

Brain Food

What's in it for me? Science-backed magic to boost your brain health and mental clarity.

You are what you eat. You've heard the adage, and you know that what you consume affects your body's shape and fitness level. But do you ever think about the hungriest part of your body – your brain? This complex organ, which powers your entire existence, has its own unique dietary requirements. And when it doesn't get what it needs, its suffering manifests as brain fog, stress, and even dementia. Highlighting the connection between nutrition and brain health, these blinks reveal the cutting-edge science behind neuro-nutrition. With recipes and specifics on what to eat and what to avoid, they show how simple it can be to take control of your diet, support your brain – and, in the process, get fit as a fiddle. In these blinks, you'll discover

why water is vital to your intelligence; the ultimate brain food; and that nutrient synergy means $1+1=3$.

Food can be medicine - or it can be poison.

When you think about getting older, do you worry about wrinkles? Well, think again. Nothing compares to the scale of Alzheimer's, which 5.3 million people live with in the US alone. Around the world, more than 46 million people have dementia. That number is estimated to climb to 132 million by 2050. Luckily, the cure is at our fingertips. The key message here is: Food can be medicine – or it can be poison. Alzheimer's was historically thought of as an inevitable result of aging or bad genes. But it's been shown that fewer than 1 percent of people actually develop Alzheimer's on genetic grounds. Instead, most cases boil down to lifestyle choices. And this isn't unique to Alzheimer's – it's estimated that 70 percent of all stroke cases, 80 percent of heart attacks, and 90 percent of type 2 diabetes cases in recent years have been due to an unhealthy lifestyle! In short, your DNA is not your destiny. So why aren't doctors talking to us more about the power of personal choice? Well, Western medicine tends to treat symptoms with surgery or drugs over less-invasive preventative approaches. There are a lot of things you can do to help your neurons stay strong. Being physically and mentally active are among the most important. But what tops the list? Eating well. Think about it. You might exercise a few times per week or take medications now and then. But you probably eat multiple times every single day. You're continually exposed to food, which makes diet the most influential element affecting your DNA. The interplay between food and genes is even the focus of a whole new discipline called nutrigenomics. Of all the organs in your body, your brain is most easily damaged by a poor diet. To function optimally, it requires more than 45 nutrients, most of which are obtained through the foods you eat. These are used to replenish your brain's depleted storage and facilitate cellular reactions; they're also incorporated into brain tissue. Your brain really is the product of what you eat. Alzheimer's demonstrates the most extreme responses of the brain to the nutrients you provide. But getting smart about food applies to every aspect of your cognitive health, whether you want to boost your memory, beat depression, or maintain your brainpower into old age.

Staying hydrated makes you smarter.

Your brain has the consistency of jelly. Made up of 80 percent water, 11 percent fat, 8 percent protein, 3 percent vitamins and minerals, and a pinch of carbs, it floats inside your skull in a bath of cerebrospinal fluid. The blood-brain barrier is your brain's gatekeeper. It protects your body's most vulnerable organ against inflammation and infections by blocking foreign substances like bacteria, toxins, and even some medications. Only a select few substances that the brain needs to function are allowed to cross the barrier. Water, for one, is always welcome. It's involved in every chemical reaction that occurs in the brain - such as energy production. It also plays a structural role, filling in the spaces between brain cells and helping the brain to absorb nutrients, form proteins, and flush out waste products. Water is vital to human life - and, as it turns out, to your intelligence. Here's the key message: Staying hydrated makes you smarter. Research shows that drinking eight to ten cups, or about two liters, of water per day can boost your brain's performance by almost 30 percent. Meanwhile, dehydration accelerates brain shrinkage. The good news is, you can fully reverse the effects of dehydration in just days by drinking more water. It's important to drink hard water, which is what you get from your tap or bottled spring water. This water is high in minerals like calcium and magnesium, as opposed to nutritionally void purified water. Bottled water often tastes better, but it can be expensive - and it also creates a lot of plastic waste. Instead, consider investing in a high-quality faucet filter for your tap water at home that will remove contaminants but leave precious minerals. After a workout, hard water will rehydrate you better than most energy drinks, which contain manufactured minerals, salt, and sugar. But if you want to switch things up, drink nature's thirst-quencher, coconut water - it's low in sugar and sky-high in potassium - or aloe vera juice, which is also naturally antibacterial, antifungal, and antiviral. You could also try this Spicy Raspberry and Orange Water drink instead of soda: Place a cup of raspberries, a thinly-sliced orange, two sliced cucumbers, a handful of fresh mint leaves, and two cinnamon sticks into 1 gallon of water. Allow it to steep in the fridge overnight, and add a cup of ice right before serving. And now all that's left is for you to enjoy! Keep in mind that you could also actually eat up to 20 percent of your daily water intake. Veggies like cucumbers and lettuce are 96 percent water, while among fruits, watermelon boasts the highest water content at 93 percent. So make sure you include these in your daily diet, too.

