



paleorehab

Overcoming “Adrenal Fatigue”

The Three Step Plan To Recovering from HPA Axis Dysregulation

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Introduction

“Fatigue is an excellent gauge of well-being because it is a very hard symptom to mask. The only way to get rid of fatigue is to treat the underlying causes. Fatigue has many faces, but they all say the same thing - the mental and physical load are too great.”

— Kathleen A. Kendall-Tackett

Before you start reading this eBook on healing from adrenal dysfunction, consider the reasons why you want to heal in the first place. Maybe...

- You're sick of waking up in the morning and feeling like you've been hit by a truck.
- You're scared you might have to quit your job one day when the fatigue gets too much to handle.
- You've told your doctor how fatigued you are every day, and he told you it's all in your head. (*What??*)
- Your brain fog is so severe you can hardly pay attention at work anymore.
- Your sister was diagnosed with chronic fatigue syndrome and you want to avoid going down that same path.
- You don't know how you'd survive the day without half a pot of coffee.
- Your anxiety makes you feel like you could crawl out of your skin.
- You're fed up with being exhausted all day but not being able to sleep through the night.
- You're not losing weight no matter how low carb you go.
- Your idea of “stress relief” is downing half a bottle of wine before dinner.
- You're feeling guilty of always turning your husband down when he's “in the mood.”
- You've suddenly been diagnosed with an autoimmune disease and you don't know how to stop it from getting worse.
- You used to be an avid Crossfitter but after several injuries you can barely lift weights anymore.
- You constantly feel freezing cold no matter how hot it is outside.
- Your period is completely irregular and you're afraid you won't be able to get pregnant.
- **You're done trying to figure out how to make your “perfect” diet and lifestyle even more perfect so that you can regain the energy you feel you deserve.**

Does this sound like you? Are you struggling to regain the energy you once had? Is life becoming more of a struggle every day?

Unfortunately we live in a society that glamorizes busy-ness; that keeps us going, going, going all day long until we get home and barely have enough energy to cook, exercise, or spend quality time with our loved ones; that overstimulates us with smartphones on our nightstand and late night TV in our bedrooms; that puts pressure on us to have the perfect swimsuit model body without an inch of cellulite in sight.



Queen got it right when they sang “*pressure, pushing down on me...*” We’re all under constant pressure to have a great body, perfect health, a well-paid job, a perfect home life, a dozen best friends, a spotless house, and 2.5 children with a dog and a white picket fence.

Whether this pressure comes from the society around us, or from within (we often put way too much pressure on ourselves to live “perfect” lives), if allowed to go on unmitigated for many years, it’s a perfect recipe for a *health disaster*. That health disaster is called “**adrenal fatigue**.”

Constant, daily stress raises your risk for dozens of chronic diseases, causes you to gain weight, ruins your mood and energy levels, and overall turns your life into a living nightmare.

Well, not anymore!

This eBook has been designed to help pull you out of the never-ending cycle of stress, fatigue, anxiety, depression, and just plain exhaustion. **It’s time to heal.**

We’re going to teach you the steps to take to identify if you have HPA axis dysfunction, and the diet and lifestyle changes that can help you heal quickly and get back to enjoying your life.

You will learn the signs and symptoms of adrenal dysregulation, the nitty gritty of what’s actually happening at a physiological level, the 3 most common problems we see in our patients’ diets, and the four lifestyle components that are crucial for overcoming the underlying causes of stress in your life.

Get ready to take back control over your health and recover the vibrant, boundless energy you know you deserve!



About Laura and Kelsey

We are registered dietitians with a passion for ancestral nutrition. We both started our careers working under Chris Kresser, a renowned functional medicine practitioner, and have established our own private practices. We have worked with many HPA axis dysregulation patients and have seen them come out on the other side feeling happy, healthy, and energetic. We wanted to share our adrenal healing protocol with world... and **Paleo Rehab: Adrenal Fatigue** was born!



What is “Adrenal Fatigue”

And Why Does It Matter?

HPA Axis Dysfunction: The Medical Term for “Adrenal Fatigue”

Before we talk about how to heal from “adrenal fatigue”, we need to clear up some confusion about the term itself.

Adrenal fatigue is not a medically recognized health issue... but **HPA axis dysregulation** is! They're essentially the same thing, but it's important to understand what HPA axis dysregulation is and why it's often called “adrenal fatigue” by the alternative health community.

The hypothalamic-pituitary-adrenal axis (HPA axis) is the control center for your body's stress response. When you get stressed, the hypothalamus releases corticotropin-releasing hormone (CRH), which is the first of a cascade of hormonal changes that eventually result in the production of cortisol (the “stress hormone”) from the adrenal glands. This is a normal response and is something your body was designed to do.

However, in the modern world your HPA axis is constantly being activated, as you're being exposed to stressors all the time. From money problems, to traffic, to waking up to an alarm clock - stress is all around you.

Compare this to your ancestors, whose stress levels were generally quite low. Their stressors were fairly acute, such as being chased by an animal or not having enough food for a few days. But they'd bounce back - they'd survive the chase or the famine and the stress would go away.

Your ancestors didn't have many of the emotional stressors you deal with today, like financial issues, work struggles, and chronic health conditions. These types of stressors can take a toll on the HPA axis as they are things you deal with constantly - even as one problem goes away, it's often replaced by another. These chronic stressors separate you from your ancestors and make it more likely to develop HPA axis dysfunction. Can you imagine our ancestors worrying about their 401k?

