

## **BEYOND COFFEE**



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**A SUSTAINABLE GUIDE TO  
NOOTROPICS, ADAPTOGENS,  
AND MUSHROOMS**

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*A Sustainable Guide to Nootropics,  
Adaptogens, and Mushrooms*

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The following book provides an overview of various nootropics, adaptogens, herbs, and mushrooms, highlighting their mechanism of action, potential benefits, side effects, and interactions with medications such as blood pressure medication or SSRIs. Many of these compounds have gone through rigorous testing and research, which is discussed here. However, side effects and interactions should be considered for each person on an individual basis. The information presented does not constitute medical advice or recommendations. Please consult your physician about taking any of these compounds, particularly if you have a chronic medical condition or take medications daily, to assure safety.

Visit [beyondcoffeebook.com](http://beyondcoffeebook.com) for more information including what the authors take on a daily basis to find their flow-state, interviews, and other resources. You can also use this link to share the first two chapters for free with others.

# FOREWORD

In today's technologically activated, ever-increasingly fast-paced digital age, what's the most common medically related focus goal across demographics and ages?

Hands down, it's brain performance.

From Silicon Valley execs to undergraduate and postgraduate students, aging Baby Boomers, military veterans, and at-home digital startup parents, the number one desired area of health, performance, and optimization is the brain.

We are both fascinated and fearful of the future of our immensely magical human brains. On the one

hand, gene jockeys promise longer lives. On the other, the epidemic of dementia *en masse* looms in the not-so-distant future. The brain and various approaches to improving cognition are like a neurological Pandora's box. Our brain has the potential to create symphonies of miraculous beauty—as well as degenerate into a puddle of infantile dependency, often in the same lifetime. Thus, the “Decade of the Brain” has brought agents of cognitive performance into the limelight, specifically a novel class of acceleration tools called nootropics.

I first came into contact with a nootropic chemical jet fuel while in my medical training, through a medication that is a close cousin to Ritalin called Cylert. Just before medical school, I broke my neck in a diving accident and suffered my fifth major concussion. While in my psychiatry residency, I got turned upside down in a snowboard park and put a six-inch crack in my helmet, thus receiving my sixth one. These two concussions compounded in effect. I started having severe post-concussive syndrome and narcolepsy, a neurological condition where one gets sudden and uncontrollable sleep attacks. It was beyond miserable.

The only treatment at the time was prescription medication. A chemical rescue pill came into the picture... and it worked! How seductively it worked. Four years into the prescription and it was still working. Then I started experiencing some of its longer-term side effects, like migraine headaches, irritability, and mood swings. I also learned about the likely long-term neurotoxicity of stimulants like these. Plus, I had watched three out of four of my grandparents pass away with neurodegenerative conditions (two from Alzheimer's dementia and one with Parkinson's disease); it was clear there was a need for an integrative, healthier, and more sustainable approach to neurological recovery and longevity.

Little did I know then that this experience would lead to a lifelong passion for exploring the psychiatric realms of cognitive science and regenerative methods, medicines, and technologies.

I've written books on concussion recovery and have medically directed clinics focused on reparative neurobiology and transformational medicine. My medical and experiential background in this space has taught me a few simultaneously simple and profound things:

1. We are each designed to express our unique brilliance.
2. The brain is an infinitely complex, ever-evolving matrix of magic.
3. Everything can be healed and optimized.
4. It's up to each of us to do our due diligence to explore the available options, try them out for individual response, and use them responsibly.

Unbeknownst to me at the time, my brush with an unsustainable neurotoxin prescribed as “medicine” would color my research to not just look for results, but also to pay special attention to the sustainable approach to those results.

In this, the most dynamic time in human history, the human and natural collective needs each of us to be switched on to the best versions of ourselves, to who we are and what we're here to do, for the long term.

In service to this vision, we offer this guide to support you along your journey of self-discovery and sustainable optimal performance. You have a unique genius to shine forth. We're excited to see it.

