### **10 research-proven tips for better memory**

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Healthful habits help protect memory, but the aging brain may need an extra tweak or two to stay sharp.

If you're age 50 or over, chances are you've noticed some decline in your ability to remember things. Perhaps you can't recall why you raced to the pantry, or you forget the names of people you just met at a party.

While most people notice memory changes with age, only a small percentage — about 10% by age 65 — experience actual dementia, a serious and progressive decline in memory and cognitive abilities. Such significant loss of mental functioning is due not to aging but to organic disorders, injury, or neurological illness. Good general health habits help protect cognitive function and reduce the risk of dementia. Studies have shown that women are less likely to experience cognitive decline or dementia if they stay physically active, get enough sleep, don't smoke, reduce their stress levels, maintain a rich social network, limit alcohol to one drink or less a day, and eat a balanced diet low in saturated and trans fats. And physical problems or medication side effects are less likely to disturb memory in women who seek and follow medical advice (see "Remember your health," below).

Normal age-related changes in the brain can slow some cognitive processes, making it a bit harder to learn new things quickly or to ward off distractions. Fleeting memory difficulties ("Where did I leave the keys?") may occur more often. These changes are considered normal, but they can be frustrating. The good news is that, thanks to decades of research, most of us can sharpen our minds with proven, do-it-yourself strategies. Here are some ways to boost your ability to remember as you age:

#### 1. Believe In Yourself.

Myths about aging can contribute to a failing memory. Middle-aged and older learners do worse on memory tasks when exposed to negative stereotypes about aging and memory, and better if exposed to messages about memory preservation into old age. If you believe that having a good or poor memory is out of your control, you'll also be less likely to put in the effort to maintain or improve your memory skills and may thus experience greater cognitive decline as you age. Believing that you can improve — and translating that belief into practice by developing memory skills and challenging your mind — will keep you sharper.

## 2. Economize Your Brain Use.

If you don't need to use mental energy remembering where you laid your keys or the time of your granddaughter's birthday party, you'll be better able to concentrate on learning and remembering new and important things. Take advantage of calendars and planners, maps, shopping lists, file folders, and address books to keep routine information accessible. Designate a place at home for your glasses, purse, keys, and other items you use frequently. Removing clutter from your office or home will minimize distractions so you can focus on the new information you want to remember.

## 3. Organize Your Thoughts.

New information that's broken into smaller chunks, such as the hyphenated sections of a phone or social security number, is easier to remember than a single long list, such as financial account numbers or the name of everyone in a classroom. When presented with something lengthy to remember, divide it into smaller pieces (in the classroom, separate the children by row and gender), or notice patterns, such as repeated digits or all the children with long hair.

Remember your health

You won't have much luck implementing memory-improvement strategies if a health condition is sapping your learning ability. Many medical problems that become more common with age can impair cognitive skills if they go unrecognized or untreated. Here are some ways to protect yourself:

Avoid sugar shock. In the Harvard's Nurses' Health Study, women ages 70–81 performed worse on cognitive tests and showed more deterioration over a two-year period if they had type 2 diabetes. Those taking medication to control glucose levels did better than those not on drugs.

Control your pressure. Some "senior moments," or memory lapses, have been linked to a reduction in blood flow to the brain caused by high blood pressure. In the Baltimore Longitudinal Study of Aging, people did worse on memory and other cognitive tests if they had either low or high blood pressure. High blood pressure seems to be more damaging to memory in women than in men.

Keep breathing. People with sleep apnea, who stop breathing temporarily many times during the night, score worse on memory and cognitive tests. Their scores rise if they use continuous positive airway pressure (CPAP) machines to keep airways open during sleep.

**Treat depression.** Cognitive problems can be a symptom of depression. Older women who are depressed have worse cognitive function than non-depressed women, and their skills decline more rapidly with time. Among adults diagnosed with mild cognitive impairment, those who also have depression are more than twice as likely to develop Alzheimer's disease.