Whether the stressors you face are psychological or physiological, each time you face them your HPA axis is activated and the stress response begins. As your adrenals pump out more and more cortisol, you become less and less sensitive to its effects. The negative feedback cycles that normally keep the stress response in check get turned off, and you develop what is called “HPA axis dysfunction”.



HPA axis dysfunction describes the state in which your HPA axis no longer works the way it should - instead of only turning on when you're under acute stress and turning off when you're not, it is consistently turned on, and the mechanisms that turn it off stop working. When this happens, you are constantly producing cortisol and levels become too high. Eventually, the HPA axis can't keep up and your cortisol levels start dropping off, becoming too low.

Having the right amount of cortisol circulating in your body is crucial. The "stress hormone" serves many different functions in the body, like keeping inflammation at bay, and is an integral part of the immune system. Without it, you're not in a good place! In fact, severely low cortisol like in the case of Addisonian crisis can be life-threatening.

While "adrenal fatigue" (HPA axis dysregulation) is not life-threatening, the functionally low cortisol levels found in those with adrenal fatigue syndrome can cause unpleasant, distressing symptoms and keep you from living life on your own terms.

In the next sections, you'll learn exactly what causes functionally low cortisol levels and HPA axis dysfunction and how to change your diet, supplements, and lifestyle to heal from adrenal fatigue.

Causes of HPA Axis Dysregulation and "Adrenal Fatigue"

Now that you understand a little more about what adrenal fatigue (HPA axis dysregulation) is, I bet you're wondering **why** you ended up with this syndrome in the first place?

The most obvious cause of adrenal dysfunction is stress. In a medical or biological context, **stress is a physical, mental, or emotional factor that causes bodily or mental tension.** Stress can be external (i.e. the environment or social situations) or internal (i.e. illness, inflammation, psychological issues, or negative thoughts.)

As we explained earlier, dealing with stress is the main function of the HPA axis. In our western culture, we are constantly bombarded by stress from all areas in our life. This includes the obvious stressors like finances, family, relationships, and work, but it also includes dozens of other stressors that you might not even be aware of.

Diet

Diet is one of the biggest stressors in modern life, and many of you reading this eBook have made the change to a whole foods, ancestral, and/or Paleo diet in the attempt to remove dietary stressors from your life. That's a great first step, as many of the industrial seed oils and highly refined grains that fill our processed foods are incredibly inflammatory and health damaging.



However, you might not realize that even your “perfect” Paleo diet is actually a stressor in your life. You might not be getting enough of a certain type of nutrient, or perhaps following the diet so strictly in itself is stressful. We’ll talk shortly about how to modify your diet to make it less stressful, but don’t think that those of you on a Paleo diet are immune to dietary stress - you might be getting just as much stress input from your diet as someone who eats McDonald’s every day!

Gut Health

Gut issues are another major source of stress for many of our clients with adrenal dysfunction. Poor gut health can manifest itself in any number of ways, from reflux/GERD to bloating, constipation, diarrhea, IBS, “leaky” gut, and even inflammatory bowel disorders like Crohn’s, celiac disease, and ulcerative colitis.

Chronic gut problems can develop *because* of stress, and can also contribute to the overall stress your body is under. It’s a vicious cycle that we see all the time in our patients.

Sleep Issues

Sleep disturbances are another incredibly common issue we see in our patients with adrenal fatigue. We see many women going through menopause that are struggling with chronic insomnia. We also see many young professionals who spend way too much time on their computers and phones, and the bright light exposure has disrupted their circadian rhythms, and their sleep cycle is dysfunctional. We see new parents with babies who wake up multiple times per night, and no one in the house is able to sleep more than a couple of hours straight.

Poor sleep is a scarily common issue in our culture, and you may be falsely assuming that your sleep troubles are “normal”.

Chronic Disease

Chronic disease in general is another unfortunate cause of stress that we see regularly in our patients. Ironically, as you’ll learn in the next section, there are many other chronic health conditions that are not only *caused* by HPA axis dysregulation, but the stress of struggling with a chronic health condition can exacerbate HPA axis issues as well. It’s another common, vicious cycle just like gut health issues.



Overtraining

Overtraining is another common cause of HPA axis dysfunction we see in many of our younger clients. Overtraining simply means that a person is engaging in a high volume of high intensity activity that is inappropriate for their health and other lifestyle factors.

While some people can handle training for marathons or participating in Crossfit competitions every weekend, there are many people who end up overdoing the exercise and under doing the rest and recovery. This can lead to severe HPA axis issues and is one of the biggest reasons why people in their 20s and 30s develop adrenal fatigue despite following a “healthy” Paleo diet and lifestyle. (Maybe you’re one of them!)

Perfectionist Tendencies

Perfectionism is a common trait in those we counsel with adrenal fatigue, and this attitude often drives a person to do more than they should: work harder, exercise harder, play less, sleep less, and have higher expectations of themselves than is reasonable.

If you consider yourself a perfectionist, you may recognize your tendency to overdo *everything* in your life, and the compounding effects of these areas of stress in your life can ultimately lead to adrenal fatigue if not dealt with appropriately.

