

Hi there! 👋

Lopa and Ben here, Founder & Co-founder of Rasa, an adaptogenic coffee alternative brand. We're obsessed with herbs, adaptogens, sustainable sourcing, and transforming the way people energize.

We're so over the adaptogen misinformation out there! We created this guide to share sound scientific and traditional knowledge on these incredible plants so you have a reliable reference and can feel confident using adaptogens.

We sell adaptogen-focused products, so we want to be transparent about our inherent adaptogen bias! But beyond furthering our own mission, we want to educate the market and you, dear human. While this guide isn't intended as a promotional tool, we reference how Rasa operates at times since we are speaking from our perspective and experience.



Lopa is our Founder & CEO, and a longtime herb enthusiast and Ayurveda student. She's been taking adaptogens and educating friends about them since wayyy before they were cool. She started Rasa in her kitchen in 2015 before launching it publicly in 2018.

That's when **Ben**, a clinical herbalist, joined as Chief Herbalist and **Co-Founder**. Before Rasa, Ben sourced 10 million (you read that right) pounds of herbs a year for Celestial Seasonings.

He's read over 100 peer-reviewed papers while formulating our products, and always keeps up on the newest herb research. He's also an active member of the herb industry's push toward ever-more sustainable practices.

We've spent hundreds of hours studying adaptogens and reviewing this guide for accuracy. We're also grateful for herbalist and writer Sara Weinreb who helped with writing and research for this guide, and Alexandra Owens who made it gorgeous.

Whether you source adaptogens from us or others, this guide will empower you to enjoy adaptogens safely and effectively so you can experience the life-changing, stress-reducing, energy-balancing magic of these herbs (and not waste your dollars).

We recognize that our collective scope of understanding around adaptogens is still limited and ever deepening and evolving. We'll keep this guide up to date as research develops and new information becomes available to us. We'd love to hear from you—if there's a brand you want us to check out or new information we should know, send it our way!

Sy buy

Lopa + Ben

P.S. This is not a comprehensive guide (there are whole textbooks on adaptogens!), and, it's an excellent starting point.

After reading this, you'll be among the most adaptogen-educated consumers out there!



Table of Contents

Introduction	0
Adapto-whats? Your Adaptogens 101	0
1. The History of Adaptogens	04
2. The 🖔 4 N's	0!
Benefits: What the Heck Do Aadaptogens Do Anyway?	0
1. Adrenal Support	
2. Stress Resilience	08
3. Balanced Energy	09
4. Enhanced Immunity	10
5. Better Sleep	11
6. But Wait, There's More!	12
The Definitive List of Adaptogens	13
1. The Adaptogen Experts Whose Work Defines This List	13
2. The Definitive List of Adaptogens	14
3. The List of the Adaptogens Rasa Uses in Our Blends	15
4. Indigenous Uses of Adaptogens	16
Buyer Beware: Adaptogen Washing	17
1. Why Adaptogen Washing Sucks	18
2. Adaptogen Washing Common Offenders	19
3. Mushrooms = Adaptogens? Not exactly	20
4. 7 Ways to be Adaptogen Savvy So You	
Actually Get to Experience the Adaptogen Magic	21
Effective & Safe Dosing	22
Adaptogen Sustainability	24
Parting is Such Sweet Sorrow	25
3ibliography	26

Adapto-whats? Your Adaptogens 101

Adaptogens are a special class of herbs that help the body adapt to and defend against the toxic effects of stress (hence the name).

Adaptogens work systematically in the body to help balance, restore, and protect.

They actually adapt their function according to your body's specific needs—helping your body find homeostasis within your unique circumstances. They work *bi-directionally*—meaning they can rev up or slow down the body as needed.

Adaptogens are nature's antidote to stress. These herbs survived the Ice Age and still live in some of the harshest conditions around the world: they've learned to not only be resilient in the face of stress, but to thrive in it. In turn, they can help us do the same.

1. The History of Adaptogens

The herbs we now call adaptogens have been used in Traditional Chinese Medicine, Ayurveda, Indigenous cultures, and traditional European herbalism for millennia (literally thousands of years). Yes, adaptogens were used way before capitalism and Instagram made them trendy.

Then, back in the 1940's and 50's, Russian scientist Nikolai Lazarev was studying herbs (first, Asian ginseng; then eleuthero, its Russian cousin) to find something that would give Russian supersoldiers and elite athletes an edge without the crash.