DAN ENGLE, MD

# INTRODUCTION

About five years ago, I was diagnosed with a heart condition—an irregular heartbeat termed “atrial fibrillation.” I was twenty-six years old. When the doctor told me the diagnosis, he asked me about my lifestyle, habits, stress, and exercise regimens. Then he asked how much caffeine I consumed each day. I told him that it was “anywhere between five and six cups” of coffee. He nodded, barely reacting, as if I had confirmed something in his mind. Then, in a somewhat unsurprised manner, he said that my caffeine consumption was likely the major contributor to developing a condition like atrial fibrillation this early in my life.

He said, “James, with your condition, you really

shouldn't consume more than 80 mg of caffeine a day."

"Okay, how much is that in terms of coffee?" I had no idea what I was about to agree to.

"Well, at five to six cups, you're currently consuming about ten times that amount."

Despite the fact that I had just heard the news that I had a heart condition (one that I didn't know existed prior to that doctor's visit, about which I didn't know the implications nor the severity), I remember being most overwhelmed by my doctor's suggestion that I reduce my caffeine intake to about half a cup of coffee. At that time, I was running a company of 70 employees, and I couldn't imagine taking my energy crutch away. I remember seeing article after article touting how great coffee was for you. I thought about bringing those articles up to my doctor. Then I remembered he was my doctor, not some person who was casually deriding my bitter, black, productivity muse.

Conversationally, we only spent a few more moments on the topic, because there were larger



things to discuss (like going to the ER for a cardio-version; fun!). But in our subsequent meetings, in which he continued to make the case for decreasing my caffeine intake, he mentioned green tea (specifically matcha green tea) as a great alternative to coffee. It contained less than 80 mg of caffeine and, he said, “includes another compound called l-theanine that adds a calm focus in addition to the reaction of caffeine...It helps reduce the anxiety that coffee can give you as well.”

I can't say it was game-changing at the time. But it did crack the door in my mind to an alternative to coffee. I was intrigued by the comment that another compound, when added to caffeine, could get me closer to what I was ultimately seeking in the first place: short-term and long-term productivity.

I took it for granted that coffee was the ambitious person's best friend. But five years and 40-plus iterations with different compounds later, I have learned about the different compounds from around the world that allow me to consume a fraction of the caffeine I used to, yet produce a multiple of the energy and productivity that coffee once delivered. These compounds include adaptogens,

anti-inflammatories, herbs, mushrooms, and brain-focused supplements, sometimes called nootropics.

I experimented, researched, and sought expertise on the good, the bad, and the ugly: the short-term boosts and long-term drains, the shortcuts, sifting through science and pseudoscience. I read research paper after research paper and heard anecdote after anecdote. What I came up with was the scientifically scrutinized, well-documented, natural, and most importantly—sustainable—approach to these compounds.

To be clear—and this is very important—each of us should focus on five areas when it comes to energy, focus, and productivity, in this order: sleep, exercise, diet, stress-management, and then exogenous compounds like the ones we have researched and written about in this book. If you sleep two hours a night, it doesn't matter how much caffeine or l-theanine you consume, your productivity will not be optimal. And study after study shows that exercise improves cognitive performance as well as any cognition-enhancing substance.

Additionally, poor diet and high glucose levels

have been linked to chronic fatigue. Constantly overloading your figurative plate, too, without a thoughtful approach to stress-management, strains your focus and the relationships with those around you. A guide to the sustainable approach to nootropics would not be complete without calling this out.

In addition to talking with your doctor about any of these supplements, herbs, roots, or mushrooms **before taking any of them**, you should also talk to your doctor about establishing goals in these prerequisite four areas as well.

Here are our quick tips on those four other areas before jumping into the rest of the book:

**Sleep:** Aim for seven to eight hours of sleep each night, while waking up each morning at the same time. Waking up at different times each morning throws off your circadian rhythm and does not allow your body to create a stable, dependable one. No matter what time you go to sleep, try to wake up at the exact same time each morning for optimal sleep each night. Need help falling asleep at an earlier time and don't want to risk tossing about? The second-

best piece of advice on this topic I received from the same sleep doctor was to use 300 micrograms (**not** milligrams, as that is too much) of melatonin about three hours before you want to fall asleep to kickstart your natural production of melatonin.

**Exercise:** Practice 30 mins of aerobic exercise three times per week. Get your heart rate up and get your sweat glands going (your skin is your largest organ, after all, put it to work).