Your brain needs fats - but all fats are not created equal.

High-fat diets are all the rage these days - just think of keto or Atkins. Part of the rationale is that because the brain is "made of fat," you need to eat fat to support it. This is, in the most generous interpretation, wishful thinking. First of all, it's crucial to distinguish between fats. Your body contains two types: storage fat and structural fat. Storage fat is the visible, squishy stuff used to store energy. Then there's structural fat, which literally supports your cells; that's the only fat your brain contains. These fats can be broken down into fatty acids - specifically, saturated and unsaturated fats. When it comes to what you eat, your brain loathes the former and loves the latter. The key message here is: Yes, your brain needs fats - but all fats are not created equal. Contrary to what many diet books proclaim, your brain can make as much saturated fat as it needs locally. Any saturated fat you ingest will simply cause inflammation throughout

your body and limit oxygen flow to your brain. What does this mean in practical terms? In a study of over 800 elderly participants, those who consumed more than 25 grams of saturated fat – that’s six slices of bacon – per day were at least four times as likely to develop dementia as those who ate half that amount. Even worse are the trans fats in processed foods like commercial doughnuts, cold cuts, or margarine. If you love chips, try making your own by frying sweet potato slices in coconut oil. They’re delicious – and more nutritious than any store-bought variety. Your brain craves monounsaturated fats, which are provided by avocados, oats, olive oil, nuts, and whole milk products. Yogurt and kefir are great because they also contain live bacteria that support the digestive and immune systems. Polyunsaturated fats like omega-3s and omega-6s are also necessary for your brain to function. With omega-6s, however, a little goes a long way; too much will put your body’s inflammatory response into overdrive. Skip the fatty meats, and instead use a drizzle of grapeseed oil or a handful of peanuts to fulfill your daily needs. Omega-3s are the number one nutrient for fighting age-related cognitive decline and dementia. Flaxseeds, walnuts, chia seeds, wheat germ, spirulina, and cold-water fish are all excellent sources. But the real star is caviar, or what the author calls “the ultimate brain food.” An omega-3 powerhouse, caviar is also a proven memory-booster. If you’re worried about breaking the bank, salmon roe is a close second in terms of nutritional benefit – and costs a third of the price.

Amino acids affect how well you think, feel, and sleep.