He partnered with pharmacologist Israel Brekhman, and together they deployed a team of 1,200 biologists, scientists, and physicians to do over 3,000 (!!!) clinical trials on 4,000 plants and herbs.

The result? They defined the term "adaptogen" and identified about a dozen adaptogens, as well as three criteria to define them: The 3 N's.

2. THE 3.4 N'S

It started with three, but now there's a fourth! Brekhman and Lazarev concluded that, in order to qualify as an adaptogen, an herb must be:

Non-toxic: They have no ill side effects in normal therapeutic doses. (Keep in mind that bio-individuality matters and always consult your healthcare provider).

Non-specific: They produce a non-specific state of resistance to physical, emotional, or environmental stress (which is to say they systemically build our resistance to all forms of stress in the body).

Normalizing: They help restore normal physiological function that has been altered by chronic stress, which means they gently usher you back to center from whichever direction you've drifted.

Since their initial definition, expert clinical herbalists and researchers have refined and even expanded the 3 N's, adding a 4th N:

Neuroendocrine*: They have an impact on the neuroendocrine system (= nervous + endocrine systems), specifically via the two main pathways that your brain uses to tell your adrenals that stress is present:

- a. **The HPA Axis** (Hypothalamic Pituitary Adrenal Axis) The endocrine system pathway from the brain to the adrenal cortex.
- b. The SAS (Sympathoadrenal System) The nervous system pathway from the brain to the adrenal medulla.

^{*} Shout out to Ben LeVine, Rasa's Resident Clinical Herbalist & Co-Founder, who named the 4th N to make it easier to remember—because "3 N's + the HPA/SAS" doesn't exactly roll off the tongue.

Benefits: What the Heck Do Adaptogens Do, Anyway?

Before we dive into the specifics of what adaptogens do (brace yourself!), we need to point out that regularity is key to unlocking the benefits we share in this section. These benefits are cumulative in nature and require consistent use over time—so don't fret if you read about their magical qualities and don't experience it on your first go. It takes time. More on this later.

At a high level, adaptogens are balancing

Adaptogens have a balancing effect across our entire physiology, from mood to immunity, keeping our body's cortisol level (i.e., our response to stress) in the optimal range. Plus, they make us more resilient and adaptable, too. #winning

At a more granular level, adaptogens provide:















1. Adrenal Support

The Science

As explained in the 4 N's section, your body has two main stress-response systems that tell your adrenals to pump you up with cortisol and adrenaline:

- The endocrine system's hypothalamic pituitary adrenal axis (HPA axis)
- The nervous system's sympathoadrenal system (SAS) (Hello, Neuroendocrine, our 4th N)

Adaptogens are eustressors (= good stressors, like exercise) that strengthen and tone the HPA and SAS by mimicking (good) stress in the body.

The Lowdown

Taken regularly, adaptogens help strengthen your stress-response "muscles," so your body spends less energy dealing with stress, and more energy on meeting the demands of life. You know when people talk about "adrenal fatigue?" That's a misnomer, what people are really referring to is HPA axis dysfunction, which many of us know of as the dreaded burnout.



Adaptogen Fun Fact: Heat shock proteins, first discovered with heat shock through the use of saunas, are powerful proteins that can mitigate the damage high stress inflicts on our bodies (reducing inflammatory and immunological pressure). But, you don't have to sit in a sauna to reap the benefits—adaptogens upregulate heat shock proteins, too, allowing us to mimic stress in the same way sitting in a sauna would. Whether it's in the sauna or your morning cup, it's time to get steamy.

2. Stress Resilience

The Science

Adaptogens regulate stress by putting an upper limit on how much cortisol (the stress hormone) you secrete in response to stress.

These amazing herbs work in many ways, including via both your hormonal and nervous systems to help your body cope with stress more effectively. This ability to work through multiple pathways is known as network pharmacology, and is the opposite of most pharmaceutical drugs (which are often considered "one drug, one action, one direction").

Consuming adaptogens daily (like Rasa) restores balance to your neuroendocrine system and replenishes your reserves so you have access to your full potential—the you that only you can do!

The Lowdown

Just like with lifting weights, adaptogens help you more easily handle larger stress loads and recover faster over time—all while increasing stress resilience overall.

