

Key Strategies to Reduce Your Cortisol Levels

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STORY AT-A-GLANCE

- › Cortisol's principal purpose in the body is to increase your blood sugar when levels are low by breaking down lean muscles, bones and brain tissue into amino acids that your liver converts into glucose
- › It also uses stored peripheral and subcutaneous fat, but leaves behind the harmful visceral fat surrounding your internal organs, which contributes to inflammation
- › You can reduce your cortisol levels by increasing carbohydrate intake. The carbohydrates help maintain your blood sugar level so your body no longer needs to raise cortisol to generate glucose
- › More tips on how to add the right carbs into your diet are included, along with other strategies that can further reduce your cortisol levels, such as stress-lowering activities and progesterone

Interest in the adverse effects of elevated cortisol levels has been on the rise – a topic I've been dedicated to shedding light on for my readers. As reported in a recent article in the Huffington Post,¹ "According to Google Trends, there has been a huge uptick in people searching the words 'high cortisol' as we all learn more about cortisol and how different levels of it can impact our health."

Many people think of cortisol simply as the stress hormone, but that is not its main role in your body. Cortisol is primarily your body's protective mechanism to keep your glucose levels from dropping dangerously low, preventing you from going into a hypoglycemic coma and dying.²

However, its mechanism of action contributes to its long-term consequences and makes elevated cortisol levels undesirable. It is also one of the factors that made me radically revise my recommendations about low-carb diets.

What Is Cortisol and How Does It Work?

Cortisol belongs to a class of steroid hormones called glucocorticoid.³ The term "gluco" means glucose (sugar),⁴ while "cortico" indicates its origin in the adrenal cortex.⁵ While its role in maintaining glucose balance is recognized, cortisol's primary function was often emphasized to be the regulation of inflammatory responses to stressors.

However, that is not true. Cortisol's main purpose in your body is to increase your blood sugar when there's not enough glucose in your bloodstream and your liver does not have enough glycogen reserves. It does this by sacrificing your lean muscles, bones and even brain tissue, breaking them down into amino acids that your liver then converts into glucose through a process known as gluconeogenesis.⁶

This is what made me realize that being on a chronic low-carb diet is not a good idea. While both low-carb and fasting are helpful short-term interventions for those who are overweight and metabolically inflexible, it's important to add carbs back into your diet once you've regained metabolic flexibility. Otherwise, these strategies will backfire and lead to decreased metabolic health, compromised mitochondrial function and impaired metabolism.

Cortisol also uses up stored fat through a process known as lipolysis.⁷ While this might seem beneficial, the problem with it is that cortisol primarily targets the beneficial peripheral and subcutaneous fat, leaving behind the harmful visceral fat surrounding your internal organs, which contributes to inflammation.

So, while cortisol may initially exert anti-inflammatory action, having consistently high levels of it also leads to inflammation and compromises your immune system.

Ultimately, whether your body is producing high amounts of cortisol due to chronic

stress or to compensate for the lack of healthy carbs in your diet, this is not a state you want to be in for a prolonged period if you want to live a long and healthy life.

Elevated Cortisol Levels Is Highly Catabolic

In a [previous interview](#) about cortisol and its association with carbohydrates and glucose, Georgi Dinkov, who is an expert on the work of the late Ray Peat, Ph.D.,⁸ an author and pioneer in nutrition, bioenergetic medicine, environmental factors and regenerative processes, commented:

"I think there's hardly a chronic condition where you don't see cortisol implicated, and usually, in the majority of cases, it is elevated cortisol, not low cortisol. In fact, the only situation in which low cortisol becomes problematic is probably Addison's disease, which is adrenal failure. And that's very rare."

The catabolic nature of elevated cortisol is responsible for its negative effects. It not only damages brain tissue, contributing to brain atrophy seen in conditions like dementia and depression,⁹ but also accelerates aging,¹⁰ which is something very few in the longevity community are even aware of.

To stay healthy as you age, you need to build healthy tissues, but chronically high cortisol levels prevent that. Additionally, cortisol stimulates the release of neurotransmitters that trigger food cravings,¹¹ putting you at risk of unhealthy eating habits.

