BRAIN HEALTH

How to Nurture and Nourish Your Brain for Top Performance

Brain Health

Your Short Guide to Ultimate Brain Health

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Introduction

Your brain is just like any other part of your body. In order to maintain optimum function and to get the very most from it, you need to treat it right.

And this is rather important, seeing as your brain is responsible for pretty much everything you do. Whether it's the obviously 'mental' stuff, like concentrating at work or performing complex sums; whether it's physical stuff like regulating your breathing, helping you sleep and directing your movements; or whether it's managing your emotions and helping you to feel happy and calm.

Whatever it is you're doing or experiencing; your brain is at the route of it. And thus, you can improve *every* aspect of the human experience just by focusing on your brain health.

How Your Brain Function Can be Enhanced

The trouble is that many people have very little idea just how to go about looking after their brains. This is the most previous piece of equipment in the world – more powerful than infinite supercomputers – but we tend to just ignore it and hope it all works out okay.

In fact, a lot of the time, we unintentionally subject it to a fair amount of abuse!

For starters, most of us eat entirely the wrong diet and this means our body doesn't have access to the raw materials it needs in order to maintain optimum brain function. In the short term, this makes us feel groggy and slow but in the long term, it can lead to cumulative damage that results in neurological diseases and age-related cognitive decline. That's right: it's not inevitable that you should become forgetful and cantankerous as you get older!

The other problem is that most of us don't *use* our brains enough. We don't challenge them, and we don't train them. Due to a phenomenon called 'brain plasticity', it is actually possible for us to train and grow our brains just like a muscle. New neurons can be created, and new connections can be formed and strengthened. This all means that it's possible for us to develop certain brain areas beyond others and actually enhance our abilities as a result.

But when you *stop* challenging your brain or training it, it can lead to all kinds of problems. Especially when you combine that with high levels of stress and the aforementioned poor diet.

How You Started Destroying Your Brain With Bad Nutrition and Stress

The way that most people eat these days is enough to severely damage our health and lead to serious problems.

As mentioned previously, the brain needs a large number of very specific nutrients in order to function well. These include the all-important precursors to various neurotransmitters. Neurotransmitters are chemicals that change our mood and the way they think – they help us to sleep, to feel good, to focus and to remember things.

But the brain makes these neurotransmitters out of vitamins, minerals and amino acids. If you aren't getting enough l-tyrosine for instance, then you might struggle to make dopamine – the neurotransmitter responsible for helping us to focus, stay motivated and remember things. Meanwhile, tryptophan is what the brain uses to create the 'feel good' neurotransmitter serotonin. This is then later converted to melatonin to help us sleep.

Vitamin B6 is a building block for *numerous* neurotransmitters including dopamine, epinephrine (focus), serotonin and GABA (calmness). Choline, found in eggs, is the precursor to acetylcholine which can improve pretty much every single aspect of your cognitive function!

Then there are the countless other crucial nutrients that the brain needs to perform optimally. For example, healthy arbs are what fuel

the brain with energy, antioxidants protect the brain cells from free radicals and zinc enhances brain plasticity.

But most of us are not getting anywhere near enough nutrients in our diets. That's because we eat far too much 'processed foods.' Processed foods contain lots of calories to make us feel full but they are 'empty calories' that are devoid of the things we need.

Meanwhile, our switch to a more modern diet that doesn't include things like fish, mean that even those who try to eat 'healthily' are generally not getting the things they need.

A perfect example of this is the modern lack of omega 3 fatty acid. Omega 3 is a fatty acid found in fish (and some plants), which aids with 'cell membrane permeability' (especially the DHA form). This is important because it allows things to pass more easily through the cell walls – good things like nutrients and signals from other parts of the body.

At the same time, omega 3 fatty acid is also used by the brain to create a number of hormones that are linked with managing the blood. This way, omega 3 is able to reduce blood pressure and heart problems.

