

# Why we become more forgetful with age – and what you can do about it

December 21 2016, by Vanessa Loaiza

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Credit: AI-generated image ([disclaimer](#))

How is it that we are able to remember some events in great detail whereas other memories seem to fade away over time? Our memory changes with age, so that we may have a memory slip on a trip to fetch something from the next room, but we're still able to recall important events from history with great detail. But why?

One important aspect of memory formation and retention is the associations we build between the information we later try to remember and other details. For example, when and where the event took place, who was there, or the feelings we felt at the time. These details not only help us as clues to search our memory, but they also allow the [mental time travel](#) we all experience when we recall those detailed memories, so that it feels like we can relive an experience in our minds.

Scientists refer to this experience as recollection, and some distinguish it from familiarity, which refers to the general feeling that we have experienced something before, but are not quite able to put our finger on all of the [details of the event](#). For example, you see someone at the supermarket or on public transport who instantly seems very familiar, but you cannot recall who they are.

The experience of familiarity is very fast – you can quickly detect that you may know the person – but recollecting the details of who they are comes a bit more slowly (hopefully before they approach you). This is an example of how the processes differ on a subjective, or what's called a phenomenological, level.

## **What's going on in the brain**

Apart from the behavioural and phenomenological differences that make the familiarity versus recollection of a face seem distinct from each other, [research has also indicated](#) that different areas of the [brain](#) underlie the phenomena. The hippocampus, within the [medial temporal lobes](#) of the brain, is strongly involved in forming the associations that help to give rise to recollection, whereas the nearby perirhinal and entorhinal cortices appear to be more important for familiarity.

Research has shown that the ability to retrieve details of an event and the phenomenological experience of recollection decline as people get older,

whereas familiarity remains relatively the same [regardless of age](#). Studies have also shown that the structural integrity of the hippocampus [declines](#) with increased age, whereas the entorhinal cortex showed minimal changes in volume. In other words, areas of the brain such as the hippocampus that are important for recollection tend to decline in volume, whereas the areas that support [familiarity](#) remain more intact as people get older.



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Scientists also know that memory does not work as a flawless tape-recorder: it is often the case that we not only forget information, but also misremember it, even if we feel as if we recollect an experience vividly and accurately. That older adults are increasingly unable to retrieve specific details of an event means they could be more susceptible to

[experiencing false memory.](#)

## How to stop memories from slipping

So what can be done to deter or reverse these changes in older age? While there is no magical pill or super food that can protect us, research suggests a number of strategies that can help ameliorate some of the more difficult impacts of ageing on our memories.

One popular suggested solution is to do as many crosswords and sudoku puzzles as possible. It is a perfectly intuitive idea: if we think of the brain like a muscle, then we should exercise that muscle as much as possible to keep it sharp and fit. Yet, so far there is scant evidence to support this belief.

At best, you can expect to get very good at doing crosswords and sudoku, but the transfer of those skills to other kinds of abilities that are further away, such as being better able to reason abstractly or remember more information, [is less supported](#) by research evidence. So, you should certainly keep doing crosswords if you enjoy doing them, but do not believe or [buy into the hype](#) that such brain training will ward off cognitive decline or dementia.

The method more likely to help is to simply engage in more physical exercise, particularly aerobic exercise. The [research](#) regarding the benefits of exercise not only to your physical health but also to your mental health and abilities is much more settled than that of [brain training](#). This does not have to be strenuous exercise that involves running marathons. Something as simple as brisk walking, or anything that gets your heart pumping and causes you to break a sweat, shows strong benefits to your memory performance. [Research](#) has also indicated that areas of the brain such as the hippocampus which are important for memory show increases in volume as a result of [aerobic](#)

[exercise](#).

So the best advice for improving your [memory](#) is to use that half hour you might have spent doing a sudoku puzzle to go for a nice walk with a friend instead.

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