Symptoms of “Adrenal Fatigue”

So what are the major symptoms of adrenal fatigue? Obviously since “fatigue” is in the name of the syndrome, it follows that constant tiredness, low energy, imbalances in energy (e.g. tired in the morning, wired at night) and utter exhaustion would be the primary symptoms of HPA axis dysregulation, but here is a list of a variety of other symptoms you might be experiencing due to adrenal fatigue (List adapted from **Dr. Michael Lam**):

- Insomnia
- Heart palpitations
- Low blood pressure
- Hypoglycemia
- Depression
- Hair loss
- Irritability
- Anxiety
- Panic attacks



- Brain fog
- Inability to concentrate or focus
- Inability to handle stress
- Waking up feeling tired in the morning
- Feeling tired in the afternoon between 3:00 and 5:00 pm
- Sugar cravings
- Coffee needed to get going in the morning
- Caffeine intolerance and jitters
- Craving for fatty food and food high in protein
- Craving for salty food
- Dry skin
- Low libido and lack of sex drive
- Low thyroid function
- Exercise intolerance
- Food and chemical sensitivities
- Abdominal fat accumulation
- Loss of muscle mass
- Temperature intolerance
- Infertility
- Severe PMS
- Dysmenorrhea or amenorrhea
- Premature Menopause
- Constipation and/or diarrhea
- Joint and muscle pain
- Cold hands and feet
- Prematurely aging skin
- Stomach pain or indigestion
- Dizziness
- Tinnitus (ringing in the ear)
- Numbness and tingling in extremities
- Mouth sores
- Shortness of breath
- Dark Circles under the eyes
- Postural orthostatic tachycardia
- Recurrent yeast infections

Whoa. There are clearly dozens of symptoms that could potentially be related to adrenal and HPA axis issues, and many of these are ones that we see in our patients regularly. Unfortunately, adrenal dysfunction affects us all in different ways, so your symptoms may be completely different from someone else's, even if the underlying cause is the same.

Whatever your symptoms are, it's important to get your HPA axis health under control in order to reduce your current symptoms and prevent the development of more serious chronic diseases.



The HPA Axis: Not Just “Adrenal Fatigue”

Other Diseases and Conditions Affected by the HPA axis

You might have noticed that many of the symptoms listed above sound strangely familiar to many of the other chronic diseases that people in Western cultures typically face. It may surprise you (or not at this point) that HPA axis dysregulation has been implicated in an incredible number of chronic diseases. Let's talk about a few of those now.

Gut Health

We mentioned gut health as an important contributor to adrenal health, but it can also be a symptom of HPA axis issues. There are many different ways your gut health can be impacted by chronic stress. For example, stress reduces the production of stomach acid, which negatively affects your ability to digest your food.

It also increases your risk for gut dysbiosis, infection, and bacterial overgrowth of the small intestine (SIBO), as stomach acid is your primary defense against pathogenic bacteria from getting through your digestive tract.

When we're stressed, our beneficial bacteria counts go down while potentially pathogenic bacteria counts go up. Chronic stress also causes leaky gut, intestinal inflammation, and altered immune activity in the digestive tract. All of these effects can lead to or increase the severity of serious gut issues like irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD).

Autoimmune Disease

Another class of disease that is strongly tied to adrenal health and HPA axis function is autoimmune disease, including multiple sclerosis (MS), Sjogren's syndrome, lupus, Hashimoto's thyroiditis, and rheumatoid arthritis. While stress itself likely does not cause autoimmune disease on its own, evidence suggests that relative adrenal insufficiency (i.e. low cortisol) may be a marker of many autoimmune disorders.

The immune system is tightly linked to the stress response system, and many experts believe that chronic stress and HPA axis dysregulation can be a trigger for the development and increased severity of many autoimmune diseases. This means that if you have an autoimmune disease, or autoimmunity runs in your family, getting your adrenal health optimized will be an important preventative technique to prevent the onset or progression of autoimmune disease.



Hormonal Imbalances

Cortisol is not the only hormone affected by HPA axis dysregulation. The hypothalamus and pituitary glands also interact with gonadal organs (there is an HPG axis), which include the ovaries and testes. This means that stress can disrupt the functioning of sex hormones like progesterone, estrogen, and testosterone.

One of the most common hormonal patterns we see in chronically stressed women is low progesterone and high estrogen, which can cause PMS, menstrual irregularities, hypothalamic amenorrhea, and infertility, among other estrogen dominance symptoms. Men often experience low testosterone in this situation, leading to reduced libido, excess body fat, lower muscle mass, and even depression.

Mental Health

Speaking of depression: depression and anxiety are two of the most common psychological disorders that can be caused by HPA axis dysfunction. These disorders can be seen in patients with both high and low cortisol levels, and chronic excess stress on the brain may even lead to structural changes in certain parts of the brain. The HPA axis also plays a role in post traumatic stress disorder (PTSD) and bipolar disorder.

Fibromyalgia and Chronic Fatigue Syndrome

Fibromyalgia is a disease that is known to have HPA axis involvement. Some studies have suggested that women with fibromyalgia have decreased function of the HPA axis, while others have found that there may be an excess of activity. But in both cases, levels of key hormones like cortisol are affected, resulting in the symptoms of fibromyalgia.

Many people with fibromyalgia also have Chronic Fatigue Syndrome (CFS). Kelsey wrote **a great article** on CFS and the role that the HPA axis plays in this disorder. CFS patients typically show low cortisol output, and it has been proposed that HPA axis dysfunction in CFS is a vicious cycle; this means that HPA axis dysfunction is not only involved in the onset of CFS, but it also propagates ongoing symptoms once the syndrome manifests.

Focusing on HPA axis support and adrenal health is critical for those suffering from chronic fatigue syndrome.