This means it takes you longer to freak out, and when you do, you don't freak out quite so....freakishly. Plus, you bounce back to your best self more quickly than without adaptogens. But, we want to be extra clear: adaptogens don't eliminate your stressors, they just help you cope with them better. It's still ideal to leave that toxic job or have that hard conversation with your uncle, if and when possible. And please, please don't use adaptogens to keep overextending yourself when rest is what you really need.

3. Balanced Energy

The Science

Another effect of chronically elevated cortisol levels is a depletion of our bodies' metabolic reserves—i.e., our energy stockpile. By keeping cortisol levels within an optimal range, adaptogens regulate cell metabolism, increasing the availability of your energy throughout the day, and ensuring we always have what we need.

Because your body is less taxed from fighting stress, adaptogens effectively *give your own energy back to you*. It's all you—no Red Bull needed!

The Lowdown

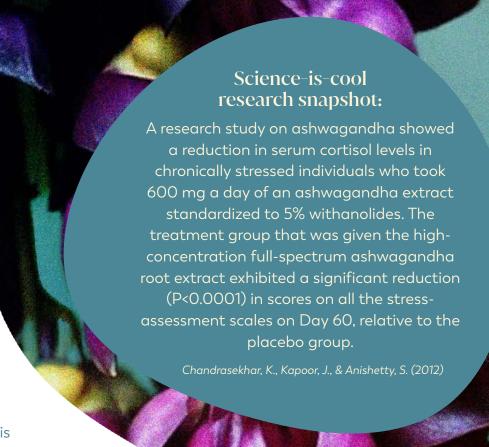
When you get out of constant fight-or-flight, your body begins to normalize, and over time, your energy levels stabilize.

Afternoon crashes become less of "a thing." Smooth, steady energy is the magic sauce of consistent adaptogen use!*

As you get more balanced, you also have more access to appropriate *response* (instead of knee-jerk *reaction*) to whatever life throws your way.

In the words of Dr. Aviva Romm, "You can't pour water from an empty cup. Adaptogens help keep your cup full."

* Of course, to quote adaptogen expert David Winston: "Adaptogens are not a replacement for a healthy lifestyle! There is no substitute for the best sleep, exercise, food, & human connection that are available to you."



4. Enhanced Immunity

The Science

Chronic stress—a condition that arises for the majority of us in the "always-on" ness of modern society—frequently leads to elevated levels of cortisol and inflammation.

Over time, this stress suppresses immune function and decreases the quantity of illness-fighting cells (like lymphocytes) in our bodies, impairing our ability to fight off pathogens.

Under stress, our body prioritizes systems that favor immediate survival, and the immune system (and digestion and libido too, for that matter) is not one of them.

It's a good thing that adaptogens support balanced cortisol levels, as we already explored .

Adaptogens also increase production of immune cells, including specialized cells like natural killer (NK) cells as well as T and B cells. These cells are vitally important to the strength of our immune system and regular intake of adaptogenic herbs may help keep immune cells at ideal levels.

The Lowdown

When we're constantly running on adrenaline and cortisol, our immune system stops getting the resources it needs and we become more susceptible to the havoc caused by a weakened immune system.

Adaptogens—from eleuthero to ashwagandha, rhodiola to reishi, and of course astragalus—are powerful immune tonics that:

Help regulate our immune system by balancing our cortisol levels

Work directly with our immune system to help reverse the immunosuppression caused by stress, i.e., they are immunomodulators (because we like to use fancy science words here).



This budding field is how we understand our mood, stress levels, and immunity to be intertwined. Since they are all influenced by one another, we can see how adaptogens are vital supports for keeping our immune system balanced and in check.

5. Better Sleep

The Science

Cortisol is deeply connected to our circadian rhythm, the internal body clock that tells us when to sleep and when to feel awake. In fact, there's such a thing as circadian cortisol. Chronic stress can dysregulate this natural rhythm and keep cortisol too high into the evening (hello, tired and wired!)

Adaptogens support better sleep by:

- Normalizing circadian rhythm dysfunction via regulating cortisol secretion (which is a main cause of sleep-related problems).
- Helping us deal with both emotional and physical stress (less stress = better sleep!)
- Facilitating deeper sleep via overall HPA regulation.

The Lowdown

Remember how we said the 3rd N was "Normalizing?" Well, when it comes to sleep, adaptogens first reduce the stress response, then bring balance and harmony (i.e. normalization) to our circadian rhythms.



