



# *Shifting Your Metabolic Barometer*

REDUCING STRESS AND INCREASING YOUR METABOLISM

# Stress.

6 letters that wreck absolute havoc on our bodies.

And the worst part?

**FOR THE MOST PART, IT CAN FEEL UNAVOIDABLE.**

And although society has largely normalized it (and sometimes glamorizes it, 'hustle culture', anyone?) make no mistake, it's one of the most dangerous conditions that we suffer from, causing the physical, mental, and emotional issues we deal with daily.

But, we DO have good news!

Not only is stress manageable, but you can make practical changes to your lifestyle to reduce the many stress-induced issues in your body.

Since knowledge is power, in this guide, we'll first cover what stress really is and how exactly it affects your body (sit tight, this won't be pretty). Then, we'll get to the good stuff and take you through an action plan so you can reduce your stress load.

So without further ado, let's get started!



# Effects of Stress

Let's discuss the different types of stress so you can better understand what's happening from a physiological perspective.

## Acute Stress

**Acute stress** is something all animals experience, and it directly relates to our survival. During an acute stress response, a chemical cocktail of neurotransmitters is released in response to some stimuli that our brain interprets as threatening. These chemicals — primary cortisol and adrenaline — serve with helpful bodily functions, like increasing blood flow to the limbs and sharpening decision-making abilities which can help us avoid risk. For instance, stress hormones are released when we see an oncoming car, which helps us move quickly out of the way.

## Chronic Stress

**Chronic stress**, on the other hand, is prolonged stress. And this is the especially problematic one. Essentially, the same stress hormones are being released into the body as during the acute response, but on an ongoing basis. So instead of cortisol and adrenaline production dropping after the stimuli is gone, the brain continues to serve up these chemicals, contributing to all sorts of issues in the body.

Most of us are experiencing chronic stress due to a world filled with constant stimulus. Our bodies stay stuck in a stress response as we jump from task to task and from one stressful situation to another without ever winding down.

Stress can wreak havoc on many bodily systems, with one of the primary ones being your metabolism. Stress hormones cause increases in appetite and strengthen cravings for simple carbohydrates like sugary and starchy foods, as well as salty and fatty foods. Inflammatory responses from stress can cause bloating and water retention, as well as poor processing of necessary nutrients.

Here are 25 other ways that chronic stress affects the many organ systems in our bodies and side effects it has on our overall health.

**INCREASED:**

- **Cortisol production:** The stress hormone cortisol is associated with weight gain (especially in the belly), inability to lose weight or gain muscle, and premature aging.
- **Nutrient excretion:** Stress increases the urinary excretion of calcium, magnesium, potassium, zinc, chromium, selenium, and various trace nutrients.
- **Salt retention:** Stress interferes with the body's ability to retain salt, which can lead to high blood pressure (hypertension).
- **Blood cholesterol:** Stress raises LDL cholesterol ("bad" cholesterol) levels.
- **Blood platelet aggregation:** Stress can contribute to platelet "clumping," which is a major risk factor in heart disease and can lead to blood clots.
- **Inflammation:** Stress causes inflammation, which is the basis of many ailments including brain and heart disease.
- **Gastric emptying time:** Stress can lead to constipation and may be a risk factor in diseases of the colon.
- **Swallowing rate:** A fast swallowing rate, common with stress, is a likely factor in digestive upset.
- **Food sensitivities and allergies:** Plenty of anecdotal evidence shows the connection between stress and issues with food, most likely due to decreased immunity and leaky gut.
- **Insulin resistance:** Chronic low-level stress may cause target cells to become unresponsive to insulin—a factor in diabetes, weight gain, heart disease and aging.
- **Erratic function of LES:** The lower esophageal sphincter opens inappropriately during periods of stress, causing gastric reflux (heartburn).
- **Oxidative stress:** Stress prematurely ages the body; a precursor to many diseases.
- **Risk of osteoporosis:** Bone density and formation have been shown to decrease in stressed people, since stress increases the urinary excretion of calcium, magnesium and boron.
- **Anxiety, worry, and fear:** Stress perpetuates these emotions and creates a state of tension and dysfunction within our hormonal cascades and overall physiological, mental, emotional, and spiritual wellness.

