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# Strength training

Super foods for brain



"If You Are Working On Something That You Really Care About, You Don't Have To Be Pushed. The Vision Pulls You." - Steve Jobs

Research shows that the best brain foods are the same ones that protect your heart and blood vessels, including the following:

### Green, leafy vegetables.

Leafy greens such as kale, spinach, collards, and broccoli are rich in brain-healthy nutrients like vitamin K, lutein, folate, and beta carotene. Research suggests these plant-based foods may help slow cognitive decline.

## Fatty fish.

Fatty fish are abundant sources of omega-3 fatty acids, healthy unsaturated fats that have been linked to lower blood levels of beta-amyloid-the protein that forms damaging clumps in the brains of people with Alzheimer's disease. Try to eat fish at least twice a week, but choose varieties that are low in mercury, such as salmon, cod, canned light tuna, and pollack. If you're not a fan of fish, ask your doctor about taking an omega-3 supplement, or choose terrestrial omega-3 sources such as flaxseeds, avocados, and walnuts.

### **Berries.**

Flavonoids, the natural plant pigments that give berries their brilliant hues, also help improve memory, research shows. In a 2012 study published in Annals of Neurology, researchers at Harvard's Brigham and Women's Hospital found that women who consumed two or more servings of strawberries and blueberries each week delayed memory decline by up to two-and-a-half years.

### Tea and coffee.

The caffeine in your morning cup of coffee or tea might offer more than just a short-term concentration boost. In a 2014 study published in The Journal of Nutrition, participants with higher caffeine consumption scored better on tests of mental function. Caffeine might also help solidify new memories, according to other research. Investigators at Johns Hopkins University asked participants to study a series of images and then take either a placebo or a 200-milligram caffeine tablet. More members of the caffeine group were able to correctly identify the images on the following day.

# Walnuts.

Nuts are excellent sources of protein and healthy fats, and one type of nut in particular might also improve memory. A 2015 study from UCLA linked higher walnut consumption to improved cognitive test scores. Walnuts are high in a type of omega-3 fatty acid called alpha-linolenic acid (ALA), which helps lower blood pressure and protects arteries. That's good for both the heart and brain.















### Feed your gut

Prebiotics and probiotics are two important components in keeping your gut healthy. Let's take a deep dive into what is gut health and why we need to take better care of it.

#### Two important dietary components:

**Probiotics:** These are living microorganisms that are found in fermented foods like yogurt and vegetables. These microorganisms add to your gut microbiota and help foster a healthy immune system. Eating these probiotics ensures that the intestinal environment remains healthy or it could lead to health complications related to obesity, diabetes, neurodegenerative diseases.

**Prebiotics:** Probiotics are foods that need to be fed to the probiotics to help them grow and thrive. They are usually carbs that the body cannot digest so they go to the lower digestive track where the probiotics can feed on them.



"All food is ultimately broken down in the gut to a simple form that can enter the bloodstream and be delivered as nutrients throughout our bodies. This is only possible with a healthy digestive system. A healthy gut contains healthy bacteria and immune cells that ward off infectious agents like bacteria, viruses and fungi. A healthy gut also communicates with the brain through nerves and hormones, which helps maintain general health and well-being."



### What is good for gut health?

- Eat a wide range of plant-based foods. A healthy gut has a diverse community of microbes, each of which prefers different foods.
- Eat more fibre. Most people eat less than they should. Fruit, vegetables, pulses, nuts and wholegrains feed healthy bacteria.
- Avoid highly processed foods. They often contain ingredients that either suppress 'good' bacteria or increase 'bad' bacteria.
- Probiotic foods, such as live yoghurt, might encourage more microbes to grow. Eat them if you enjoy them.
- Choose extra-virgin olive oil over other fats when you can. It contains the highest number of microbe-friendly polyphenols.
- Antibiotics kill 'good' bacteria as well as 'bad'. If you need antibiotics, make sure you eat lots of foods that boost your microbes afterwards.
- If your diet is low in fibre, a sudden increase can cause wind and bloating. This is less likely if you make gradual changes and drink extra water.