6. But wait... there's more!

There are even more benefits adaptogens can bring to your body, mind, and spirit, including:

Supporting
healthy lymphatic
& circulatory
flow

Supporting healthy blood pressure

Supporting libido (yes, some adaptogens are aphrodisiacs!)

Mental alertness

Faster recovery post-illness or physical activity

Supporting
healing &
rebuilding of
damaged muscle
tissues

Increased
endurance (at
the gym, in the
bedroom...wherever
you play)

Antioxidants
which help prevent
cell damage from
free radicals

And on the softer side, Ben, our clinical herbalist, says certain adaptogen blends help him "feel my feelings, so I can lighten my emotional stuckness and be present to moments of joyful connection." That's a little something we could all use, eh?

The Definitive List of Adaptogens

1. But First: The Adaptogen Experts Whose Work Defines This List

These modern-day western herbalism researchers have contributed to the science, study, and understanding of adaptogens. We came up with the Definitive List of Adaptogens based on research and literature reviews from:



David Winston, RH

One of the foremost adaptogen experts and herbal educators of our time. Author of Adaptogens: Herbs for Strength, Stamina, & Stress Relief.



Alexander Panossian,
PhD, DrSci
Prominent adaptogen researcher with
~200 peer-reviewed research papers
& many ground-breaking explorations
into how adaptogens work.



Donald Yance, CN, RH

Another great herbalist and adaptogen expert; Author of Adaptogens in Medical Herbalism.

You may notice all three are older white dudes. We included them here because their modern-day research is vital to our western understanding of adaptogens, particularly the science behind how they work. However, it's imperative to acknowledge that Indigenous Peoples around the globe were using adaptogenic herbs LONG before Western scientists "discovered" them, and continue to use them to this day.

2. The Definitive List of Adaptogens

brought to you by

RASA

Definite Adaptogens

American Ginseng

Ashwagandha

Asian Ginseng

Cordyceps

Eleuthero

Rhaponticum

Rhodiola

Schisandra

Shilajit*

Probable Adaptogens

A. Mandshurica

Aralia Elata

Astragalus

Ba Ji Tian (Morinda)

Васора

Cistanche

Codonopsis

Cynomorium

Devil's Club

Epimedium

Eurycoma

Guduchi

Gynostemma

He Shou Wu

Holy Basil (Tulsi)

Licorice

Maca

Marapuama

Mucuna Puriens

Notoginseng

Pantocrine (Deer

Velvet)*

Poria mushroom

Prince Seng

Reishi

Shatavari

Suma

White bryony

Please share this page & help us educate the world!

Bold = Adaptogens in Rasa

NOTE: Winston and Yance have different systems for classifying adaptogens: Based on the latest science, Winston defines "Definite," "Probable," and "Possible" adaptogens. Yance defines "Primary" and "Secondary" adaptogens. If an herb or substance* makes it onto any of their lists, we give benefit of the doubt and add it to this list. We routinely review the science and will update this guide as new information becomes available. *Shilajit and Deer Velvet are not plants

3. And the list of the adaptogens Rasa uses in our blends

(What can we say? Gotta plug ourselves once in a while, we're pretty proud of all these adaptogens we use to support your wellbeing!)



American Ginseng restore, moisten, strengthen



Codonopsis nutritive, immunity, sweetness



Gynostemma sweet, vital



Reishi calm spirit, wisdom



Shatavari juicy libido, resilient



Ashwagandha calm, sleep, stamina



Cordyceps endurance, capacity



Maca nourish, libido



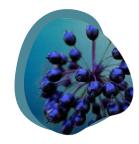
Rhodiola stimulate, good mood, cognition



Poria mood, relax



Astragalus Immunity, protect



Eleuthero stamina, balance, immunity



Mucuna Pruriens joy, motivation



Schisandra anti-fatigue, liver protecting



Tulsi
aromatic, nervine,
cognition

4. Indigenous Uses of Adaptogens

While the term "adaptogen" is a modern scientific term less than 100 years old, the use of adaptogenic herbs has spanned millennia, all across the globe. Much of this guide pulls from modern and western research, so it's important to talk about a few (of many) examples of how adaptogens have been used for far longer than the term has been around.