Reduce Your Fat Intake Before Increasing Carbs in Your Diet

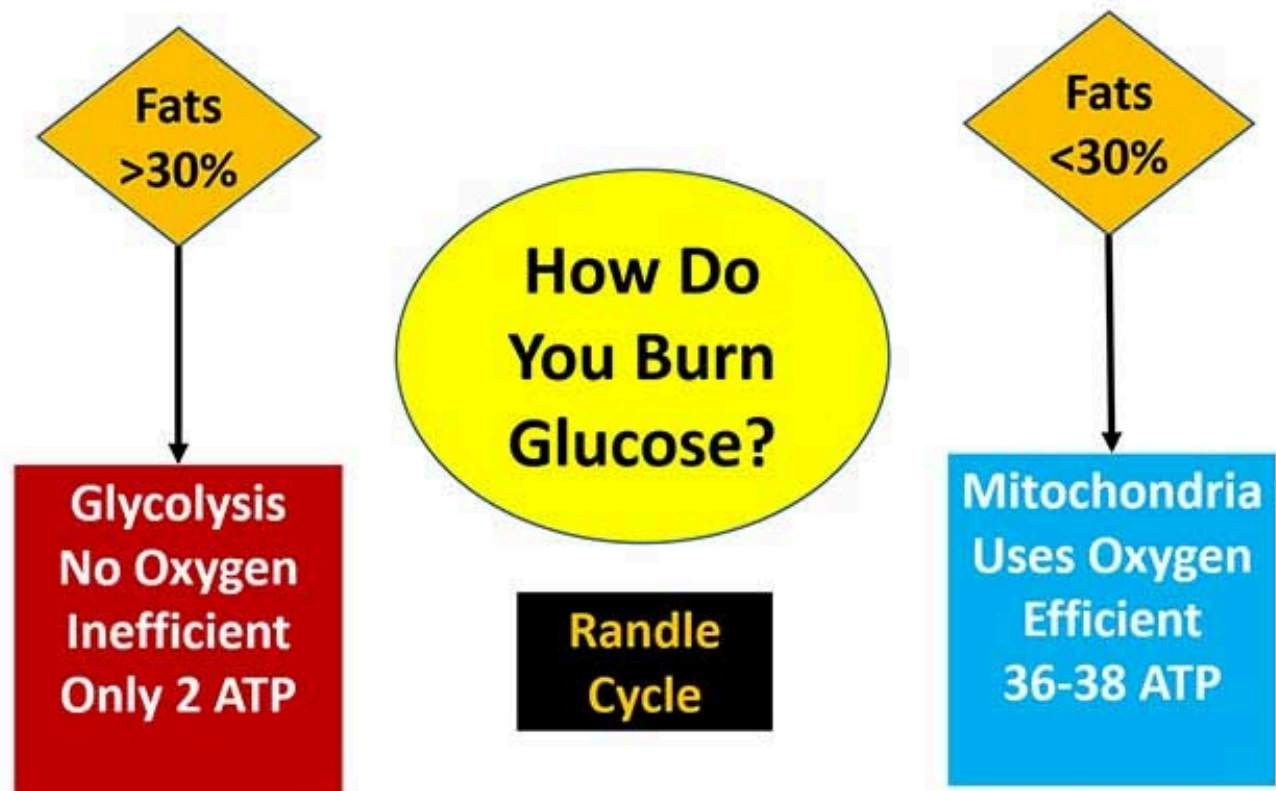
Given the health ramifications of cortisol, it's clearly important to take every proactive step possible to maintain optimal levels of this hormone. One strategy that can help you achieve this is to increase your carb intake so that your body no longer has to generate glucose to raise low blood sugar.

Carbs are also a better fuel than fat because they generate less reactive oxygen species in your mitochondria. However, before increasing your carb intake, it's crucial to consider two key points – when to increase it and the best type of carbs.

Before you increase carbs, make sure you're no longer on a high-fat diet. This is because your body can only burn one fuel at a time – either fat or glucose. It has a "switch" called the Randle Cycle that decides which fuel you burn. When you eat a lot of fat, the Randle Cycle switches your body to burn fat for fuel.

But if you're eating high-carb while still on a high-fat diet, your body will not be able to burn the excess glucose (carbs) for energy. Instead, it stays in your bloodstream, raising your blood sugar levels and putting you at risk of chronic diseases like diabetes.

To make the metabolic switch happen, you need to lower your fat intake below 30% of your calories per day. I created the figure below to help you visualize it, so you can better understand this vital concept.



Choose Your Carbs Wisely

Although consuming more carbs is recommended for lowering cortisol, it's important to be mindful of the type of carbs you consume. You should avoid processed foods and snacks because these junk carbs contain ingredients like **linoleic acid** and high-fructose corn syrup (HFCS). These disrupt your gut microbiome and contribute to endotoxin production, which is a major driver of increased cortisol and inflammation.

"Yakult's Nutritionist and Science Manager UK & Ireland, Dr. Emily Prpa spoke with us to discuss just how these [high cortisol] levels can be tackled ...

Dr. Prpa added that nourishing our gut microbiome is essential. This means loading up on fruit, vegetables and whole grains. Dr. Prpa said: '[These foods] are packed with anti-inflammatory compounds and prebiotic fibres that support gut health,'" The featured Huffington Post¹² article reports.

While I agree with eating more fruits and vegetables, I respectfully disagree with the advice to load up on grains because they contain numerous substances that can disrupt your health and contribute to endotoxin production, including inflammatory lectins,¹³ gliadin (an immunotoxic protein)¹⁴ and glyphosate residues.¹⁵

Grains also contain resistant starches, which are a type of complex carbohydrate. If you have an impaired gut microbiome, complex carbs can worsen your health by increasing the concentration of endotoxin in your body. You should avoid legumes, beans, lentils, uncooked potatoes, green bananas and pasta for this same reason.

