

How to Preserve Your Brainpower

By David Robson

Like any good machine, the brain needs a little care and attention as it ages to ensure it continues to run in good working order. If only there were a manual to its maintenance that could tell us how to fine-tune its circuits. Unfortunately, the available advice is often contradictory and confusing, but BBC Future has sifted through the evidence. Read on to discover the six most promising ways to sharpen your wits.

Don't... lose faith in your abilities

Do you ever walk into a room, only to find that you've forgotten why you were there? As people get older, it's easy to assume it's a sign your memory is already fading. In fact, it is just as likely to happen to young and old alike. And we shouldn't be so speedy to jump to the worst conclusion, since the doubts can become a self-fulfilling prophecy.

Over the last 10 years, Dayna Touron at the University of North Carolina has found that with age, we tend to lose confidence in our mental abilities, even though they are often in working order. The result is that we rely on crutches, such as our car's GPS or our phone's notepad. Ironically, by failing to test ourselves, we may accelerate own decline. So if you do find yourself dithering in a doorway not really knowing where you are meant to be, just see it as a reminder to push your memory a little bit harder.

Do... protect your ears

The mind suffers if it becomes isolated from its senses. Perhaps by placing extra strain it places on your attention, and blocking us from useful stimulation, hearing loss seems to trigger the loss of the brain's grey matter; according to one study, it increased the risk of cognitive impairment over a six-year period by 24%.

Whatever your age, it's worth taking note of situations that could be contributing to your ears' wear and tear. Listening to loud rock music for just 15 seconds a day would be enough to damage your hearing; even using a hairdryer for 15 minutes a day could harm tiny cells that pick up sounds. And if you think you are already hard of hearing, try to seek medical help – nipping the problem in the bud could stall further decline.

Do... learn a language or a musical instrument

Rather than fiddling with a brain training app or a crossword (which often appear to have limited general benefits), you might want to consider a more ambitious mental workout, such as learning the piano or picking up a new language. Both rely on a wide skill set, exercising your memory, attention, sensory perception and motor control as you try to wrestle new scales or the unfamiliar sounds of new words.

The practice should help you to become more mentally nimble, with potentially lasting benefits into old age. One study last year found that musicians were around 60% less likely to develop dementia than people who didn't play a musical instrument; another showed that speaking another language may delay the onset of Alzheimer's by five years.

At the very least, pushing yourself in this way should help you to appreciate your current abilities. And if you find that your job is just too demanding to allow yourself to pick up a new skill, consider yourself lucky: more stimulating occupations do seem to help you preserve your mental powers, although the benefits may not last far into retirement.

Don't... feast on junk food

Obesity can harm your brain in many ways. The build-up of cholesterol in the arteries can restrict blood flow to the brain, starving it of the food and oxygen it needs to function. What's more, neurons are highly sensitive to levels of the gut hormone insulin. A regular diet of sweet, calorific food can disrupt that insulin signalling, triggering a chain reaction that leads to deadly plaques that build up in the brain.

The good news is that certain nutrients – like omega 3 fatty acids, and vitamins D and B12 – seem to damp down age-related damage to the brain. This may explain why older people eating a typically Mediterranean diet tended to show the same cognitive skills as people 7.5 years their younger.

Do... build your body

We often make a distinction between brains and brawn. In fact, getting in shape is one of the surest ways to build your mind. Physical activity not only establishes a better blood flow to the brain; it also triggers a surge of proteins such as “nerve growth factor” that can help stimulate the growth and maintenance of neural connections in the brain.

The benefits seem to stretch from cradle to grave: children who walk to school get better grades, while taking a leisurely stroll seemed to boost pensioner's concentration and memory. What's more, a wide variety of exercises can help, from gentle aerobic exercise to weight training and body building; just choose a training regime that suits your current fitness.

Do... party like you're 21

If all that sounds like hard work, one of the best ways to protect your brain is to socialise. Put simply, humans are social creatures, and our friends and relatives stimulate us, challenge us to try new experiences, and relieve us of stress and unhappiness. Astonishingly, one study of 70-year-olds found the most socially active individuals were about 70% less likely to experience cognitive decline over a period of 12 years, compared to the people with the least active social lives. Everything from memory and attention to overall mental processing speed seems to have benefited from the regular contact with other people.

Ultimately, the scientists suspect that there is no single magic bullet to train your brain. The people who age best have a lifestyle that incorporates a little of everything: a varied diet, stimulating activities, and a circle of loving friends. And that's not so much a recipe for a smart brain as a healthy and happy life.

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