Tulsi (holy basil) is considered one of the most sacred herbs in the Hindu tradition, where families adorn their household with the plant, as it is considered the herbal embodiment of Lakshmi, the goddess of abundance and generosity. Tulsi is also native to Africa where it has been used traditionally for thousands of years.

Schisandra has been used in Traditional Chinese Medicine (TCM) for millennia—it was first cited in the Shennong Ben Cao Jing, an ancient Chinese medical text believed to have been written around 200 to 250 CE. It is used in TCM to "calm the Shen", our spiritual heart, and also as a sexual tonic.

Maca has been grown and consumed by farmers in the Peruvian Andes for thousands of years as both food and medicine. It is said that Inca warriors consumed maca before going into battle!

Ashwagandha has been traditionally used in both Asia and Africa. It's a central herb in Ayurveda, the traditional Indian medicine system, as a key *rasayana* herb. Rasayanas are formulas traditionally used to promote health, vitality, and longevity. The plant is also used by the Sotho of South Africa, who often use the leaves to heal wounds.

Cultures that use adaptogenic plants have long recognized their fortifying and balancing nature. In Traditional Chinese Medicine, adaptogens are often classified as *qi* tonics—herbs that naturally increase vitality by supporting energy production. In Ayurveda adaptogens are often classified as rasayanas. We pay our deep reverence and homage to the thousands of years of traditional and Indigenous wisdom from which use of adaptogens stems.

Buyer Beware: Adaptogen Washing

Brands that don't know any better (or are choosing not to learn about the herbs they use), are often using the word "adaptogen" to describe their products....when their products have zero adaptogens. #smh

While they may be using herbs, many of these "adaptogenic" products do not include any adaptogens on the definitive list (herbs that meet the 4 N requirements, remember?).

Adaptogens are buzzy right now because:

1. they are potent herbs that serve as medicine of our time because we are all stressed out, sick, burnt out, and need some support and;

2. Once they get trendy, people realize they can make sweet cash money by marketing products with these herbs and benefits.

And while we are fans of all herbs, we're not fans of mislabeling plants, misleading customers, or adding a "fairy dusting" of an adaptogenic herb (i.e., not an effective dose), all for the sake of marketing. We do recognize that, at times, some well-intentioned people are mislabeling products adaptogenic because they contain medicinal herbs.

While we appreciate their enthusiasm for adaptogens, we caution you to keep in mind that mislabeled products probably do not have an herbalist formulating them. So while they may not mean malintent, they are likely not the most reliable products on the market, either.

Gosh, the internet (and marketing, and capitalism) can be so troublesome, no? But, it can be wonderful at times because we can actually find the products that help us feel our best. We just have to educate ourselves and be discerning.



1. Why Adaptogen Washing Sucks

Adaptogen washing is both a dishonest and a misinformed practice. Not only is adaptogen washing misleading to you, the consumer, it also sucks time, money, and your energy trying to figure out what is actually legit. It can also put our plant-friends at risk (wasting plants by using them ineffectively is not a good look).

Even when they contain proper adaptogens, not all adaptogen products are created equal. Formulation matters! You can't throw a bunch of non-adaptogens in with a sprinkling of ashwagandha and expect miracles. Whoever formulates your products must intimately know and understand EVERY ingredient, and how they relate to one another, combining them to harness and provide the most benefit and functionality.

Quality herbal formulation ensures:

Your body reaps the most possible benefits

Increased bioavailability

Decreased risk of possible side effects

Not to mention it's important in the sourcing of safe and effective ingredients, as well.

Adaptogen washing, at best, makes consumers waste money on expensive products that do nothing for them. At its worst, adaptogen washing challenges the credibility of adaptogens (which, if you've read this guide, you know are prrrretty darn great) and herbalism overall. Many people write off herbs and adaptogens as ineffective woo-woo after trying several adaptogen washed products with no visible results. That's a darn shame, because herbs are truly powerful and effective.

Additionally, while we at Rasa (and many other integrity-driven brands!) work obsessively to make potent, delicious, high-quality adaptogen blends both accessible and affordable, many companies unfortunately, have a "how much can we charge for this?" mentality. (#CapitalismSucks #JustBecauseYouCanDoesntMeanYouShould)

If you ask us, there's nothing more capitalistic and opportunistic than selling overpriced "wellness" products that don't actually improve customers' wellbeing. </end-rant>

2. Adaptogen Washing Common Offenders

The following plants, herbs, and substances are frequently called adaptogens when they're... not (or not yet researched enough to end up on the definitive list!).

