



Head Strong

The Bulletproof Plan to Boost Brainpower, Increase Focus, and Maximize Performance – in Just Two Weeks

By Dave Asprey

12-minute read

Synopsis

Head Strong (2017) is a cutting-edge guide to strengthening and fine-tuning your cognitive powers. From what toxic foods to avoid to the importance of healthy lighting, it leaves no stone unturned in its advice on reaching optimal mental performance.

Who is it for?

- High-flying businesspeople looking for an edge in the boardroom
- Health nuts interested in optimizing their brainpower
- Anyone who struggles with brain fog, procrastination, and lethargy

About the author

Dave Asprey is a Silicon Valley investor, writer, and podcast host. A biohacking pioneer, he's the creator of Bulletproof Coffee and the author of *The Bulletproof Diet* and *Super Human*.

What's in it for me? Unlock your full cognitive potential.

Are you happy with the way your mind works? Is your brain sharp enough, fast enough, and reliable enough to keep you on your A game, day in and day out?

If you're like most of us, then probably not. Brain fog, forgetfulness, and a lack of energy are common signs that our brains are underperforming.

That's where these blinks come in. They lay out the exact dietary and lifestyle changes you need to make in order to regain your natural mental sharpness.

Drawing on the latest innovations in neuroscience and neurobiology, these blinks will help you harness your true brainpower once and for all.

In these blinks, you'll learn

- why you should ditch milk but eat more butter;
- why LED lights are not your friends; and
- how sex and chocolate can help you learn.

Healthy mitochondria are the key to a sharp and efficient brain.

In today's increasingly dynamic and competitive world, it can be hard to get an edge. Most of us work extremely hard, pouring our blood, sweat, and tears into our endeavors. But that's not enough. In order to stand out from the crowd, we need to do more than just persevere – we also need to be able to think smart.

That, of course, is easier said than done. Having the mental energy, alertness, and agility to cope with life's challenges can often be a tall order. So are we simply stuck with the mental hardware nature has given us?

Well, the short answer is no – there's actually a lot we can do to make life easier for our brains!

The key message here is: Healthy mitochondria are the key to a sharp and efficient brain.

Of all the organs, your brain makes the greatest drain on your body's energy reserves. Using up to 20 percent of your energy resources at any one time, it requires more fuel than your lungs, heart, or even your legs.

So what powers this energy-hungry system? Well, tiny cellular structures called *mitochondria*, which exist inside every cell in your body, play a pivotal role in getting your brain the energy it needs.

In fact, the health of your mitochondria directly dictates the brainpower you have at your disposal right now. That's because your brain's *prefrontal cortex*, responsible for advanced cognitive function, has the greatest concentration of mitochondria anywhere in the body – except for the ovaries.

Mitochondria produce energy by breaking down a substance called *adenosine triphosphate*, or ATP. This

reaction provides us with the fuel our bodies and brains require – meaning that healthy mitochondria make for sharper, more energetic minds.

Too often, though, we overtax our mitochondria, making our minds sluggish and dull. This isn't done deliberately, of course – who wants a drowsy mind? Instead, we unwittingly exhaust our mitochondria by exposing ourselves to environmental toxins.

When we do this, our bodies need extra energy to get rid of the toxic food, light, or air we've encountered. And with all our energy going to detoxification, we end up with little left when we actually need to perform.

The results? Fatigue, brain fog, and a lack of focus. If this sounds familiar, don't worry! The following blinks lay out some accessible advice for avoiding harmful toxins and keeping your brain healthy and well-fueled.

Improving your neural health can help you fine-tune your mind.

If you've ever studied biology, then cells called *neurons* are probably already familiar to you.

Neurons are one of the basic building blocks of the brain. Their main job is to combine with other neurons to form huge pathways called *neural networks*. Ultimately, the way these networks operate helps to determine how we think, learn, and respond to our environment.

You see, our ability to remember things depends on having well-functioning neural networks. When our neurons can freely communicate with one another, we easily store new information and have little difficulty recalling it later on.

On the flipside, when we do have trouble remembering things and memorizing new information, it's often a sign that our neural networks are underperforming.

This is the key message: Improving your neural health can help you fine-tune your mind.

Luckily for us, our neurons' health isn't set in stone. Like our mitochondria, the health of our neurons depends on the lifestyle choices we make.

Time to get scientific. One of the factors that allows neurons to communicate with each other so effectively is the *myelin membranes* that surround them. Myelin is an especially thick and fatty cell membrane, and it's crucial to healthy neural networks.

That's why consuming healthy, saturated fats – the kind found in grass-fed butter and meat – can be so beneficial for your cognitive performance. Stable fats like these are the kind of raw material that your body needs in order to create robust and well-functioning myelin membranes.