### Exercise your brain

#### 1. Challenge your mind

The act of learning something new is a great exercise for your brain. As you learn, the size and structure of the neurone in the brain change along with the connections between them. This is super helpful in keeping your mind active.

Activities such as crossword puzzles, board games, playing an instrument or learning a foreign language are just a few ways to exercise your mind.

Opt for a board game or puzzle over watching television. Even just a few minutes a day of testing your mind can improve your brain health.

#### 2. Increase omega-3 fatty acids

Docosahexaenoic acid (DHA) is a component of omega-3s that is an essential structural component of the brain and retina. These Omega-3s are not produced in the body but have to be taken externally from our diets and hence are essential when planning a meal.

Research has shown that animal-based omega-3s can help reduce the symptoms of many psychiatric illnesses and degenerative brain disorders. (Low DHA levels have been linked to memory loss and Alzheimer's disease.)

Some foods that are the best food sources of animal-based omega-3s: fish, liver and seafood.

#### 3. Exercise more

Exercise helps stimulate the release of brain-derived neurotrophic factor, that supports the learning, cognition and neural health. It is also responsible for improving blood flow to the brain leading to decreased risk of stroke.

Moving your body enhances the brain function by multiplying nerve cells, strengthening connections between cells and protecting neurons from damage. So, move that body more!

#### 4. Get enough vitamin D

This vitamin is responsible for promoting nerve growth in the brain. In fact, researchers have identified metabolic pathways for vitamin D in the hippocampus and cerebellum of the brain, areas that are involved in planning, processing of information and the formation of new memories.

The best way to get vitamin D? Lay under the morning sunlight and soak in this essential vitamin. There are also a number of high-quality supplements to help you out.

#### 5. Optimize gut flora

Referred to as the second brain, the gut is thriving environment for bacteria, known as the microbiome. These microbiomes transmit information to the brain via the vagus nerve. An imbalance in the gut flora can lead to abnormal brain development and neurotransmitter imbalances. Also, the feel-good neurotransmitter serotonin is produced primarily in the gut and hence a dysfunctional gut also affects mood.













### Why strength training is important?

Strong muscles are responsible for utilising oxygen and nutrients from the blood in a much more efficient manner than the weak muscles. What this means is that activities require less cardiac work making it a light exercise for your heart. Strong muscles also help the sugar to move into cells easily and efficiently making sure that the glucose levels in the body remain well under balance. This is extremely beneficial for those suffering from diabetes. Apart from that, it also enhances weight control.

On the other hand, weak muscles hasten the loss of independence as everyday activities — such as walking, cleaning, shopping, and even dressing — become more difficult. They also make it harder to balance your body properly when moving or even standing still, or to catch yourself if you trip. The loss of power compounds this. Perhaps it's not so surprising that, by age 65, one in three people reports falls. Because bones also weaken over time, one out of every 20 of these falls ends in fracture, usually of the hip, wrist, or leg. The good news is that the risk of these problems can be reduced by an exercise and fitness routine that includes strength training.

#### Seated bridge

Sit slightly forward in a chair with your hands on the armrests. Your feet should be flat on the floor and slightly apart, and your upper body should be upright (don't lean forward). Using your arms for balance only, slowly raise your buttocks off the chair until nearly standing with your knees bent. Pause. Slowly sit back down. Aim for 8–12 repetitions. Rest and repeat the set.

#### **Triceps dip**

Put a chair with armrests up against a wall. Sit in the chair and put your feet together flat on the floor. Lean forward a bit while keeping your shoulders and back straight. Bend your elbows and place your hands on the armrests of the chair, so they are in line with your torso. Pressing downward on your hands, try to lift yourself up a few inches by straightening out your arms. Raise your upper body and thighs, but keep your feet in contact with the floor. Pause. Slowly release until you're sitting back down again. Aim for 8–12 repetitions. Rest and repeat the set.

#### Standing calf raise

Stand with your feet flat on the floor. Hold onto the back of your chair for balance. Raise yourself up on tiptoe, as high as possible. Hold briefly, then lower yourself. Aim for 8–12 repetitions. Rest and repeat the set.

#### Research courtesy: Harvard Medical

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