Heart Disease

You may be surprised to learn that one of the most prevalent diseases in our society, cardiovascular disease, is also associated with HPA axis dysregulation. In fact, researchers are now starting to believe that the risk factors associated with cardiovascular disease like increased abdominal fat are actually symptoms of HPA axis dysregulation.

Adrenal dysfunction and chronic stress lead to increased inflammation, a strong risk factor for cardiovascular disease. It is crucial for those suffering from cardiovascular disease to get their stress and HPA axis function under control.

Cancer

Inflammation is also a risk factor for developing cancer, another condition that can be affected by HPA axis dysregulation. The HPA axis influences the immune system and the production of growth hormone, both of which affect cancer growth and proliferation.

Research has also shown that altered cortisol rhythms lead to earlier mortality in those with breast cancer. Improving HPA axis function can even potentially lengthen a cancer patient's life!



How Do I Know If I Have “Adrenal Fatigue?”

Testing Options

The symptoms of adrenal fatigue can also be related to other health issues you may be experiencing, so in order to know if you have adrenal fatigue and to know the severity of it, it's important to test.

Unfortunately, many conventional doctors don't “believe” in adrenal fatigue because they don't test for *functionally* low cortisol levels that cause chronic symptoms such as fatigue and brain fog. Instead, they focus on the life-threateningly low levels of cortisol, like in the case of Addison's disease. They will test your blood cortisol levels in the morning, or they'll do an ACTH test - neither of which give you an accurate picture of your overall cortisol rhythm throughout the day.

This is where functional medicine testing excels. While conventional medical treatment is solely focused on keeping you alive and out of the hospital, functional medicine is designed to make you truly feel healthy. In keeping with this goal, functional medicine testing looks for optimal levels, rather than just the levels that keep your out of their office.

Functional medicine cortisol testing is usually done using urine or saliva instead of blood. We have updated our recommendations to use the newest testing available, which is urine testing for cortisol and its metabolites.

Testing your cortisol levels using urine is incredibly easy and accurate, and can tell you how your cortisol levels change throughout the day. Once you understand how your cortisol levels fluctuate throughout the day, you can choose the best diet, supplement, and lifestyle changes to support your adrenal function *right now*.

For example, if your cortisol levels are currently high, you shouldn't take a supplement that raises your cortisol. However, if you have low cortisol, that's exactly the supplement you'd want to take! Knowing whether you have high or low cortisol significantly changes the way you deal with your adrenal fatigue. Get tested!

*(Note: We make specific testing recommendations in Module 1 of our **5-week online adrenal fatigue program**, and also provide an option for you to get your hormones tested if you don't have a healthcare provider you're working one-on-one with. We'll also explain how to interpret these tests.)*



What If You *Can't* Get Tested?

While testing is the best way to determine if you have adrenal fatigue and the most accurate way to guide treatment, we understand that it's not available to everyone. If you can't get tested, you can still get a sense of whether or not you might be dealing with adrenal fatigue by seeing if you identify with the symptoms listed below.

If you answer "Yes" to many of these questions, you may have adrenal fatigue syndrome:

- Do you often feel stressed and feel that this stress has a negative effect on your well-being?
- Does your energy often feel depleted?
- Has your ability to exercise decreased significantly?
- Do you have a difficult time recovering from exercise?
- Do you often get less than 7 hours of sleep per night?
- Do you often wake up unrested?
- Do you need coffee or other stimulants to make it through the day?
- Do you get dizzy when you stand up from sitting or lying down?
- Do you have difficulty thinking clearly or feel like you forget things often?
- Has your sex drive decreased?
- Do you get sick often?

For an even deeper look into your risk of having adrenal fatigue, you can complete our **Symptoms Quiz**. From there, you can implement the diet and lifestyle changes we recommend in this eBook and in our online **adrenal fatigue program**.

Note: We don't recommend that you follow the supplement changes outside of the general supplement guidelines until you can get tested. It may actually be detrimental to your adrenal health to take the wrong supplements, and could potentially worsen your symptoms.

Test, don't guess!



3 Steps To Heal From “Adrenal Fatigue”

And Get Your Energy Back!

Step 1: Diet

Now that you understand what “adrenal fatigue” is, what its causes are, and how to get tested for it, it’s time to discuss one of the most important factors that affect the health and healing of your adrenal glands: **Your diet.**

Your diet can be a powerful tool to help you recover from any level of HPA axis dysfunction, and should be the first thing you focus on when healing. If you’re eating a diet that isn’t providing the nutrition you need, your body will struggle to recover from adrenal dysregulation, as an inadequate diet compounds all of the other stressors you’re experiencing, whether that be poor sleep, work or social stress, or chronic illness (or all of the above!).

As Paleo-ish nutritionists, we typically recommend a Paleo diet with additional ancestrally-appropriate foods depending on personal tolerance. That means a diet based primarily on grass-fed or wild meats, fish, eggs, and poultry, healthy fats like coconut oil, ghee/butter, tallow, lard, and olive oil, copious amounts of organic fruits and vegetables, starchy plants like potatoes, sweet potatoes, white rice, and plantains, and full fat grass-fed dairy products if tolerated. And we almost always suggest staying gluten-free when you have adrenal fatigue

However, simply following a Paleo/ancestral diet isn’t enough to recover good adrenal function. We work with dozens of women and men every week who have actually developed adrenal dysregulation because of the problems they didn’t realize they had in their overall diet. They thought since they were eating “clean” Paleo that they were getting what they needed for adrenal health. Unfortunately this is rarely the case in HPA axis issues!

