17 ways to keep your brain healthy

Sleep well, swap butter for olive oil, learn a musical instrument – or embrace some other 'magnificent obsession'. Doctors tell Sarah Phillips the best ways to stave off cognitive decline

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Take care of your health generally

"All of the sensible things that apply to bodily health apply to brain health," says Dr Suzanne O'Sullivan, a consultant in neurology at the National Hospital for Neurology and Neurosurgery in London, and the author of The Age of Diagnosis. "When you're 20, you can get away with absolute murder. You can not sleep for nights at a time and stuff like that. But you get away with nothing when you hit middle age. With every year that I get older, my lifestyle gets healthier." All of her consultations will focus to some degree on lifestyle choices, she says: "I work with a lot of people with degenerative brain diseases, and they are not caused by lifestyle. But everything is made better by having a moderate degree of exercise, eating healthily and sleeping well, whether it be bodily disease, brain disease or mental health."

Don't smoke, and don't drink every day

"If you want to damage your brain, smoke a lot," says Tom Solomon, professor of neurology at the University of Liverpool. Likewise, "a lot of alcohol is not good for you. A bit of alcohol seems to be OK. There is some soft data suggesting one to two units might reduce risks of cardiac disease in the elderly, but the evidence overall is that alcohol is harmful, especially to the brain." Dr Faye Begeti, a neurologist and neuroscientist at Oxford University hospitals, takes a hard line: "I find that people who are not alcoholics, but drink a small amount of alcohol every day over many decades, can still run into problems. With alcohol I have two rules for my patients: not out of habit, so only when celebrating; and not drinking daily."

Ditch the butter

Opt for "antioxidants and unsaturated fats, and not too much red meat", says Solomon. "The biggest evidence is for the Mediterranean diet," says Begeti, adding: "I was born in Greece, so maybe I am biased." She says the advice she often gives on this is simple: "When you cook, your primary source of fat should be olive oil rather than butter. This is what I do and it is a really easy transition to make. You can have cakes with olive oil in; everything you fry should be in olive oil, rather than butter. I'm not saying you would never eat butter again, but that the primary source of fat is olive oil. And having some omega-3 with oily fish has really good evidence for brain health as well." She says it is important for vegans and vegetarians to take vitamin B12 supplements.

To prevent headaches, drink water, not coffee

"We see people who have simple or chronic headaches," says Solomon. "The things that reduce the risk of headaches are all very much the same. Regular exercise. Staying hydrated by drinking at least two litres of water a day. Stopping all caffeine. Not skipping meals. Getting to bed at a sensible time. We usually say to people: if you do this religiously for three months, headaches

will reduce or come under control. And most of those things are also good for your general brain health, as far as we know."

Exercise three times a week

There is a well-established link between physical activity and brain health, says Dr Richard Davenport, a consultant neurologist in Edinburgh and the outgoing president of the Association of British Neurologists: "It works on many levels: psychological, metabolic, physiological."

"Things that are good for your blood vessels are good for your brain," Solomon says. "A lot of dementia is because of damaged blood vessels. Physical activity is good for blood vessels as it keeps blood pressure down."

Solomon got a Guinness world record for running the fastest marathon dressed as a doctor in 2010, raising money for Encephalitis International, a brain inflammation charity. But you don't need to run marathons to keep your brain healthy, he says. Although "there is not much hard data telling you exactly how much exercise to do – in our headache clinics we say do 20-30 minutes of something that gets you short of breath two or three times a week, so running, swimming, cycling. They are very good for de-stressing, too," he adds – another bonus for the brain.

Stand on one leg

"There are studies that show being active in every decade really helps with brain longevity," says Begeti. "I advise people to include single-leg exercises in their routine, because walking relies heavily on single-leg balance, and maintaining this becomes crucial as we get older.

"Aerobic exercise releases a brain-nourishing chemical called brain-derived neurotrophic factor that supports our neurons. A combination of that with resistance exercises that build up muscle is very important, as numerous studies have found greater muscle mass reduces cognitive decline, even in those who have already been diagnosed with dementia."

Sort out your sleep

"Good sleep starts at the beginning of the day," says Begeti, "rather than at night when you are stressing about not getting good sleep. Anchor your morning by getting up at roughly the same time each day. If you need more sleep at the weekends, then catch up with 60 to 90 minutes, or one sleep cycle extra. Don't make it too erratic, because then your brain doesn't know when to produce the right hormones."

"We still don't exactly know what sleep is all about," says Davenport, "but there is good evidence that sleep is allowing the brain some downtime to do a bit of tidying up, and in particular, tidying some of these dodgy proteins that ultimately may do bad things in terms of degenerative disease. In other words, getting decent sleep matters."

Chill out a little

"With insomnia, there can be a lot of worry when we hear that reduced sleep can give rise to disease," says Begeti. "It is about being able to do good things for your brain, but not being stressed if you're not doing everything

Engaging with social media may actually be helpful for middle-aged people

perfectly, because stress has negative effects as well." But, she concedes: "It's easier said than done to say to somebody, 'Don't be stressed!'" "There is evidence that people with perceived long-term stress are at increased risk of cognitive decline and dementia," Solomon agrees.