Moreover, while I believe ripe fruits and starches like white rice are ideal carbs, it's important to note that they're rich in fiber, which will feed endotoxin-producing gut bacteria UNLESS your gut health is optimal.

If you experience problems eating complex carbs that result in bowel issues, then consider temporarily restricting your carb intake to very simple carbohydrates such as fruit juice, which is easier to digest. Once your gut health improves, you'll be able to incorporate more fiber-rich fruits, vegetables and starches.

Carefully Introduce Complex Carbs Into Your Diet

Complex carbs have long been thought to be beneficial for the gut microbiome, whereas simple carbs (sugar) have been linked to aging. So, what is it that makes supposedly beneficial complex carbohydrates problematic for your health?

Indeed, complex carbohydrates nourish your gut microbiome, but they can also feed pathogenic bacteria, which thrive in your gut when you're exposed to metabolic poisons like linoleic acid¹⁶ and xenoestrogens.¹⁷ These can impair your mitochondrial energy production and reduce carbon dioxide levels in the intestine, creating an environment conducive to pathogenic bacteria growth.

When these harmful bacteria consume complex carbs, they proliferate. When larger numbers of the bacteria eventually die, they release high levels of lipopolysaccharide, an endotoxin that further compromises cellular energy production. The solution is to improve your mitochondrial function and their ability to produce enough cellular energy.

Once you achieve that, you can benefit from complex carbs again. Until then, it's best to carefully introduce complex carbs into your diet. Start with fresh fruit juice, and if you can tolerate that, try healthy whole ripe fruits. Some of the ripe fruits I recommend include:

Oranges	Tangerines	Mango
Grapes	Melon	Watermelon
Pineapple (keep intake moderate as it contains serotonin)		

Once you can tolerate whole fruits, you can add more forms of complex carbs into your diet. Cooked starches such as potatoes and white rice are good options. Potatoes contain water-soluble oxalates, though, which can be problematic, so make sure to boil them to lower their oxalate content. You can also increase the amount of resistant starch,¹⁸ which doesn't spike your blood sugar, by cooking, refrigerating, and reheating before eating.

Incorporate Stress-Lowering Strategies for Optimal Results

Aside from switching to a high-carb diet, you should also address your stress levels to keep your body from producing excessive cortisol. As reported in the featured HuffPost article,¹⁹ "Dr. Prpa advised that incorporating relaxation techniques and self-care can reduce cortisol levels, giving our gut a chance to reset and activating our parasympathetic nervous system, which helps us to relax."

"Stress doesn't just affect our mental state; it's got a profound impact on our gut health too. When stress levels soar, our gut bacteria – the unsung heroes of digestion – can take a hit," Dr. Prpa elaborated.

The Huffington Post lists the following techniques to help you relax, according to the mental health charity, Mind:²⁰

Do things you enjoy, like reading, taking a bath, watching movies, playing with pets or trying new recipes.

Engage in active relaxation activities like going for walks or doing yoga, Pilates or gentle stretching.

Take a few minutes each day for deep breathing. Keep your shoulders down and relaxed when doing so. Place a hand on your stomach; it should rise and fall as you breathe in and out.

Try painting, drawing, crafting, music or baking for fun.

Spend time outdoors, being in the moment as you take note of trees, plants and animals.

Imagine yourself in a peaceful place.

Listen to your favorite music.

Take a break from your phone for an hour to unwind.

Consider Taking Progesterone

An in vivo study published in the *Journal of Applied Physiology*²¹ linked high cortisol levels to the increased expression of the enzyme 11 β -HSD1, which is responsible for converting inactive cortisone into active cortisol.

Fortunately, some substances can block the activity of 11 β -HSD1, thereby reducing tissue cortisol levels. These include aspirin, emodin and progesterone. These substances also boost the activity of another enzyme called 11 β -HSD2, which can help deactivate cortisol.

Of these three, progesterone may be one of the most beneficial, as it has many other health benefits. I generally recommend a daily dose of 30 to 50 milligrams of bioidentical progesterone, ideally taken in the evening before bed, as it can also promote sleep. Combine it with natural vitamin E (look for supplements labeled "d alpha tocopherol") to increase its bioavailability.

You can also dissolve about 1/32 teaspoon of pure USP progesterone powder into one capsule of high-quality vitamin E, and then rub the mixture on your gums. Aside from blocking cortisol, progesterone also helps deactivate adrenaline, another potent stress hormone. As noted by Dinkov in another [interview about hormone replacement](#):

"There are human studies demonstrating that when you administer progesterone, even in its nonoptimal form – such as just the powder without the long-chain fatty acids and definitely without the tocopherols – even in that form, a single dose [100 to 200 mg] is sufficient to drop cortisol and adrenaline by about 60%."

Sources and References

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