**Diet:** Everything in moderation. There is a lot of compelling research around intermittent fasting (eating within time boundaries of eight to ten hours each day) to optimize both cognitive function and lifespan.<sup>1</sup>

**Stress-Management:** Apps like Headspace and Calm can be great for easily creating level-setting habits once a day around meditation. Another trick is to not over-promise or over-commit each day. As the adage goes “everything takes twice as long and is three times more expensive than you think”—so plan accordingly by committing to half the things you think you can accomplish in a day. It will leave you the slack in the day to really knock something

out of the park, as well as give you ample space for spontaneity or seizing an opportunistic moment that you wouldn't have otherwise had the time or energy to contemplate. Warren Buffett and his partner Charlie Munger, two of the most famous investors of all time, famously plan four hours each day just for thinking. Plan a few minutes later today just to think about that!

Exogenous compounds (supplements, herbs, mushrooms, and so on—that is, many of the compounds in this book): Avoid addictive, short-term, unsustainable approaches to these compounds. You want scientifically proven effects to build over time in a safe way. It's also simpler to find what works for you for smaller (but more sustainable) gains that build up over time—rather than short bursts of productivity that help you today but make you pay tomorrow (or help you today but are habit-forming and addictive, where the effects actually diminish over time instead of building). Our definition of a “sustainable approach” is one that is (a) safe, (b) scientifically proven to work, (c) beneficial long term, and (d) non-habit forming.

We will discuss some of the most popular noot-

ropics that very clearly DO NOT fit in this category. Nootropics that are either not safe long term, or are addictive and build tolerance over time would not be sustainable in our view. Something that is not proven safe but may be effective would also not fall into our bucket. Many people find benefits from a wide range of nootropics that we don't endorse. This book is not a *Guide to Nootropics* as much as it is a *Sustainable Guide to Nootropics*. We have rated each compound on a “sustainability scale” that is at the intersection of safety, efficacy, and long-term application. We recommend any compound that is at four or five stars, but we do not recommend any compounds that fall below four stars, often because of safety or discontinuation/habit-forming concerns.

## **SO WHAT ARE NOOTROPICS?**

Nootropics, pronounced “new-tropics” (though many people say “new-troh-pics” interchangeably), comes from a Greek origin of ‘nous-trepein’ which means “mind-bending.” The word was coined in the 1970s by the chemist and psychologist Corneliu Giurgea.

The term is increasingly broad, as it is used to define a growing category of compounds that improve cognitive function. Like the term “vitamins,” it’s a large umbrella of many sub-categories. The more we learn about cognitive performance, the more we learn that in addition to pharmaceutically-created compounds that are created for increasing attention span, or over-the-counter herbs that can increase memory, things like anti-inflammatory compounds (like natural turmeric curcumin) can boost cognition by relieving the brain of inflammation. Instead of adding to the system, they help remove blockers of cognitive performance. Ten years ago, compounds like turmeric curcumin would not have been seen as a typical “nootropic” compound, but the surface area is ever-expanding as more and more individuals and researchers find ways to optimize cognitive performance.

Nootropics therefore include wide varieties of supplements (like CDP-choline), roots (Maca), herbs (bacopa), fungi (lion’s mane mushrooms), coffee or teas (like matcha green tea), or drugs (like Adderall). Not all are equal. Not all are safe. Not all are well understood. Not all are meant for long-term consumption. What we felt was missing online or

in the research was a guide for the safe, non-habit forming supplements, roots, herbs, and fungi that you can take every day to either improve memory (bacopa monnieri, a natural herb that has shown clinically verified improvements of up to 20 percent), improve focus (alpha-GPC, a natural choline compound has shown clinically verified improvements in cognitive performance in patients taking the compound for 90 days<sup>2</sup>) or improve energy (there are more compounds around the world that give us energy besides caffeine—and they decrease inflammation, a drain of energy for the body).

Before we begin, let's address a few misconceptions.

New compounds are being discovered or purported each year, and the research on newer nootropics is often scant. Serious consequences can come from taking compounds that are poorly understood and poorly researched. However, there is a common misconception that all nootropics are poorly understood. This is not the case. Many compounds, from bacopa monnieri to modafinil are exceptionally well-studied and scientifically researched, with decades of rigorous, double-blind studies confirming and reconfirming their benefits.