Here are the three biggest issues we see in our adrenal fatigue clients’ diets:

1. Too low calories
2. Too low in one or more macronutrients (carbs/fat/protein)
3. Too low in micronutrients (vitamins and minerals)



Calories Count

But not in the way you think they do! So often we have patients who come to us with a history of restrictive dieting, whether they are trying to lose weight, conquer an autoimmune or digestive illness, or are simply trying to “eat clean” - any of these reasons can lead a person to undereating calories. We see this in women especially, as many women are told that eating 1200-1500 calories per day is completely adequate and is appropriate for reaching and maintaining weight goals (hint: it’s usually not.)

The first step in any adrenal health supporting diet is to ensure you are eating enough calories. This can be difficult to figure out, but a good place to start is by using an online calorie calculator and estimating your needs. (We like **this one**.) Your needs will depend on your height, weight, age, gender, activity level, and stage of life.

For example, a woman who is breastfeeding will need 300-500 more calories per day than a woman who is not. So use this calculation as a start, but remember you may need even more calories daily than this calculator is able to estimate for you.

Once you know how many calories you need on a daily basis, use a tracking program to track your intake for a few days and determine if you’re hitting your goals. More often than not, we see patients who are under eating by 500 calories per day or more, which is an enormous stress on your body and is terrible for adrenal health.

You can use online programs like **MyFitnessPal** or **Cronometer** to track your intake and make sure you’re eating enough to support your body’s needs. You may be surprised to see how far off your intake is from that goal!

Low Carb, Low Fat = High Stress

The second most common issue we see in our adrenal dysfunction patients’ diets is that they are significantly limiting one or more macronutrients, usually in an effort to lose weight or prevent chronic disease. Unfortunately for those with HPA axis dysregulation, eating a too low carb or low fat diet can actually exacerbate their chronic health conditions, and cause weight loss resistance or even weight gain.

While some people thrive on a very low carb or low fat diet, we generally recommend a more balanced approach to nutrition in our patients with adrenal issues. This is because both of these dietary strategies can lead to blood sugar control problems, and poor blood sugar control is one of the primary symptoms of adrenal dysfunction.



You may be wondering how blood sugar control affects the function of your adrenals. Cortisol, produced by the adrenal glands, is one of two primary hormones that promote a rise in blood sugar by stimulating a process called gluconeogenesis, or the creation of new blood sugar. Cortisol also acts as an antagonist to insulin by inhibiting glucose uptake in muscle and fat tissue, which helps to conserve glucose in the blood.

These two actions of glucose help raise your blood sugar when it is low, either from inadequate glucose intake on a low carb diet, or the blood sugar spike and crash cycle that often happens on a very low fat diet. And when the adrenal glands are constantly responding to drops in blood sugar, it can exacerbate the symptoms of HPA axis dysregulation and over time make you feel worse.

Low blood sugar is a stressor to your body, as the brain requires a steady amount of glucose to function. While you may be familiar with the dangers of high blood sugar, you may not realize that low blood sugar is actually *more* dangerous - in fact, if your blood sugar dropped low enough, it could kill you! So it's easy to see why your body would treat a drop in blood sugar as a serious issue that needs to be addressed immediately.

That's why the best diet to keep your adrenals healthy is the diet that will keep your blood sugar super steady.

The primary way we recommend doing this is by eating a diet that is generally well balanced in macronutrients, particularly carbohydrates. A diet that contains slightly higher protein, moderate carbohydrates, and adequate healthy fats can help ensure the body has enough nutrition to keep blood sugar stable. If you're trying to recover from adrenal fatigue, we believe this is the best diet to do so.

The breakdown that we suggest our clients try to follow is the following percent of calories ranges: **20-30% protein, 20-30% carbohydrates, and 40-60% fat.**

We suggest eating regular meals - at least three per day - and trying to include each of these macronutrients in each meal. Protein is especially crucial to have in the morning, and carbohydrate consumption later in the evening can help improve sleep. We advise against daily intermittent fasting while healing from HPA axis dysregulation, and suggest eating one or two snacks per day if you are struggling with blood sugar issues in between meals.

Use the same calorie tracking apps we mentioned earlier to assess your macronutrient intake. You may be surprised to see that you are significantly under eating in carbohydrates, fat, protein, or a combination of these three.



Nutrient Density Is Key

Finally, the last component of an adrenal-healing diet is nutrient density, or the abundance of vitamins and minerals in your diet. Vitamins and minerals are also called micronutrients, and these nutrients are essential for good health, energy, and adrenal function. Getting adequate amounts of the bioavailable nutrients your body needs is an essential part of healing your whole body when dealing with adrenal issues.

There are a variety of nutrients that are especially important for adrenal function, including:

- Vitamin C
- Magnesium
- Pantethine (B5)
- Vitamin B12
- Omega-3 fats
- Vitamin D & A
- Vitamin B6
- Zinc
- Probiotics

These nutrients are ones that are commonly recommended to supplement with. We'll discuss our supplement recommendations in a minute, but it's important to remember that many of these nutrients come from whole foods as well, and you should do your best to get as many of them as possible in dietary form.

That's why we recommend a diet rich in a variety of "adrenal superfoods", such as grass-fed liver and meat, leafy greens, fruit, fatty fish, pastured eggs, shellfish, fermented foods, starchy vegetables, and more. In our online **adrenal fatigue program**, we've put together a great list of the "adrenal superfoods" you should be eating regularly, and have also compiled two weeks worth of meal plans to help you get those foods in your diet.