## DECREASED:

- **Nutrient absorption:** Stress causes decreased enzymatic production from the stomach, pancreas, and liver, decreased bile flow from the gallbladder, and decreased oxygenation and gastrointestinal blood flow.
- **Gut flora populations:** Stress destroys healthy intestinal bacteria, which can lead to immune problems, skin disorders, nutrient deficiencies, and digestive distress.
- **Thermic efficiency:** The ability to burn calories is diminished with increased stress.
- **Thyroid hormone:** Changes in the thyroid due to stress can decrease the body's metabolic activity.
- **Sex hormones:** Stress can lower sex drive, deplete energy, and decrease muscle mass.
- **Gastric emptying time:** Stress can also lead to diarrhea, and food particles prematurely entering the small intestines — a probable factor in food allergies, sensitivities, and various disease conditions.
- **Hydrochloric acid production:** Stress diverts blood flow away from the digestive system, causing the majority of people to experience a reduction of stomach acid.
- **Growth hormone:** Stress decreases production of a key hormone in growing, healing and rebuilding tissues, which helps burn fat and build muscle.
- **Mitochondria:** Mitochondria are the cell's energy powerhouses. When these cellular organelles are diminished in number, we literally produce less energy, which can lead to chronic fatigue.
- **Confidence and certainty:** Stress inhibits our thoughts and decision making ability which can make it difficult to lead and see solutions clearly.
- **Creativity:** Writer's block and other creative slowdowns are often caused by stress, since our minds do not operate effectively under intensely stressful situations.

It can feel overwhelming to even look at this list, knowing what chronic stress might be doing to your body. But remember, there are plenty of methods for decreasing stress. Let's talk through some of the big ones.

# Action Plan

## Sleep

If you're not regularly getting 7-8 hours of quality sleep per night, then your health-related efforts are likely being sabotaged. Not only is getting restful, restorative sleep one of the primary ways to combat stress, but a prolonged lack of sleep actually starts to break down the body at a cellular level, affecting your organs and every bodily process.

### ACTION STEPS:

- Start practicing a “Power Down Hour” each night during the hour before you go to bed. This is the ideal way to ease your body into a restful sleep by keeping your circadian rhythm (the bodily process that regulates the sleep-wake cycle) functioning optimally.
- During your Power Down Hour, turn off electronics, write down anything that's worrying you, practice deep breathing or progressive muscle relaxation, or take a hot epsom salt or aromatherapy bath.
- Find ways to keep your bedroom environment conducive to high quality sleep as well. Ensure total darkness if you can, as light can stimulate the senses and keep the brain “switched on” even during sleep. Get blackout window shades or use eyeshades if necessary.
- Paint your walls a serene, peaceful color and keep your bedroom a clutter-free zone. Most importantly, keep TV, tablets, and computers out of the bedroom. You might even consider putting your cell phone in a different room and using an old-fashioned alarm clock.
- In general, try to avoid eating or consuming alcohol at least an hour before bed. Keep hydrated throughout the day, and avoid drinking lots of water before bedtime so you're not getting up to go to the bathroom during the night.

## *Diet*

Of course, your diet plays a huge role in both your stress levels and your metabolic rate. Increased cortisol stimulates insulin release and greatly affects blood sugar levels. Increased appetite and cravings can show up as a result. Furthermore, some foods can actually contribute to keeping the stress cycle going.

### **ACTION STEPS:**

- When we're feeling stressed, we tend to want to reach for comfort foods. But during periods of stress, we need to be especially aware of how we're fueling our bodies. Consuming large amounts of processed sugar can trigger feelings of worry, irritability, and sadness — which can be especially tricky for a stressed person who also deals with depression or anxiety.
- Plus, after eating too much sugar, the body releases insulin to help absorb the excess glucose in the bloodstream and stabilize blood sugar levels, which means a sugar rush makes your bodily systems work extra hard to get back to normal. This roller coaster can leave you feeling nervous, foggy, irritable, jittery, and drained.
- Be mindful about how much food you're consuming from a box or a bag. Processed foods, as well as alcohol, tend to be loaded with sugar, meaning that you can easily exceed your maximum recommended intake quickly, so it's a good idea to minimize these for a while until stress levels recede.
- Fats are absolutely vital to normal functioning inside the body and at the deeper level of the cell. Healthy fats provide protection, optimal hormone function, storage of fat soluble vitamins, and energy. In addition to fueling your hormones, healthy fats affect your brain and your gastrointestinal system, and are anti-inflammatory. That's a lot of benefits!
- Choose fats that haven't been altered and can be consumed in their natural state, like extra virgin olive oil, virgin coconut oil, avocado, nuts, seeds, grass-fed beef, cage-free chicken, and wild caught fish, to name a few. Avoid hydrogenated or partially hydrogenated oils, which can increase inflammation and oxidize cholesterol.

- Proteins serve as the building blocks for your muscles, organs, and cells. If you don't consume enough protein, you'll suffer from muscle wasting, a weakened immune system, and weak or brittle hair, nails, and skin. The highest quality proteins will come from your sources of healthy fats, particularly lean meats. Vegetarians and vegans can get their protein through beans and lentils, raw nuts and seeds, and fermented foods.
- Protein increases your metabolic rate by 15–30%. As added bonuses, it helps you stay fuller longer, may prevent you from overeating, and reduces muscle loss.
- As far as liquid, keep in mind that a lack of hydration will slow your metabolism and contribute to inflammation in the body. Drink a minimum of half your body weight in ounces of water daily. For example, if you're 200 lbs, drink 100 oz of water each day.
- Finally, try eating slowly, taking a minimum of 20 minutes to consume a meal. This allows the body to relax and digest food properly, absorbing nutrients and communicating correct hunger-fullness levels. Your metabolism will thank you for taking your time during meals!