CBD Gingko Milk Thistle

Chaga Goji berry Moringa

Charcoal Kava Pearl powder

Collagen Lion's Mane Tocos

Elderberry L-Theanine Tremella

Guarana Matcha Turkey Tail

Ginger Maitake Turmeric

Adaptogenic herbs are just one of many types of herbs that are part of the genius and bounty of nature. There are many other types of herbs that have their own benefits! Calling an herb by a wrong name just confuses people, and takes away what these plants are really good at. Plus, the term adaptogens starts to get diluted to the point of not meaning anything!

Put it this way: if we said our product was full of CBD, but had no CBD... that'd be pretty obnoxious, right? You might even think CBD was BS (spoiler alert: it's not).

Or, in non-herb terms, it's like if we sold you a workout bike by saying it was amazing because it helps you build arm strength. We love bikes, they provide a great workout, and can be super fun and pretty, but...arm strength? Not so much. Stay in your lane, folks.





Seven Ways to be Adaptogen–Savvy So You Actually Experience the Magic

- **1. Always read the ingredients:** If a product doesn't contain herbs or mushrooms from The Definitive List of Adaptogens, it isn't adaptogenic. Period, end of story.
- 2. Only buy products formulated by clinical herbalists and manufactured by reputable companies. The energetics and specific actions of individual adaptogens are highly variable and matching the right plants to the right person is something products companies often get wrong. Buying products formulated by clinical herbalists ensures that the products are properly formulated and balanced for a wide range of consumers (or to address the specific intention of said formula).
- **3. Keep an eye out for imposters.** If a product says it has adaptogens and doesn't, it's likely a company that doesn't know what they are talking about and the product is almost certainly not clinical-herbalist formulated. This could be a brand just trying to capitalize off the adaptogen trend.
- **4. Remember, adaptogens aren't a quick fix; they have a cumulative effect**, which increases in efficacy as time goes on. So don't throw away a new product that "just isn't working" after a few days or weeks. Give it time—the health benefits of these herbs can take anywhere from a few weeks to a month (or a few months!) to fully kick in. It's best to use products that you will actually take daily.
- **5. Learn about sourcing:** some adaptogens have serious long-term sustainability concerns. Ensure the brands you are buying from are committed to sustainable practices. (That goes for all herbs, not just adaptogens!) The way in which herbs and mushrooms are often (over)harvested hurts the environment, damages ecosystems, and puts many plant species under strain.
- **6. Good marketing ≠ good product.** There are a lot of brands out there that put more money into their marketing than into their product formulation. While having great marketing (cough—ads and influencers) doesn't mean you have a junky product, it also doesn't necessarily mean your product is great, either.
- **7. Ask questions**: If you're reading this list and thinking "how the heck am I supposed to know this stuff?!" You can and should ask brands directly about who formulates their products, how dosing works, how and where their herbs are sourced, and more. From there you can gauge how transparent and forthcoming a brand is or if they are avoiding answering because they don't know (or worse).

Dosing

Simplifying dosing into two pages isn't easy—and it shouldn't be. Learning to dose and take herbs and adaptogens effectively is an art and takes time. This practice is best done in partnership with an herbalist or by following dosing instructions on a product formulated by an herbalist (reminder to be careful where you buy products!) Let's cover some high-level basics.

Is more always better?

Adaptogens tend to have two personalities when it comes to dosing. Some adaptogens appear **linear in their effect**, meaning the more you take, the more intense the effect—like ashwagandha. Others look biphasic—we see the most benefit from a goldilocks approach that's not too high or too low, like rhodiola. We're in search of the "MED," or **minimum effective dose**. What is the smallest dose that will give the desired effect? Spoiler alert: this dosage varies from person to person, so it's always important to test things out and see how you feel.

The cumulative effect

We'd be remiss not to bring up (again!) the **cumulative effect** here as well. While adaptogens increase performance and push off fatigue in single acute doses, repeated consumption is necessary for the maximum benefit. **Daily adaptogen intake not only balances our stress response, but it builds our overall tolerance for stress, particularly the insidious chronic stress we encounter in our productivity-obsessed modern life.** Adaptogen intake is akin to exercise in this way—you wouldn't go to one spin class per month and think you'd get into top shape, would you?