Most importantly though, this also allows omega 3 fatty acid to reduce inflammation in the brain and the predominance of 'pro-inflammatory cytokines.' This is highly important, seeing as pro-inflammatory cytokines are what make you feel so groggy and confused when you're poorly or very tired.

Brain fog is a serious problem and it's made worse by the fact that most of us also have far *too* much omega 6 fatty acid. Omega 6 fatty acid is a useful nutrient in its own right but when we get too much of it, it can actually lower omega 3 *and* cause more inflammation. Most of us have far too much omega 6, because it is used in all kinds of preservative oils.

This is then combined with chronic dehydration, which most of us experience on a daily basis. Dehydration can *also* cause inflammation in the brain, while also generally leading to sluggish performance.

These processed foods are also exampling of 'simple carbs' – carbs that have no sustenance and which the body processes very quickly. This results in a sudden spike in blood sugar that provides you with a burst of energy, followed by an immediate trough straight afterward.

Then there are all the toxins and high quantities of sugars that we consume regularly – and the cancer causing free-radicals.

Is it any wonder that you struggle to think through the thick haze sometimes?

The Role of Stress

Even worse is the role of stress. Today, it's a sad fact that a great number of us experience chronic stress, leading to elevated levels of cortisol (the stress hormone) in our systems. This has a number of serious negative effects on our health and on our brain function in particular.

For starters, when there is excess cortisol in the system, this increases the amount of the neurotransmitter 'glutamate'.

Glutamate is a general excitatory neurotransmitter, and this means that you'll experience increased brain activity across the board. This leads to heightened awareness and that sense of nagging thoughts. It also makes it harder to sleep, which can lead to memory loss and depression.

But perhaps the most worrying side effect is that ongoing stress also leads to the creation of more free radicals – unattached oxygen molecules that attack the brain cells and potentially cause cancer. It can also generally destroy brain cells, robbing you of your ability to think straight.

Also worrying is that stress depletes levels of brain-derived neurotrophic factor (BDNF). This is the principle neurotransmitter that stimulates the creation of *new* brain cells and it's highly important for increasing brain plasticity. In other words, stress prevents you from learning and this in turn is associated with depression, OCD, schizophrenia, dementia and Alzheimer's disease.

And cortisol also acts contrary to numerous other important neurochemicals. That is to say that when cortisol goes up, these go down. And key victims here are serotonin (happiness), testosterone (drive) and dopamine (motivation and learning).

Just in case that you thought the 'more alert' part sounded cool earlier. Note that this also increases your awareness of things like nagging pains, irritating noises and more. This is why stress is associated with tinnitus – the ringing sound some people experience in their ear that has no cause.

And meanwhile, heightened stress can actually cause our frontal cortex – the part used for planning, creativity and higher-order thinking – to completely shut down.

So, in short, stress can absolutely neuter your cognitive ability in the short term and cause long term damage if it is allowed to continue.

The Day You Stopped Learning

All this would be bad enough, if our current lifestyles didn't also involve so little learning and actually *using* our brains.

The brain is a tool that has one singular interest: heling us to survive in our environment. And the way it does this is to adapt and to evolve, to enable us to get more reward and less punishment. It helps us seek out food, shelter and sex, while avoiding pain, hunger and fear.

To do this, our brain needs to learn. It predicts outcomes, tries new things and then decides whether or not to do that again based on the response. If it got food, then the neural connections involved in that action are strengthened and it will do it again in future. If it got pain, then the neural connections will be largely overridden, and it won't do it again…

But the brain *loves* doing this. Learning, exploring and adventuring keeps the brain youthful and nimble and encourages continued growth and the production of more dopamine and BDNF to encourage plasticity.

Once life stops being unique and interesting, the brain stops needing to pay attention and can rely on existing connections. Thus, the things you are already good at get strengthened and everything else gets pruned. You become set in your ways and your brain ceases production of dopamine and BDNF – preventing you from

being able to learn new things. And this is when dementia has been shown to kick in.

