

How Long-Term Memory Retrieval Works

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Once information has been encoded and stored in memory, it must be retrieved in order to be used. Memory retrieval is important in virtually every aspect of daily life, from remembering where you parked your car to learning new skills.

There are many factors that can influence how memories are retrieved from [long-term memory](#). Obviously, this process is not always perfect. In order to fully understand this process, it is important to learn more about exactly what retrieval is as well as the many factors that can impact how memories are retrieved.

Memory Retrieval Basics

So what exactly is retrieval? Simply put, it is a process of accessing stored memories. When you are taking an exam, you need to be able to retrieve learned information from your memory in order to answer the test questions.

There are four basic ways in which information can be pulled from long-term memory. The type of retrieval cues that are available can have an impact on how information is retrieved. A retrieval cue is a clue or prompt that is used to trigger the retrieval of long-term memory.

- **Recall:** This type of memory retrieval involves being able to access the information without being cued. Answering a question on a fill-in-the-blank test is a good example of recall.
- **Recollection:** This type of memory retrieval involves reconstructing memory, often utilizing logical structures, partial memories, narratives or clues. For example, writing an answer on an essay exam often involves remembering bits of information and then restructuring the remaining information based on these partial memories.
- **Recognition:** This type of memory retrieval involves identifying information after experiencing it again. For example, taking a multiple-choice quiz requires that you recognize the correct answer out of a group of available answers.

- **Relearning:** This type of memory retrieval involves relearning information that has been previously learned. This often makes it easier to remember and retrieve information in the future and can improve the strength of memories.

Problems With Memory Retrieval

Of course, the retrieval process doesn't always work perfectly. Have you ever felt like you knew the answer to a question, but couldn't quite remember the information? This phenomenon is known as a 'tip of the tongue' experience. You might feel certain that this information is stored somewhere in your memory, but you are unable to access and retrieve it.

While it may be irritating or even troubling, research has shown that these experiences are extremely common, typically occurring at least once each week for most younger individuals and two to four times per week for elderly adults. In many cases, people can even remember details such as the first letter that the word starts with.

Retrieval failure is a common explanation for [why we forget](#). The memories are there, we just cannot seem to access them. Why? In many cases, this is because we lack adequate retrieval cues to trigger the memory. In other instances, the pertinent information might never have been truly encoded into memory in the first place.

One common example: try to draw the face of a penny from memory. The task can be surprisingly difficult, even though you probably have a very good idea of what a penny looks like. The reality is that you probably only really remember enough to distinguish pennies from other forms of currency. You can remember the size, color, and shape of the coin, but the information about what the front of the coin looks like is fuzzy at best because you probably never encoded that information into your memory.

Even though memory retrieval is not flawless, there are things that you can do to [improve your ability to remember information](#).