And don't forget about synergy!

Lastly, there's synergy. If you're consuming multiple herbs, how do the herbs play together? For example, you don't want to double or triple up on different herbs that have similar effects without taking that into account.

Since we're talking about dosing (and how to avoid the BS on the internet)—a piece of advice: look for brands that are transparent with their dosages and herb strengths.

What's the deal with taking breaks?

When it comes to herbs, if you're taking really strong extracts or high doses for an acute situation or symptom, cycling on and off can be helpful. If you are taking a synergistic blend formulated for daily and long term use, breaks may not be necessary. Listen to your body. For example, we intentionally formulated Rasa for daily use. We don't go purely for energy, but also lean heavily into nourishing and replenishing adaptogens, designed to be used for the long

Our Chief Herbalist Ben likes to say: **be aware of how much you're pressing the pedal vs. filling up the gas tank.** Strong single extracts can press the

pedal too aggressively and cycling or short-term use is recommended.

Filling the tank can be accomplished with lower doses of long-termuse friendly adaptogens and blends (like Rasa—told you we'd plug ourselves a few times here and there! (a)

What about format?

haul (let's be BFFs? K cool).

While we don't have space to talk about which format (hot water extraction, tincture, powder, etc.!) is best for each and every adaptogen, this is another reminder to turn to reputable brands who know how to best extract adaptogens for their properties.

Adaptogen Sustainability: Some Quick Thoughts on a Complex Subject

Due to increasing popularity, there are emerging long-term sustainability concerns about certain adaptogens. Here at Rasa, we are obsessive about sustainable sourcing. We source over 50 botanicals from 15 different countries, with a focus on ensuring long-term ecosystem sustainability, social responsibility, potency, geo-authenticity, purity, and safety.

Herbalist-driven, integrity-driven brands are mindful of how they impact our planet, the herbs they use, the workers who harvest them, and each other.

These values mean looking at the **source of herbs**, evaluating any potential risks of **overharvesting**, and determining **which wildcrafted herbs we feel good about** (and seeking organic cultivation or further regulation for those we don't). With cultivated herbs, it also means looking at the **growing conditions** of those herbs and ensuring purity and potency.

Here are a couple examples of how we are living these values:

Our Chief Herbalist, Ben, has been monitoring the sustainability of the adaptogen *Rhodiola rosea* since he visited China in 2018. Industry experts are now sounding the alarm and a new study is strongly recommending more intensive monitoring for wild-harvesting and the switch to cultivation where possible.

At Rasa, we have made the commitment to stop sourcing wild rhodiola from China and we're partnering with a new cooperative, the Alberta Rhodiola Rosea Growers Organization, for organizatly cultivated rhodiola going forward.

Wild eleuthero root, an adaptogen from the same region of China, is starting to face similar sustainability challenges. We are spearheading a multi-company, multi-year effort to get this precious herb Fair-Wild certified, which will ensure the transparency and accountability needed to protect wild populations.

Parting is Such Sweet Sorrow!

You made it to the end! How does it feel to be among the world's most educated adaptogen consumers? Pretty good, huh?

Now that you know what adaptogens do for you, which plants are real-deal adaptogens and which aren't, and how to spot adaptogen washing, you are equipped with the tools and knowledge you need to **shop and use adaptogens with confidence.**

Even though we set out to make the most comprehensive consumer guide to adaptogens out there, **it only scratches the surface.** Want to dive deeper and get *really* nerdy? We're here for it. We're constantly staying on top of the research and sharing it via our Instagram and blog.

We plan to update this guide as there are new findings about adaptogens, as the research deepens, and we promise we will keep our definitive list up to date.

Oh, by the way! Did we mention we make adaptogen-packed products? I mean, we didn't make this guide to sell them to you, but we are also pretty proud of our sustainability sourced, herbalist-formulated blends.

Want to try Rasa? We recommend starting with the <u>Rasa Ritual Sample Pack</u> (you can use the code ADAPTOYES for \$5 off for making it to the end of this guide, consider us impressed!).

Or try another brand, that's cool too. We won't stress about it because...we take adaptogens daily. • We just want you to experience that adaptogen magic.

Published 2022



Bibliography (where did we gather all this intel?)