Now with all this in mind, consider the way your life has changed from when you were younger to now. When you were born, everything was new, and your brain was *highly* plastic. You were constantly learning new things and discovering new things. Thus, your brain was filled with novelty and it responded to this by producing huge amounts of dopamine and BDNF. This is why children can pick up languages so incredibly quickly. It's why they're always smiling and it's why they're always curious and learning.

As we get older, we become more familiar with the world around us. Things get more set-in stone and we no longer have to learn simple things like how to walk or what a tree is.

But we're still learning – we're learning at school; we're learning when we watch TV and we're daydreaming about all the things we could be! This continues to a lesser extent into adolescence as we head off to college and as we start dating for the first time, learn to drive and learn to pay the rent in our own apartments.

Even in young adulthood, much is new as we travel with friends and as we try out different jobs and progress through our careers.

But then things start to slow down. We stop learning new things and we find a job that we like and *stay in it*. Meanwhile, our bodies become tiered and we gain more responsibilities – like children and mortgages. We settle down in some part of town and don't move home or environment…

The result is that we end up stuck in a rut and going through the same motions day in, day out. All the while our brain is flooded with stress hormones and we're eating entirely the wrong diet.

All this contributes to a general slowing of our brain function, damage to our mood and wellbeing and the growing inability to learn. This is why older people are stereotypically more closed minded – they're *literally* become set in their way. It's like taking the same route across a lawn every single day – eventually that route will become entrenched and you'll never be able to go any other way.

Brain cells start dying, your mood deteriorates, and you crawl toward inevitable old age.

The Solution

Wow, that's depressing! The good news is that it's also *wrong*.

The inevitable bit, that is. Old age may be inevitable, but the cognitive decline associated with it most assuredly is not. In fact, there are plenty of ways you can combat age related cognitive decline and keep your brain youthful and healthy *well* into older age.

Read on and we'll look at what some of the things you can do are…

Fix Your Nutrition

Step number one is to fix your nutrition. Instead of eating lots of processed foods, sugary snacks and preserved ready meals, you need to switch to nutrient dense sources of complex, slow-release carbs, to lean proteins, to vegetables and fruits!

This doesn't mean switching to some kind of fad diet. It just means eating food with real, natural ingredients. And it means seeking out those 'superfoods' whenever you can.

If you only add a few things to your diet, consider these:

Eggs

Eggs are absolutely amazing in just about every way when it comes to your brain and your health in general. For starters, eggs are one of the only 'complete' sources of protein. This means that they

contain 100% of the essential amino acids that you can't produce in your body, thereby helping you to produce all kinds of neurotransmitters.

Eggs are also rich sources of selenium, vitamin D, B6, B12, zinc, iron and copper… all things that can boost your brain power.

Best of all, eggs are also high in choline – which is the chemical precursor to 'acetylcholine'. Acetylcholine meanwhile is a neurotransmitter that helps keep us alert, awake and highly attuned to our senses.

As though that wasn't enough, eggs are a *great* source of saturated fats. Saturated fats are also highly beneficial for the brain, seeing as the brain is largely *made* of fat. Plus, it boosts testosterone, which is linked with drive and motivation, as well as mood (and low cortisol).

Tuna

Tuna is an excellent source of amino acids yet again and is nice and lean for those of you trying to keep their weight down. What's more, is that tuna is a brilliant natural source of omega 3 fatty acid. We've already seen the amazing health benefits of omega 3 fatty acid, so 'nuff said on that front. Oh, and it's cheap too!

But while tuna is great source of all these things, it is a little high in mercury owing to pollution – so don't eat more than a small can a day.

Red Grapes

Red grapes are high in a substance called resveratrol. Resveratrol is a potent antioxidant, which means that it can prevent the action of free radicals in the brain and thereby reduce your chances of brain tumor or Alzheimer's.