This is the starting point for your diet - but remember, everyone is different and the diet that will heal your adrenals best is not the same as the diet that will heal someone else's. You may have specific issues such as digestive conditions, autoimmunity, or blood sugar dysregulation that affects your ability to eat the foods that we recommend in the quantities we suggest.

Use these guidelines as a starting point, and continue to tweak and experiment as necessary until your diet fits you perfectly. (And don't forget to get help from a qualified healthcare professional if you need it!)



Step 2: Supplements

Now that you know the diet changes you should focus on to heal from “adrenal fatigue”, it’s time to learn about the supplements that support and retrain the HPA axis to function appropriately.

Before we jump into this, we must remind you that **any supplement changes should be made under the care and guidance of your personal healthcare provider.**

General Supplements

While most of the supplements we recommend for adrenal dysfunction depend on what pattern of cortisol you’re experiencing, there are many nutrients that are required for the adrenals to function optimally. You can get some of these nutrients from your diet, but sometimes a supplement is necessary, even just in the short term.

B Vitamins

Pantothenic acid (Vitamin B5) is required for the structural integrity of the adrenal glands, and B5-deficient rats actually have decreased adrenal function.

Pyridoxine (Vitamin B6) is required for cortisol to have its gluconeogenic properties. Gluconeogenesis is the process by which we make new glucose from protein and fat, and is necessary for blood sugar regulation. B6 is even more important for women who take oral contraceptives, as these medications have been shown to decrease B6 levels.

Vitamin C

The adrenal glands have one of the highest concentrations of Vitamin C compared to other organs. Vitamin C is also required for the production of adrenal hormones such as epinephrine and norepinephrine. Our Vitamin C stores are reduced every time we activate the HPA axis, so those under high amounts of stress may need more than the average person!

Magnesium

Magnesium, like Vitamin C, is also depleted when we’re under stress. Most Americans don’t get enough magnesium to begin with, and those with adrenal fatigue need even more. This is also another reason why we recommend a whole foods diet - refining and processing food removes up to 85% of the magnesium it contains!

Probiotics and Prebiotics

Gut health is intricately tied to adrenal health via something called the gut-brain axis. Altered gut bacteria leads to HPA axis dysfunction and vice versa, so it’s important to address any gut issues you might have as you heal from adrenal dysfunction.



If you currently have dysbiosis, small intestinal bacterial overgrowth, or a parasite it will be next to impossible for you to recover from adrenal issues. We recommend you get tested and treated for any gut problems, but if you've already dealt with those issues we think keeping gut bacteria in good shape with probiotics and prebiotics is a great idea!

There are more supplements that can help you heal, but they are specific to each pattern of adrenal dysregulation. Remember that it's very important to test your cortisol levels before taking any adrenal supplements, as it can worsen your symptoms if you take one that isn't appropriate for your pattern of adrenal dysregulation.

We dive into great detail about the dosages and brands of the supplements mentioned here, as well as pattern-specific supplements, in our online **adrenal fatigue program**. (And we'll also give you **10% off** any of those supplements as a member of the program!)

Step 3: Lifestyle

It may surprise you to learn that even though as dietitians we focus strongly on diet and supplement modifications, when it comes to adrenal dysfunction, **lifestyle may be the most important factor in your successful healing**.

If you've developed this condition due to stress, poor sleep, overexercise, or lack of social connection, you can't eat and supplement your way out of it. You **must** focus on your lifestyle and make the necessary changes to eliminate as much stress out of your life as possible.

We'll briefly cover the four major lifestyle factors that will affect your recovery, and give you some tips on how to deal with each of them. We go into more detail in our online **adrenal fatigue program**, so this is just a brief overview!

Stress

Stress is *everywhere*. You may tend to think that there's nothing you can do about this stress; that it's just a part of life. So you accept your fate and let stress take over your life. But what if it didn't have to be that way?

We help our counseling clients create a plan to reduce their stress, and having a plan is key to successfully eliminating stress from your life. If your significant other isn't supportive of your new diet and that's stressing you out, it doesn't mean there is nothing to be done to reduce that stress. Can you have a conversation and figure out a way you can both support each other even if you don't agree?



Maybe your work life is incredibly stressful, and you feel like you never get away from it. You're on your phone late at night answering emails because you feel like you have to. Can you come up with a better method, like only answering emails until a certain time at night and then shutting your phone off? Maybe you can talk to your boss and tell him or her that you'll only be answering emails while you're physically in the office.

Don't just accept your stressors. More often than not, there's something you can do to reduce them and simply having a plan can reduce the stress in and of itself.

Now, it's clear you can't get rid of *all* your life's stressors. Your body was made to handle some stress, but you need to make sure that the HPA axis is primed and ready to deal with these stressors appropriately. To retrain your HPA axis and reduce stress, you'll want to implement a regular stress management program.

A stress management program can consist of regular mind-body activities such as:

- Yoga
- Tai chi
- Meditation
- Deep breathing
- Visualization
- Mindfulness-based stress reduction

Try a few different types of stress relieving activities if you're new to these types of stress management techniques in order to find some that you truly enjoy. After all, if you don't like the technique you're doing, you probably won't keep it up in the long run!

Once you've found one or two methods that you like, we recommend practicing for at least **one minute** every day. The benefits build over time, so the longer you practice, the better! Don't worry about the length of each individual session - as long as you're doing some amount daily, you're re-training the HPA axis to do what it should.