## Activity

Of course, physical activity is another key element of putting a stop to looping stress cycles. In fact, rigorous physical activity actually mimics the stress cycle in the body, releasing adrenaline and cortisol, and then stabilizing post-workout. Endorphins and dopamine are released during exercise — the neurotransmitters that contribute to feelings of happiness and wellbeing.

### ACTION STEPS:

- In order to complete the stress cycle, it's important to get in regular cardio workouts. High-intensity interval training (HIIT) is particularly excellent at increasing the metabolic rate, even after the workout is finished. HIIT's quick, intense bursts of activity also help reduce fat mass significantly.
- But it's best to have some variety in your workout routine, since this keeps your metabolic rate — as well as new muscle growth — from plateauing. So incorporating different types of cardio exercise, like running or hiking, cycling, swimming, jumping rope, and even dancing, can help keep your metabolism strong and your routine from becoming dull.
- Yoga has been shown to drastically reduce stress. Much of our stress is physically stored in the muscles, particularly the hips and shoulders, so regular stretching is vital to releasing tension that accumulates in these areas. Practices that incorporate stretching of the psoas muscle — the main muscle that contracts during the stress response — will be particularly helpful. Even taking 10 to 20 minutes each morning to do some lunges, warriors, and pigeon poses can help release this area.
- Don't forget about weights. Lifting isn't just great for building muscle mass and feeling strong, but it releases dopamine and serotonin in the brain, which can counteract stress. Weight training also leads to an increase in resting metabolism — meaning that you're still burning calories for up to 72 hours after lifting!
- Additionally, it's crucial to have rest days — ideally 1 to 2 non-consecutive days per week. This allows the body to repair. You can still try some light stretching or a gentle walk during these days to stay moving, but be sure not to over exercise, which can actually increase chronic stress.

## *Other Supports*

There are a myriad of supports out there to help reduce stress and increase metabolism. The key is finding what works best for you through exploration and experimenting. Here are some suggestions to get you started.

### *Supplements*

If you're having trouble with falling or staying asleep, taking minerals such as magnesium and calcium can help. Additionally, supplements like melatonin and valerian root can considerably promote restful sleep. Taking a high-quality B vitamin can help your body better metabolize food and can contribute to increased energy as it supports the thyroid gland. And an omega-3 fat supplement like fish oil can also give your metabolism a boost.

### *Breathwork*

Most people know that deep breathing helps lower stress levels, but controlled breathing has been shown to affect glucose levels, affect the overall functioning of the nervous system, and increase resting metabolism. Look online for different breathwork tutorials, specifically diaphragmatic breathing and nasal breathing during exercise for a metabolism boost, and alternate nostril breathing during stress episodes to help regulate the nervous system.

### *Additives to Water*

Adding Himalayan sea salt (which is naturally rich in electrolytes, iodine, and 84 other trace minerals) to your water every day is extremely beneficial to the body. This salt keeps the body from retaining unnecessary water. You can make "sole" water in advance by filling 1/4th of a jar with Himalayan salt and the rest with water, or you can simply add a few teaspoons of Himalayan salt to each glass of water you drink. Another hack is sipping on hot water with lemon and ginger, especially first thing in the morning and before meals. This can actually increase your metabolism by 30-40%! It also helps maintain your body's pH balance and stimulates stomach acid production, which helps keep things moving in your digestive system.

## *FAR-Infrared Sauna*

Regular sessions in a FAR-infrared sauna can raise your basal metabolic rate, meaning that you'll burn calories at an elevated rate for hours after your session has finished. You'll also be aiding in the sweating process, which helps detox your body of harmful toxic residues. FAR-infrared saunas help the body to detox by activating water molecules in the lipid and fat cells found in the layer of fat that exists just below the surface of the skin. This activation of these water molecules stimulates fat cells to excrete toxins, which are then sweated out. You can also burn hundreds calories during a session, improve your heart health, find relief from pain, and decrease signs of aging in the skin.

## *Gratitude Practice*

It might sound woo-woo, but gratitude can profoundly affect the metabolism. Gratitude decreases stress by releasing neurotransmitters like dopamine and serotonin. It can decrease physical inflammation in a matter of minutes and help reduce cravings. Try making a new list each day of five things you're grateful for. Intentionally compliment someone. If you're feeling overwhelmed and full of worry, look around your physical environment and find several things you're grateful for. This can help "turn off" the stress response. If you're in a pinch and not able to do a longer gratitude practice, doctors say that simply smiling or laughing out loud can instantly release feel-good chemicals in your brain, "tricking" it into relaxation and calm.

Now that you've got a game plan to address these different areas, reduce your stress, and give your metabolism a boost, which tips will you try first? Head over to the studio's social media pages and tag us to share what's working for you!