At the same time though, resveratrol is also able to enhance the function of the mitochondria, thereby helping them to produce more energy for your brain cells. It turns out that resveratrol isn't quite as powerful as some earlier studies suggested but it's certainly still no slouch either!

Coconut Oil

Coconut oil contains something called MCT oil – Medium Chain Triglycerides. This is a type of oil that stimulates the liver to produce ketones. Ketones meanwhile are an alternative energy source that the brain can use instead of glucose. The brain actually prefers ketones for a number of tasks, which makes this a great way to give your

Supplements

If you want to give your brain a little more edge, then you can do so by seeking out a number of different supplements and nootropics. Some good examples include:

Creatine

Creatine allows the body to recycle its ATP stores. ATP is the body's primary source of energy and is used by every single cell – including the brain cells. This way, creatine is able to give us more energy to think smarter and improve mental vigilance. It has been shown in studies to increase IQ.

Omega 3

Getting omega 3 from the diet alone can be hard, so supplementing with a DHA product is a good choice. Avoid cod liver oil if you're pregnant however, due to the large amounts of retinol.

Caffeine

Caffeine will give you a short-term boost in concentration, memory and wakefulness. It's not perfect and can decrease creativity while also being mildly addictive. But it *is* neuroprotective and can prevent Alzheimer's.

Lifestyle Changes

Finally, don't forget the power of numerous lifestyle changes. Getting better sleep is absolutely critical to increase neurotransmitter stores, remove adenosine (which contributes to brain fog) and strengthen new neural pathways.

Also, very important is exercise. The brain is primarily designed for movement – this is what the majority of brain areas actually specialize in! Moving the body is the best way to learn and to stimulate plasticity, while cardio will also improve circulation to the brain while adding a short-term increase in serotonin and endorphins.

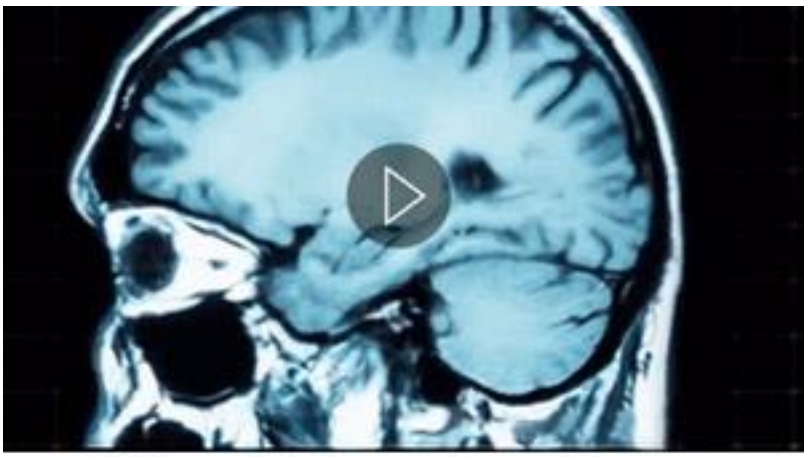
Finally, make sure to keep learning, keep exposing yourself to novel surrounds and keep trying new things. Computer games are actually a great way to do this – as every new game includes new environments and new rules to uncover!

Of course, we're only just scratching the surface of what you can do to increase your IQ, your wakefulness, your creativity and your long-term brain health. In the full book, we go into much more depth discussing the huge number of specific brain training

techniques, health strategies and more that you can use to start getting more out of your brain and looking after it.

A lot of this is about what you need to *stop* doing. And it's about making small changes to your routine and lifestyle – like eating a little more fruit and perhaps walking a little more. Doing small things can make a huge difference to the way you feel now and, in the future,, it could potentially be the difference that adds 5 or 10 years of quality life. Look after your brain and *everything* will get better.

The Natural Way to Supercharge and Maintain A Healthy Brain & Hearing



What Hearing Loss Does To Your Brain

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