Your central nervous system, controlled by your brain, is composed of over 80 billion cells called neurons. Neurons are unique because of their ability to send signals to other cells – no matter how far away. Proteins play a vital role in this messaging process. Many of the amino acids that make up proteins act as neurotransmitters – the chemical messengers that your brain uses to communicate and process information. Neurotransmitters are responsible for how you think, speak, remember, and dream. Serotonin, for example, influences your emotional stability, sleep patterns, memory, and appetite. Dopamine is in charge of cravings, movement control, and reward-motivated behavior. As it turns out, many cognitive issues arise as a result of neurotransmitter abnormalities. For instance, reduced serotonin levels are common in people with depression, which in turn can affect attention and memory. This depletion of neurotransmitters can often be traced back to – you guessed it – a poor diet. The key message here? Amino acids affect how well you think, feel, and sleep. Your brain needs amino acids every day for your cognitive functions to work properly. Chia, the ancient Mayan word for “strength,” packs the biggest punch. Long used as fuel by warriors and long-distance runners alike, two tablespoons of these tiny seeds contain over 200 mg of the tryptophan your brain needs to make serotonin. Research has shown that eating carbohydrates with tryptophan-rich foods helps increase its absorption, which increases serotonin production, which promotes sleep. Plant-based foods like raw cacao, oats, spirulina, and pumpkin seeds are among the richest natural sources of tryptophan. Animal products like full-fat goat’s milk and yogurt, or fish like tuna or salmon, are also fantastic. One of the author’s go-tos is her Basic Wild Alaskan Salmon for Four. To prepare this dish, you’ll need to rinse a 1 pound fillet and cut into 4 pieces. Heat a skillet over low heat, place the fillets skin side down, and add ¼ cup filtered water. Cover and simmer for 4 to 5 minutes. Meanwhile, heat 2 tablespoons extra-virgin coconut oil, 2 tablespoons tamari, the juice of ½ a lemon together, and stir for one minute. Transfer the fish to a plate and drizzle the tamari-lemon sauce on it. Pair the

fish with brown rice for dinner – or have your childhood cup of warm milk with honey before bed – to catch some quality z’s.

Glucose keeps the brain running.

When it comes to dieting, carbohydrates can be controversial – the terms “good” and “bad” are thrown around seemingly willy-nilly. But, for your brain, it’s simple: what makes or breaks a carb is its specific supply of a sugar called glucose. Your body can use both fat and sugar for energy, but your brain relies totally on glucose. Through the process of metabolism, carbohydrate-rich foods are ultimately broken down into glucose, which is quickly absorbed into your bloodstream. Glucose then crosses the blood-brain barrier to feed the billions of cells in your brain. An adult brain needs about 62 grams of glucose over 24 hours to stay healthy and active. Red beets, onions, turnips, and rutabaga are the best natural sources of glucose. One red beet alone contains about a third of all the glucose you need for the day. Fruits like kiwi, grapes, and dates are also high in glucose, as are pure maple syrup and honey. The key message in this blink is: Glucose keeps the brain running. Maybe you’ve experienced the “the candy bar effect,” when your blood sugar levels jump and then come crashing down. Have you ever noticed how you feel afterward? Do “tired” or “weak” come to mind? Consuming a lot of sugar, especially refined white sugar, results in high blood sugar levels – which can cause inflammation, type 2 diabetes, and metabolic disorders. All of these conditions raise your risk of dementia. Reduce your intake of bad sugars found in sodas, fruit juices, candy, and white-flour goods like cakes, pasta, and pizza. Instead, focus on complex carbs and starches like sweet potatoes – be sure to eat the skin, too – berries, grapefruit, pumpkin, carrots, lentils, chickpeas, and whole grains. If you have a sweet tooth, load up on fiber, which prevents blood sugar spikes because it’s harder for your body to break down. For a treat without the sugar rush, try a square of 70 percent or higher organic, dark chocolate or a bowl of air-popped popcorn. You could also make the author’s Soothing Cacao Smoothie for Two. For this, you have to combine 1 tablespoon raw unsweetened cacao powder, 1 tablespoon almond meal, 1 tablespoon chia seeds, 1 teaspoon goji berries, 1 tablespoon organic aloe vera juice, ¼ cup chocolate protein powder, 1 cup coconut water, and 1 cup full-fat coconut milk in a blender, and mix for one minute on high. Enjoy!

Vitamins protect your brain and boost cognitive performance.