But adding more butter to your diet isn't the only way to improve your neural networks. We can also boost *neurogenesis*, the rate at which our brains form new neurons. And increased neurogenesis can lead to cognitive enhancement, rapid learning, and emotional resilience.

So how do we increase neurogenesis? It's simple. The first step is to eat less sugar. Sugar raises our bodies' insulin levels, which interferes with neurogenesis.

Instead, focus on eating foods high in compounds called *polyphenols* – commonly found in coffee, chocolate, grapes, and blueberries. And if that alone doesn't hone your cognitive skills, don't worry. Getting exercise and having sex regularly have also been shown to ramp up neurogenesis.

That's right. You can sharpen your mind by eating more chocolate and having more sex – not exactly an unpleasant prescription!

Tackle the inflammation that's sapping your brainpower.

In many cases, inflammation is a useful and healthy part of the body's response to threats. A brief burst of inflammation is often all that's necessary to combat whatever's stressing your body – like trauma, toxins, or infections.

Unfortunately, though, inflammation isn't always so short-lived. When it persists over time, it turns into what's known as *chronic inflammation* – a risk factor for developing cardiovascular disease, cancer, and diabetes.

But that's not all. Because of its harmful effects on the brain, inflammation can rob you of your mental sharpness and energy long before it causes any obvious medical conditions.

Here's the key message: Tackle the inflammation that's sapping your brainpower.

Many people assume that our mental powers naturally weaken as we grow older – but much of the cognitive decline we experience as we age is actually just a side effect of unchecked inflammation.

That isn't to say that younger people can afford to be blasé, however. Inflammation can harm our cognitive performance at any age – especially our ability to learn and pay attention.

Thankfully, there are some dietary changes we can make to reduce inflammation and restore our mental clarity. That's where a group of molecules called *eicosanoids* comes in.

The body makes eicosanoids using both *omega-3* and *omega-6* fatty acids, but each type produces very different results. In brief, *omega-6* produces pro-

inflammatory eicosanoids, whereas those made from *omega-3* are anti-inflammatory.

Now, having pro-inflammatory molecules in the body isn't necessarily a bad thing. As we mentioned, they often come in handy when the body is facing threats to its health. We actually want our bodies to have an equal number of pro- and anti-inflammatory eicosanoids.

The problem is that most of us consume far too many *omega-6* fatty acids. This skews the ratio in favor of pro-inflammatory eicosanoids and ultimately contributes to chronic inflammation.

We can work to improve this ratio and reduce inflammation by eating more wild-caught seafood, like salmon, and cutting down on vegetable oils – a common source of *omega-6*s.

Enriching your diet with a few nutritious foods can help unlock your brain's full potential.

We know that saturated fats help us to form healthy myelin membranes, and that sugar is best avoided. We know that we need to balance our *omega-3*s and our *omega-6*s. And as you might've guessed, we're just getting started! There are many more dietary tweaks we can make to positively influence our cognitive abilities.

If you want to speed up, strengthen, and sharpen your mind, you can begin by adding some brain-boosting foods to your everyday snacks and meals. And that doesn't have to be difficult. Many of the foods you'll need to kick your mind into gear can be found on the shelf in your local supermarket – if they're not already sitting in your fridge.

The key message here is: Enriching your diet with a few nutritious foods can help unlock your brain's full potential.

We've already mentioned some key, brain-friendly micronutrients – namely, polyphenols.

Polyphenols, which occur naturally in plants, are packed with the antioxidants your body needs to mop up harmful free radicals produced by the breakdown of ATP. But polyphenols do more than just protect us against free radicals. Among their many other benefits, polyphenols fight inflammation, increase the rate of neurogenesis in the brain, and help to protect our gut biomes.

So how do we make sure we're getting enough of these superpowered antioxidants? Well, as we've already discovered, they're present in coffee and chocolate, as well as in many vegetables – particularly ones that come in shades of dark red, purple, and blue.

Additionally, grape seeds actually contain a particularly potent form of polyphenol. For maximum effectiveness, this can be consumed in the form of grape-seed extract.

But it's not enough to make sure our bodies are getting enough antioxidants; we also need to eat right for our brains' *neurotransmitters*. Neurotransmitters are chemicals in the brain that transfer signals between neurons. In order to make them, our bodies need to be getting the right nutrients.

Take two of the most widely known neurotransmitters: *dopamine* – which plays a key role in the experience of reward – and *GABA*, which helps to relax the mind and body. To build these neurotransmitters, the body uses a number of amino acids, including *L-tyrosine*, *L-phenylalanine*, and *glutamine*.

If you want to make sure that you're giving your body the right materials to build these neurotransmitters, then up your intake of beef, turkey, almonds, and salmon. Your brain will thank you for it!

Ditch the foods that are limiting your brainpower.

So you can hack your cognitive abilities by adding some superfoods to your diet. That's good news – but it's only half the story. Just as important as learning to eat foods that can help your brain is learning to avoid foods that can harm it.