Two additional misconceptions about nootropics are that “they are unsafe” or “they don’t work.” However, that is the equivalent of believing something as vague and uninformed as “supplements are not safe” or “supplements don’t work”—some supplements are not safe and some are, some supplements work and others don’t. All four of these potential realities are true for nootropics. We intend to guide you through what the research says is and isn’t safe and what it says does and doesn’t work.

Misconceptions are common with new trends, and they generally come about because something is still early in scientific and cultural discovery. Many of these misconceptions are similar to those two hundred years ago at the beginning of our cultural introduction to coffee, one of the original nootropics, with the concept of coffee houses. We think time will tell that coffee was far from the end of the story. It’s much more likely that its discovery was just the beginning.

Lastly, what do we mean by sustainability?

Within this book, we use a “Sustainability Score” of 1-5 stars, with 5 stars being an herb or compound

that you can take every day safely and effectively. Some compounds and herbs actually require days or weeks of usage to find the true benefits, and there are others that will give you a short-term boost, say five to eight hours of benefit—but then your productivity falls off a cliff after that. It's robbing Peter to pay Paul.

With our approach, and through a lens of sustainability, we want you to know which compounds have shown clinical benefit from all three vectors of safety, efficacy, and sustained usage. In other words, we believe in consuming compounds where day three is even better than day one, and day 53 is better than both of those. A big reason we put this book together for you is that we were craving this kind of lens when it came to cognition-enhancing supplements ourselves. We hope you find the same benefits we have in our own lives in compiling this research.



# NOOTROPICS





## CHAPTER ONE

# INTRODUCTION TO NOOTROPICS

Wouldn't it be great to be able to take a pill or drink a tea and be smarter? Think of the movie *Limitless*. Simply pop a pill, and suddenly, you can game the stock market like a pro or help the FBI solve a murder mystery. While those may be great premises for fiction, and most people expect nothing more than that, the truth is that there are, in fact, chemical compounds scientifically designed to boost your mental capacity and abilities. And these new supplements are becoming extremely popular.

Called nootropics, these health supplements claim to offer a variety of brain-boosting benefits,

including improving memory, focus, energy, and the ability to learn, as well as fueling creativity, sharpening attention span, and boosting the brain's executive functions.

The questions are whether or not they actually work; whether or not they're safe; and how to find that intersection of efficacy and safety. That's the focus of this book.

There is a lot of information available online, in published research, and through speaking with experts; some of it is helpful, some of it isn't. As we thought about how to highlight the best research, compounds, and approaches to cognitive-enhancing supplements, herbs, fungi, roots, and the like, we realized there was a gap in the information. We could find research that showed short-term benefits with X or safety with Y, but we couldn't find a good resource for the safe, effective, comprehensive, and sustainable approach to these compounds. So we set out to write it ourselves. Please let us know what you think at [beyondcoffeebook2019@gmail.com](mailto:beyondcoffeebook2019@gmail.com), and we will aim to incorporate feedback into future versions of this book.

## OVERVIEW AND HISTORY

Despite being a relatively recent health trend, nootropics have been around a lot longer than most of us realize. For example, caffeine and other stimulants that fall into the nootropic category have been in use for centuries.

We haven't always called them by the name "nootropics," however; as the term was coined in 1972 by Romanian psychologist and chemist Corneliu Giurgea, when he developed the compound Piracetam.

Today, a nootropic is any chemical or chemical compound that is designed to improve cognitive functions. A variety of research has gone into determining not only whether nootropics work (more on that below), but also why they work. According to research published by the National Institutes of Health (NIH):

Nootropics act as a vasodilator against the small arteries and veins in the brain. Introduction of natural nootropics in the system will increase the blood circulation to the brain and at the same time provide the important nutrients, increase energy, and improve oxygen flow to the brain.<sup>1</sup>

Most nootropics can be found in either natural sources or over-the-counter supplements. Some are available only through prescription. Some compounds are created by extracting the chemicals from their naturally occurring sources, while others are synthesized in laboratories.