Sleep

The importance of sleep is hard to overstate. It's something you absolutely need for good health, which probably comes as no surprise! Yet it's something almost a third of us get less than 6 hours of a night. Sleep deprivation is a stressor and takes a toll on your HPA axis, leading to adrenal dysfunction.

Adrenal dysfunction can also be the *cause* of sleep problems. It's very common for those with adrenal issues to suffer from insomnia or wake up multiple times a night. This is an unfortunate



catch-22, since it can be difficult to know whether your sleep problems are causing your adrenal dysfunction, or the other way around.

However, with adrenal issues come blood sugar problems, and this is one of the most common reasons you might be having unrestful sleep. When your blood sugar dips too low during the night, it can wake you up. You might wake up feeling anxious or hungry or feel your heart pounding. These are all signs that you've awoken during a blood sugar drop.

To prevent nighttime awakenings and promote restful sleep, try eating a snack one hour before bedtime, consisting of mostly carbohydrates and fat. It doesn't have to be a big snack, and you shouldn't feel like you're going to bed too hungry or too full.

Some ideas for a bedtime snack include:

- Banana and almond butter
- A cup of herbal tea with honey and coconut milk
- Frozen berries with heavy cream
- Apple and full fat cheese
- Half a sweet potato with butter
- A scoop of high quality full-fat ice cream :-)

Along with adding a bedtime snack, try to make your bedroom as conducive to restful sleep as possible, and allow yourself at least a full 8 hours for sleep each night.

Follow these steps for a good night's sleep:

- Remove any electronics from the bedroom - the lights from your alarm clock or TV can disrupt sleep
- Reduce outside lights by using blackout shades - you can also use an eye mask to block out additional lights
- Reduce disruptive noise by using a noise machine or running a fan if you live in a noisy area
- Keep the bedroom fairly cool, around 65-69 degrees Fahrenheit - sleeping in a hot environment can lead to less restful sleep
- Keep a snack by your bed in case you wake up from a low blood sugar crash (nuts are a great option for this)
- Get direct sunlight in your eyes when you wake up - this helps reset your circadian rhythm

Remember - good sleep is absolutely essential for proper HPA axis function. In our online **adrenal fatigue program**, you'll learn how to create a perfect nighttime routine to get your body ready for sleep.



Exercise

Exercise in adrenal dysfunction can be tricky, as a little bit can make you feel better but too much can make you feel *much* worse, and may even be the reason you wound up with adrenal issues in the first place.

We've seen dozens of clients who not only drove themselves into HPA axis dysregulation by overtraining, but are actually *preventing* themselves from recovering because they're still not backing off the exercise appropriately! Exercising in the right way (or maybe not at all right now!) is a huge factor in your ability to heal from adrenal fatigue syndrome.

You need to make sure you're not overtraining while dealing with HPA axis issues. Overtraining looks different for everyone and is affected by a person's genetic athleticism, ability to rest and recover, and type of exercise chosen. Doing yoga 5 times per week may be something you can tolerate, but not doing CrossFit 5 times a week. Each person will vary in their susceptibility to overtraining syndrome.

The most important thing is to find the amount of exercise that makes you feel better and not worse. This may mean that more intense exercises like weight lifting and running could be out of the picture while you're healing, even if you were able to handle these exercises in the past. You may even need to take a total break from organized physical activity for a few months.

However, if you feel that exercise is something you are able to continue while healing from adrenal dysfunction, **here are some examples of exercise we suggest trying:**

- Walking outside
- Yoga
- Tai chi or qigong
- Low intensity weight training

These lower intensity exercises can help you keep moving and feeling good even while healing from adrenal fatigue. Whether or not overtraining got you into this situation, you need to be careful about how you're exercising if you want to recover your HPA axis function as quickly as possible. You'll be thankful you took it slow in the long run, because once you're recovered you'll be able to get back into the sports and activities you enjoy.

Exercise should support your health and energize you, not drain your energy and stress your organs. Not everyone is built to be an elite athlete or fitness model, and you can still be healthy and happy doing lower intensity exercise routines that keep you moving in a safe and appropriate way. You'll learn much more about appropriate exercise for healing from adrenal dysfunction in week 4 of [our online program](#).



Social Support

While healing from adrenal dysfunction, we strongly recommend paying attention to your social life. Having supportive relationships with friends and family can make a big difference in the speed of your healing. Even if you have just one or two people you can count on in your corner, don't try to go through this process completely alone.

Though some people may consider socialization to be something that gets in the way of a healthy lifestyle, we strongly recommend building your life in a way that incorporates regular social connection with people who you care about.

There are dozens, if not hundreds of research studies that have been conducted over the past few decades that demonstrate the importance of close social ties to our mental health. Building strong social connections in your life, with family, friends and the wider community, can increase your feelings of happiness and self-worth, and improve your overall mental well being.

There are many ways to cultivate your social connection and build supportive, nurturing relationships.

Here are a few ideas for how to connect with your community and foster stress-relieving relationships:

- Scheduling time with friends
- Calling/Skype-ing out-of-town family
- Volunteering
- Joining a religious or spiritual group
- Adopting a pet
- Playing organized sports and games
- Joining (or starting!) a Meetup group for a hobby you enjoy

Hopefully some of these ideas will inspire you to start building relationships with the friends you already have, or to start making new ones. Whether you join a local knitting group, start volunteering at an animal shelter, or schedule a regular phone date with your best friend from college, nurturing supportive relationships with others is a hugely important part of healing from adrenal dysfunction.