Most of us don't know which foodstuffs weaken our mitochondria, damage our neurons, and sap our mental energy – putting us at a cognitive disadvantage every time we need to perform at our best. The solution? We need to take a long, hard look at exactly what we're putting into our bodies and remove anything that's holding us back.

This is the key message: Ditch the foods that are limiting your brainpower.

One particularly toxic ingredient is a class of oils known as *trans fats*. You may have heard of them; they're vegetable oils chemically altered with hydrogen to have a longer shelf life. Unfortunately, they harm our bodies in a number of ways.

One of the ways in which trans fats impair our health is by damaging our mitochondria. In fact, consuming trans fats increases our risk of developing cancer, Alzheimer's disease, and other forms of dementia – all of which are mitochondrial disorders.

Besides its link to these life-threatening conditions, mitochondrial damage also limits our cognitive ability. So look out for trans fats in baked goods, fried foods, and margarine – and avoid them if at all possible.

The next culprit might come as a surprise to you. After all, what could be more innocuous than milk? Well, believe it or not, milk protein causes problems for everyone – even for those of us who can handle lactose.

The problem is twofold. First of all, milk protein causes inflammation, which weakens mitochondrial function and hampers the brain. Second, milk protein binds to polyphenols – and prevents them from being put to use by the body.

That doesn't mean you need to rule out all dairy products, though. Butter contains almost no milk protein, so you can leave the healthy grass-fed butter on your shopping list.

Finally, try to avoid gluten as much as you can. Even if you don't have allergies, gluten can cause inflammation and reduce blood flow to the brain – the exact opposite of what you want to have happen when you're trying to boost your brainpower.

"Junk" light can be just as unhealthy as junk food.

At this stage, it's obvious that fast food isn't going to do much for your cognitive abilities. In your new, brain-boosting health regime, sugary sodas and deep-fried, highly processed meals just don't make the cut.

But what if you're unconsciously choosing the equivalent of fast food in other aspects of your life? What if you're exposing yourself to unhealthy mistakes in other, less obvious ways – without even realizing it? To put the question more directly, have you ever given any thought to the lighting in your everyday environment?

If not, you could be exposing yourself to the equivalent of a highly toxic, fast-food meal day after day.

Here's the key message: "Junk" light can be just as unhealthy as junk food.

You see, your cells' mitochondria are highly sensitive to light. Different types of lighting send different commands to mitochondria, and different frequencies of light have different effects.

In today's world, our bodies are exposed to lighting unlike anything that occurs in nature. We've removed infrared light from our surroundings, along with ultraviolet light, and replaced it with artificial illumination that stresses our bodies and saps our energy.

Among the greatest problems with modern lighting is the amount of blue light we encounter. Take LEDs, for example, which emit an apparently white light. The reality is that they produce five times more blue light than you'd encounter naturally.

When our mitochondria are confronted with blue light, they have to work overtime – and end up producing a lot of harmful free radicals in the process. As you can guess, this isn't good news for your brain. Gradually, it can make you lose your mental edge.

So what's the solution? Well, the best way to begin addressing the problem is by reducing the blue light your devices emit.

On laptops and Android phones, you can download an app called f.lux. At night, this software automatically lowers blue light – but you can also alter the settings to reduce blue light 24/7. Most iPhones can effect the same change without any additional software; all you have to do is go to Settings and turn on the “Night Shift” mode.

The next step is to get more high-quality light – good old-fashioned sunlight is the best. So whenever the weather and your schedule allow for it, get outside and soak up the sun. Whether or not you get a tan, you'll be rewarded with a sharper, more capable mind.

Final summary

The key message in these blinks:

Your mitochondria are key to a healthy, well-functioning brain; nourish them with a varied diet – high in saturated fat, full of polyphenols, and low in toxins – and your mind will reap the rewards. And minimize the blue light you encounter every day. If possible, balance artificial light with periods in the sun.

Actionable advice:

Make sure your bedroom is pitch black.

A good night's sleep is vital if you want to be on your game the following day. In order to make your sleep as restful as possible, make sure you eliminate all sources of light pollution in and around your bedroom.

Consider investing in blackout curtains if you need to – but, in the meantime, you can just use extra fabric to keep out any troublesome light.

Got feedback?

We'd love to hear what you think about our content! Just drop an email to remember@blinkist.com with *Head Strong* as the subject line, and share your thoughts!

What to read next: *Super Human*, by Dave Asprey

So now you know how to fine-tune your mind and biohack your brain to be as quick, exacting, and fresh as possible. That's a step in the right direction – but don't stop improving there! With a mind that powerful, you'll want to enjoy it well into old age. Luckily, our blinks to *Super Human*, the wildly popular title by the

same author, tell you exactly how to keep yourself young, sharp, and healthy as the years go by.