Establish phone boundaries ...

We are in the midst of a panic about what technology is doing to our brains, but as Begeti explains in her book The Phone Fix, the science does not confirm that we are addicted to our phones. That said, she limits checking her Instagram account (@thebraindoctor) to twice a day and mutes all WhatsApp groups. “I suggest people try to develop a routine or a schedule of connection and disconnection that works for them. Distraction is a big thing when it comes to technology. I prefer people to use technology intentionally because they want to, rather than to avoid doing some difficult work or dealing with something, and instead using technology to fill that gap. When people use it as an avoidance tactic, I think that is when it can make them feel bad.”

Does having so much information readily available online mean we are losing memory capacity? “You may not be able to remember a phone number, but the brain is very adaptable,” says Begeti. “It remembers things that you use and sidelines things that you don’t. If you don’t remember phone numbers daily, then your brain might not be accustomed to remembering them. It doesn’t mean this ability has disappeared. It is more the brain is prioritising certain things that you do.”

... but use tech to make social connections

Maintaining social connections is crucial in helping to avoid dementia. “Of course, there are problems associated with technology,” says O’Sullivan. “There is some awful content on there. But I think we often forget the positive things it brings to our lives. For older people, who may not have great mobility, it is creating incredible connectedness.”

Begeti adds: “There are early studies with preliminary findings that show if middle-aged adults engage in social media, they have reduced incidence of dementia.”

Take up hobbies and meet new people

“Brain and mind health is all about having ambitions and interests outside of yourself,” says O’Sullivan. “I have so much work to do that my mind is kept well occupied, but my plan going forward is to do all the things I wish I had time to do now: go back to university, do art appreciation courses, and challenge myself in settings where I’ll be mixing with lots of different people.”

Cultivate a healthy obsession

Find a “magnificent obsession”, says Dr Richard Restak, a professor of neurology at George Washington University hospital in the US and author of How To Prevent Dementia: An Expert’s Guide to Long-Term Brain Health. “Take up an interest, the earlier in life the better, and do a lot of mental work trying to learn more stuff. You can link it to social interaction, which is very important.”

Work your mind as hard as your body

“You need to exercise the brain every day, particularly with memory,” says Restak. At 83, he is still writing books. What is his secret? “I think, in my case, it is mostly training the brain. I walk and have a sensible diet, but I’m not cultish about it. If my wife brings back some pastries, I will certainly have one.”

What’s his training? “Every day I try to learn a new word,” says Restak. “The word today is turveydrop – based on a character in [Charles Dickens’s] Bleak House – and is someone who is just interested in looking important. If somebody calls you that, it’s not a compliment.” He keeps lists of all his daily words to refer back to, if his memory fails him. But don’t narrow your train-

ing too much, he adds. “Remembering particular things is only good for the area in which they are applied, so that you become a good crossword puzzler or a great Scrabble player. I lose at Scrabble all the time. I think I’ve got a pretty good vocabulary, but Scrabble is its own world.”

Learn something new, be it the flute or French

“Learning is harder when you are older,” says Solomon, “but it helps as you mature.” He played piano as a child, then took it up again 10 years ago. “People who play musical instruments are less likely to have cognitive impairment because it is all about using the brain.”

The same goes for learning languages. With both, “You’re using very different parts of your brain. If you don’t do any of those things, there are whole chunks of your brain that are not really being used.”

Get help with hearing and vision problems

“Deafness is one of the characteristics that the Lancet Commission has identified as being an important risk factor for dementia,” says Davenport. “It’s the same for vision. Anything that leads you to less interaction with the outside world is likely to be detrimental.” There is less evidence on the effects of reduced vision, he says, “but if your vision deteriorates, you’re going to stop driving, you may stop going out so much, and all of those things start to lead to social isolation, like deafness. Keep on top of your senses; make sure you can hear and see.”

Interestingly, Davenport adds, “sense of smell is often an early symptom of some of the degenerative diseases. No one is suggesting losing your sense of smell leads to them. It is probably just an early symptom, particularly in Parkinson’s disease.”

Wear a helmet

Davenport is a keen cyclist. Does he wear a helmet? “Absolutely. There is good evidence that helmets do protect you.” He refers to the debate around the effect of repeated head injuries in sports such as rugby and football, and their role in neurodegenerative disease: “There is still quite a lot to be unravelled about that, but it makes sense to try to protect your head from unnecessary injury.

“Where you need to be careful, of course, is that we know that physical exercise is very good for people, and therefore you don’t want to stop kids playing football. But maybe easing up on heading the ball, which is already happening.”

Accept that some memory loss is to be expected

O’Sullivan points out that memory decline starts in your 30s. “We all are increasingly forgetful over time,” Solomon agrees. Don’t worry, he says, if, for example: “You go upstairs for a jumper, and then you get upstairs and you can’t remember what you’ve gone up there for. That’s not a reason to see the doctor.” He says that the difference is obvious between patients who have dementia and those who are experiencing normal forgetfulness: “When I say to these patients, ‘Why have you come to see me?’, they turn their head to look at the relative who is with them, because they have no idea why they are there.”

Don’t stress if you’re not doing everything perfectly – stress has negative effects, too