementary school and re-experienced being there, you might be able to remember.
- Many instances of forgetting are like this, in that the memory might be stored in your brain, but you have insufficient cues or lack the information needed to access it.

SOURCE: https://gizmodo.com/why-do-we-forget-1831865406



Improving Memory

Brain Training

- Exercising your cognitive skills by playing brain games is a fun and effective way to boost your memory.
- Crosswords, word-recall games, Tetris, and even mobile apps dedicated to memory training are excellent ways to strengthen memory.
- A study that included 42 adults with mild cognitive impairment found that playing games on a brain-training app for 8 hours over a 4-week period improved performance in memory tests.
- Another study of 4,715 people showed that when they did 15 minutes of an online brain-training program at least 5 days a week, their short-term memory, working memory, concentration, and problem-solving improved significantly compared to a control group.
- Plus, brain-training games have been shown to help reduce the risk of dementia in older adults.
- Play Brain Games with us every Thursday at 1 PM on Zoom!

Practice Mindfulness

- Mindfulness is a mental state in which you focus on your present situation, maintaining awareness of your surroundings and feelings.
- Mindfulness is used in meditation, but the two aren't one and the same. Meditation is a more formal practice, whereas mindfulness is a mental habit you can use in any situation.
- One study of 293 psychology students showed that those who underwent mindfulness training had improved recognition-memory performance when recalling objects compared with students who did not receive mindfulness training.
- Incorporate mindfulness techniques into your daily routine by paying more attention to your present situation, concentrating on your breathing, and gently resetting your attention when your mind wanders.
- We offer mindfulness trainings on Zoom on select Fridays at 1 PM. <u>Check our</u> <u>website to find the next session!</u>

Get Enough Sleep

• Lack of proper sleep has been associated with poor memory for quite some time.

- Sleep plays an important role in memory consolidation, a process in which short-term memories are strengthened and transformed into long-lasting memories.
- Research shows that if you're sleep deprived, you could be negatively impacting your memory.
- One study found that nurses working the night shift made more mathematical errors and that 68% of them scored lower on memory tests compared with nurses working the day shift.
- Health experts recommend adults get between 7 and 9 hours of sleep each night for optimal health.

SOURCE: <u>https://www.healthline.com/nutrition/ways-to-improve-</u> memory#TOC_TITLE_HDR_6

Let's Stay Healthy!

Looking to learn more about healthy living? Email NJSAP@ArcNJ.org or call 732-749-8514 to schedule a virtual training.

You can also visit the NJ Self-Advocacy Project <u>Training homepage</u> to submit a training request.



Don't see what you're looking for? We can create a custom training based on the needs and interest of your group!







The Horizon Foundation for New Jersey

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