If this guide did its job, you are likely wondering where we sourced all this information and how to be sure it's accurate. Here's where we pulled from!

Abedon, B., & Ghosal, S. (2008). A standardized Withania somnifera extract significantly reduces stress-related parameters in chronically stressed humans: a double-blind, randomized, placebo-controlled study.

Chandrasekhar, K., Kapoor, J., & Anishetty, S. (2012). A prospective, randomized double-blind, placebocontrolled study of safety and efficacy of a high-concentration full-spectrum extract of Ashwagandha root in reducing stress and anxiety in adults. Indian Journal of Psychological Medicine, 34(3), 255. doi:10.4103/0253-7176.106022

Deshpande, A., Irani, N., Balkrishnan, R., & Benny, I. R. (2020). A randomized, double blind, placebo controlled study to evaluate the effects of ashwagandha (Withania somnifera) extract on sleep quality in healthy adults. *Sleep medicine*, *72*, 28-36.

Francis, G., Kerem, Z., Makkar, H. P., & Becker, K. (2002). The biological action of saponins in animal systems: a review. British journal of Nutrition, 88(6), 587-605.

Holmes, P. (2007). The energetics of western herbs: A materia medica integrating Western and Chinese herbal therapeutics. Cotati, CA: Snow Lotus Press.

Kennedy, D. O. (2014). Plants and the human brain. Oxford University Press.

Kimura, Y., & Sumiyoshi, M. (2004). Effects of various Eleutherococcus senticosus cortex on swimming time, natural killer activity and corticosterone level in forced swimming stressed mice. Journal of ethnopharmacology, 95(2-3), 447-453.

Lee, Y., Chung, E., Lee, K. Y., Lee, Y. H., Huh, B., & Lee, S. K. (1997). Ginsenoside-Rg1, one of the major active molecules from Panax ginseng, is a functional ligand of glucocorticoid receptor. Molecular and cellular endocrinology, 133(2), 135-140.

Liao, L. Y., He, Y. F., Li, L., Meng, H., Dong, Y. M., Yi, F., & Xiao, P. G. (2018). A preliminary review of studies on adaptogens: comparison of their bioactivity in TCM with that of ginseng-like herbs used worldwide. Chinese medicine, 13, 57. https://doi.org/10.1186/s13020-018-0214-9

Mills, S., & Bone, K. (2000). Principles and practice of phytotherapy. Modern herbal medicine. Churchill Livingstone.

Panossian, A. (2017). Understanding adaptogenic activity: specificity of the pharmacological action of adaptogens and other phytochemicals. Annals of the New York Academy of Sciences.

Panossian, A., & Wikman, G. (2010). Effects of adaptogens on the central nervous system and the molecular mechanisms associated with their stress—protective activity. Pharmaceuticals, 3(1), 188-224.

Panossian, A., Wikman, G., Kaur, P., & Asea, A. (2009). Adaptogens exert a stress-protective effect by modulation of expression of molecular chaperones. Phytomedicine, 16(6-7), 617-622

Wang, X., Wu, H., Lakdawala, V. S., Hu, F., Hanson, N. D., & Miller, A. H. (2005). Inhibition of Jun N-terminal kinase (JNK) enhances glucocorticoid receptor-mediated function in mouse hippocampal HT22 cells. Neuropsychopharmacology, 30(2), 242.

Winston, D., & Maimes, S. (2007). Adaptogens: Herbs for strength, stamina, and stress relief. Inner Traditions/Bear & Co.

Yance, D. R. (2013). Adaptogens in Medical Herbalism: Elite Herbs and Natural Compounds for Mastering Stress, Aging, and Chronic Disease. United States: Inner Traditions/Bear.

Yang, C.-S., Ko, S.-R., Cho, B.-G., Shin, D.-M., Yuk, J.-M., Li, S., ... Jo, E.-K. (2008). The ginsenoside metabolite compound K, a novel agonist of glucocorticoid receptor, induces tolerance to endotoxin-induced lethal shock. Journal of cellular and molecular medicine, 12(5a), 1739–1753. http://doi.org/10.1111/j.1582-4934.2007.00181.x

Engels, G., & Brinckmann, J. (2015). Schisandra. HerbalGram, (106), 1-7. Retrieved November 10, 2021, from https://www.herbalgram.org/resources/herbalgram/issues/106/table-of-contents/hg106-herbpro-schisandra/.