Vitamins. We all know they’re good for us, but what do they actually do for your brain? To start, vitamins E and C protect your brain cells and tissues from toxins, free radicals, and pollution. Meanwhile, vitamin B6 is integral to the production of neurotransmitters. What’s more, there’s evidence that over 25 percent of dementia and stroke cases could be completely prevented by eating more foods rich in vitamin B. The key message? Vitamins protect your brain and boost cognitive performance. If you’re thinking, Great, where’s the nearest pharmacy? – not so fast. Because of food’s inherent nutrient synergy, manufactured supplements don’t work nearly as well as the real thing. That is, popping a vitamin C pill every day isn’t the same as drinking fresh lemon juice. Just like eating carbohydrates together with protein boosts serotonin production, or consuming omega-3s with B vitamins promotes mental sharpness, deriving your vitamins from whole foods brings extra benefits that supplements can’t generate. So here, $1 + 1 = 3$.

Luckily, there are many vitamin-packed food sources hiding in plain sight. Almonds and flaxseeds are rich in vitamin E, while citrus and berries provide vitamin C. The author's secret weapon is dandelion greens, which she grew up eating in Italy. This unassuming "weed" contains vitamins C, A, and B, as well as brain-boosting minerals like iron, potassium, and zinc. Here's her grandmother's original recipe for preparing this dish: Rinse one pound of dandelion greens and place them in a saucepan. Cover with one quart of water and bring to a boil over medium heat. Cook for eight to ten minutes or until the greens are tender but not mushy. Drain well, transfer to a serving bowl, and drizzle with two tablespoons of extra-virgin olive oil, the juice of one lemon, and a pinch of sea salt. If you can't find dandelion greens in the supermarket, buy some seeds and grow them at home! Pistachios, tuna, shellfish, organ meat, sweet potatoes, leafy green vegetables, cabbage, bananas, and garlic are all high in vitamin B6. Royal jelly, a more potent version of honey, is also a great source. Spoon it over yogurt along with chia seeds, bee pollen, and crushed pistachios for a quick pick-me-up. Finally, eggs are a great source of choline, which improves memory function. Healthy egg consumption consists of just two or three per week, so eating a variety of other choline sources is crucial; think fish, shiitake mushrooms, almonds, wheat germ, and quinoa. Or take this as your cue to finally try Marmite, which contains brewer's yeast - another choline powerhouse.

A healthy gut leads to a happy brain.

Our early ancestors were hunter-gatherers who ate grasses, seeds, fruits, roots, and the occasional fish. Meat, dangerous and difficult to obtain, was a rare treat. Meanwhile, the modern Western diet relies on processed meats, grains, and dairy products. Pesticides and chemical fertilizers pervade our produce, while animals are fed growth hormones, antibiotics, and even poisons like arsenic to fatten and preserve them - all of which we, in turn, ingest. In fact, 80 percent of the antibiotics sold in the US are used to treat livestock instead of people! Unfortunately, what's bad for your gut is also bad for your brain. And guess what's on your gut's Most Wanted list? Antibiotics and commercially raised meats. The key message here is: A healthy gut leads to a happy brain. Your body hosts an ecosystem of nearly 100 trillion bacteria, more than 95 percent of which are located in your gut. These bacteria, along with viruses, fungi, and other microbes, make up your gut microbiome. Your gut flora help digest food, protect against pathogens, and produce beneficial fatty acids. Surprisingly, these fatty acids can directly alter the function of the blood-brain barrier, affecting how many nutrients and foreign substances can pass through it. To keep your gut healthy, eat organic produce whenever possible, but especially when it comes to the 12 most pesticide-laden fruits and vegetables - also known as the "Dirty Dozen." These are apples, celery, tomatoes, cucumbers, grapes, nectarines, peaches, potatoes, spinach, strawberries, blueberries, and bell peppers. With regard to meat, dairy, and eggs, drastically reducing your intake and only consuming organic, free-range varieties is a wise move. Fiber-rich foods support digestive health and regularity, which flushes away waste products, bad bacteria, and toxins. Incorporating broccoli, berries, legumes, and leafy greens will do the trick. Prebiotics - carbs that feed your body's good microbes - are abundant in onions, asparagus, and artichokes. Probiotic foods contain live bacteria that replenish your gut microbiome; they're found in fermented and cultured foods like sauerkraut and yogurt. New research shows that changes in your gut microbiome can influence the risk of brain disorders like anxiety and depression - and probiotics could be an effective treatment. In one study, a group of women ate a cup of probiotic yogurt twice a day for a month, while a control group didn't eat any. They were then shown upsetting pictures