Check your thyroid. An underactive thyroid can adversely affect learning, memory, and attention. When thyroid hormone levels return to normal with treatment, performance in these areas improves. Even if thyroid hormone isn't low enough to cause other symptoms, older women who go untreated for this condition are twice as likely to experience cognitive decline.

Balance your iron. After menopause, iron deficiency isn't common; physicians worry more about the cardiovascular impact of getting too much. However, women who do have laboratory-confirmed low iron levels perform significantly worse on cognitive tests. After a few weeks of supplements, their scores return to normal.

#### 4. Use All Your Senses.

The more senses you use when you learn something, the more of your brain will be involved in retaining the memory. For example, odors are famous for conjuring memories from the distant past, especially those with strong emotional content, such as visits to a cookie-baking grandparent.

A study published in the journal *Neuron* (May 2004) demonstrated that odors can also improve memories of more routine matters. Adults were shown a series of emotionally neutral images, each presented along with an odor. They were not asked to remember what they saw. Later, they were shown a set of images, this time without odors, and asked to indicate which they'd seen before. Recall was excellent for all odor-paired pictures, and the best for those associated with pleasant smells. During brain imaging, the scientists found that the primary odor-processing region of the brain (the piriform cortex) became active when people saw objects they'd originally seen with odors, even though odors were no longer present and the subjects hadn't tried to remember them.

# 5. Expand Your Brain.

Widen the brain regions involved in learning by reading aloud, drawing a picture, or writing down the information you want to learn (even if you never look back at your notes). Just forming a visual image of something makes it easier to remember and understand; it forces you to make the information more precise.

#### 6. Repeat After Me.

When you want to remember something you have just heard or thought about, repeat it out loud. For example, if you've just been told someone's name, use it when you speak with him or her: "So John, where did you meet Camille?"

If you place one of your belongings somewhere other than its designated home, make a note of it aloud to yourself. And don't hesitate to ask for information to be repeated.

# 7. Space It Out.

Repetition is an even more potent learning tool when it's properly timed. Instead of repeating something many times in a short period, as if you were cramming for an exam, re-study the essentials after increasingly longer periods of time — once an hour, then every few hours, then every day. Spacing out periods of study is particularly valuable when you are trying to master complicated information, such as the details of a new assignment at work. In research studies, spaced rehearsal improves recall in both healthy people and those with physically based cognitive problems, such as those associated with multiple sclerosis.

## 8. Make A Mnemonic.

Mnemonic devices are creative ways to remember lists. They can take the form of acronyms — such as the word RICE to remember first-aid advice for injured limbs: Rest, Ice, Compression, and Elevation — or sentences, such as the classic "Every good boy does fine," to remember the musical notes E, G, B, D, and F on the lines of the treble clef.

For older learners, a particularly helpful system is a story mnemonic — that is, a brief narrative in which each item cues you to remember the next one. For example, the sentence

"The dog knocked over my glass of milk so I have to wash the floor" could remind you that your dog has a vet appointment, you should pick up your new glasses, and you need to buy milk and floor cleaner.

# 9. Challenge Yourself.

Engaging in activities that require you to concentrate and tax your memory will help you maintain skills as you age. Discuss books, do crossword puzzles, try new recipes, travel, and undertake projects or hobbies that require skills you aren't familiar or comfortable with. Again, challenge all of your senses as you venture into the unfamiliar: Try to guess the ingredients in a restaurant dish; give sculpting or ceramics a try; sample different types of music.

# 10. Take A Course.

Memory-improvement courses are becoming more common. Choose one run by health professionals or experts in psychology or cognitive rehabilitation. Stay away from courses that center on computer or concentration games, which generally won't help you with real-life memory problems. Select a course that focuses on practical ways to manage everyday challenges.

The results you get from a memory course will depend largely on the effort you put into it. According to a report presented at the American Psychological Association annual meeting in July 2004, the ability to remember names and stories depends less on age and health than on motivation to practice in people taking memory-training courses