Note: Having a community to share your struggles and successes with is one reason why we created a private Facebook forum for those people who have joined our online [adrenal fatigue program](#). We've found that having others to share their experience with has been a huge help to those who have already gone through the program, and the community provides an opportunity to share advice and connect with others going through the same health issues. It's one of the most popular parts of our program!



Now... It's time for you to *heal!*

Now that you've read through this entire eBook (and maybe read through again to *really* let it soak in...) it's time to **take action!**

We want you to implement the strategies that we just discussed, which are:

- Get tested for HPA axis dysregulation
- Assess your diet for where it may be lacking nutrients
- Add in adrenal-boosting supplements
- Start managing your stress
- Practice good sleep hygiene
- Follow an appropriate exercise routine
- Cultivate positive relationships and community

Starting with even just one or two of these changes can get you on the road to feeling more energetic, and enjoying your life on a daily basis. Pick a few to focus on over the next few weeks, and then add in the others as you're feeling ready.

If you're feeling totally overwhelmed by all of these potential changes, **you're not alone.**

That's why we've created a step-by-step program - to help you implement these recommendations with ease and start recovering your health and energy today. (Keep reading to learn more!)



Learn More in Paleo Rehab: Adrenal Fatigue

Conquer Stress And Recover Your Energy

Healing from adrenal dysfunction can be a long journey, and it can be especially difficult if you're spending hours on end searching *all over* the Internet for answers. You've probably read all the blog posts, heard all the podcasts, read all the books, and you're still stuck. What gives?

We created **Paleo Rehab: Adrenal Fatigue** for stressed-out people just like you. You don't need to suffer endlessly for no reason, and this program was designed to help get you on the right track towards better health, improved energy, and vibrant wellness.

We've consolidated all our experience with clients and packaged our adrenal fatigue protocol into a **step-by-step program** that will walk you through *exactly* what you need to do to heal.

Say goodbye to overwhelm and hello to energy!

In **Paleo Rehab: Adrenal Fatigue**, you'll discover...

- The **best lab tests** we recommend for assessing your adrenals, plus how to interpret a cortisol test.
- The **additional lab tests** you should order to monitor your health.
- Your **exact pattern of adrenal dysfunction** based on your cortisol test results.
- The **optimal diet to follow** for improved blood sugar balance and increased energy.
- The **supplement protocol** you should take based on your stage of adrenal fatigue.
- The **lifestyle and mindset changes** that will heal your adrenal fatigue forever.

You'll be learning all of this through **easy-to-follow video presentations**, plus downloadable audio files and transcripts to suit all types of learners. You can access everything from your online student portal. The program is entirely mobile as well, so you can even learn on the go!

Handouts and worksheets for each lesson will help keep you focused on that week's information. Several experts have shared their wisdom throughout the course in bonus interviews, and they've provided you specially designed guides and worksheets on their areas of expertise.

You've learned how important social connection is in this eBook, and that's why you'll get access to our exclusive **Paleo Rehab: Adrenal Fatigue Facebook group**, where you can meet and learn from other members of the community. (We hang out there sometimes too, and love answering your questions!)

Paleo Rehab: Adrenal Fatigue consists of five week-long modules:

MODULE
1

WHAT IS ADRENAL FATIGUE?

- In this module, you'll learn all about adrenal fatigue. How does it develop, and what causes it?
- We'll walk you through the proper testing for adrenal fatigue so you know what pattern you're in and can treat appropriately. You can order testing from home and take the test at home.
- You'll hear from one of our patients how finally healing from adrenal fatigue can change your life.

MODULE
2

DIET: EATING TO HEAL

- In this module, you'll learn about the exact diet that will support your adrenals so that you can heal.
- You'll be able to calculate your exact calorie and macronutrient needs, just like we do for our one-on-one clients.
- You'll get 2 full weeks of meal plans and a snack guide so you learn what to eat, how much to eat, and how often to eat

MODULE
3

SUPPLEMENT RECOMMENDATIONS

- In this module, you'll learn about the general supplements everyone with adrenal fatigue should take, along with the supplements you should take depending on what cortisol pattern you're experiencing.
- You'll get access to our supplement dispensary, where you can order supplements to be shipped to your home or work. (With a 10% discount!)
- We'll provide you the exact brands we trust and love, along with the correct dosages for those with adrenal dysfunction.
- You'll get a supplement schedule, including when to take each supplement.



MODULE 4

LIFESTYLE CHANGES

- In this module, you'll learn about the various lifestyle factors that can help you heal from adrenal dysregulation- stress, sleep, exercise, and social connection.
- We'll show you exactly how to implement all the changes we recommend and provide you resources, so you're not left hanging!
- Bonus: Expert guests have contributed mindset and exercise guides specifically geared towards people with adrenal dysfunction.

MODULE 5

BONUS: HEALING YOUR RELATIONSHIP WITH FOOD

- In this module, you'll learn all about the signs of "orthorexia", or when healthy eating goes too far and is no longer healthy.
- You'll learn how to practice mindful eating so that you can enjoy the food you eat without restricting or bingeing.
- You'll learn how to cultivate a positive body image even in the midst of adrenal healing.



GET YOUR ENERGY BACK!

Join us in **Paleo Rehab: Adrenal Fatigue** and start healing now. You deserve health and vitality, and our program will help you reclaim your energy.

Click the button below to learn more about the program. See you inside!

START HEALING TODAY!