while their brains' emotional responses were monitored with an fMRI. Guess who remained calmer?

Your brain needs healthy food, daily exercise, and good company to flourish.

Dispersed around the world are five tiny regions that all have uncannily high concentrations of centenarians: Sardinia, Italy; Ikaria, Greece; Okinawa, Japan; Nicoya, Costa Rica; and Loma Linda, California. The people in these “blue zones” don’t just live longer; they lead full lives with very low rates of cancer, obesity, heart disease, and diabetes – not to mention dementia. So what are they doing right? Despite their geographic and cultural differences, inhabitants of these longevity hotspots have nearly identical lifestyles. First, they tend to have strong bonds with family and friends. They also move every day, incorporating things like gardening and walking. Physical activity, as you probably know, is a natural antidepressant. It also stimulates memory formation, helps neurons recover from injury, and promotes new brain-cell growth. But the most notable thing about the people in these hotspots is the fact that their diets are very similar. The key message here is: Your brain needs healthy food, daily exercise, and good company to flourish. Typically, these centenarians start their days with a large breakfast, followed by a moderate lunch and a small, early dinner. As such, centenarians naturally incorporate intermittent fasting – which has been shown to increase the life span of lab animals by up to 30 percent. Try giving yourself a 12-hour fasting window between dinner and breakfast, making sure to drink plenty of water in the meantime. The centenarians’ diets revolve around fresh vegetables, fruits, legumes, and grains, which contain brain-essential vitamins, lean protein, and good carbs and fats. On average, they consume fish and meat only five times a month, and in small portions; this lowers their intake of saturated fat and cholesterol while still providing vital nutrients. Finally, these centenarians commonly drink one to two glasses of alcohol per day, most often red wine – an excellent source of antiaging antioxidants when ingested in moderation with food. Some drink coffee, the equivalent of one espresso or two Americanos, which studies show staves off dementia. When it comes to getting healthy, the most important thing is to revisit everything you’ve learned and find what works for you. Your bio-individuality influences your specific behavior, mental health, hormonal production, and nutritional needs. And, above all, remember to stop and smell the roses. It’s crucial that you strive to reduce stress and enjoy your time on Earth – just as crucial as eating broccoli – when it comes to the well-being of your brain.

Final summary

The key message in these blinks: Your brain is literally what you eat. Neuro-nutrition research shows that increasing water consumption and maintaining a plant-focused diet rich in vegetables, fruits, legumes, grains, and the occasional fish can result in pure brain bliss. By taking care to eat well and in moderation, you can reach peak mental performance, stave off disease, and age gracefully. Actionable advice: Check your cookware. Excessive amounts of minerals like aluminum and copper can sneakily enter the body via water pipes – but your pots and pans are also a potential culprit for toxins. Clear your kitchen of any aluminum cookware, as well as microwavable plastic containers and synthetic nonstick surfaces like Teflon. Instead, invest in pots and containers made of cast iron, stainless steel, glass, and traditional ceramic. Remember,

it's your brain - and life - we're talking about here! Got feedback? We'd love to hear what you think about our content! Just drop an email to with Brain Food as the subject line, and share your thoughts!