

# Are We Under Attack? No, It's Just Caffeine!

Coffee is by far one of the world's most popular and loved beverages.

According to Wirthlin Worldwide (a market research company), North Americans consume on average 1.8 cups of coffee per day. Compare this to our water consumption. It is recommended to consume on average eight to ten 8 oz glasses of "living water" (ie. mineral rich, slightly alkaline, and energy producing within the body) each day. However, scary statistics reveal that 20% of North Americans drink no water at all while only 42% of us consume a mere 2 glasses or fewer.

And the numbers are no better for our European friends.

There are several issues with coffee, but let's highlight the main one – caffeine! Coffee is the major vehicle for caffeine consumption for most humans.

Caffeine is a **central nervous system (CNS) stimulant**. It is a member of the class of methylxanthine chemicals/drugs. Xanthines (specifically theophylline) are commonly used in medicine to aid in breathing. Theobromine, another xanthine derivative, is found in cacao (chocolate) and tea. Thus, chocolate and tea are also sources of caffeine.

A dosage of 50 to 100 mg caffeine, the amount in one cup of coffee, will produce a temporary increase in mental clarity and energy levels while simultaneously reducing drowsiness. It can also improve muscular co-ordination, which is why many employers love to provide coffee to their employees – to keep them awake and working hard!

Through its CNS stimulation, caffeine increases brain activity; however, it also stimulates the cardiovascular system, raising blood pressure and heart rate via the release of noradrenaline and adrenaline from the adrenal glands (more on this later).

## Caffeine is a Drug - Have a Look...

Since caffeine is a "drug", the amount needed to produce stimulation increases with regular use, as is typical of all addictive drugs.

But you might say that caffeine (and coffee) is not nearly as dangerous as other drugs. That may be true – or is it?

Let's see what the research says...

- Coffee **intensifies stress**, causing an average 40% increase in adrenaline. This results in increased blood pressure, heart rate, perspiration, nervousness, and irritability.
- Coffee increases the secretion of stomach acid by 400%, **contributing to gastritis**

**and peptic ulcers.**

- According to the British medical journal *Lancet*, coffee drinkers have a **50% higher risk of heart attack.**
- Coffee **causes a significant loss of nutrients**, especially alkalizing minerals such as magnesium, potassium, calcium, zinc, and B vitamins.
- Coffee is a **major source of cadmium**, a heavy metal that has been linked to cancer and immune suppression.

AND...if you're a woman, please consider the following even scarier facts:

- Caffeine is **linked to ovarian cancer, bladder, and kidney cancers.**
- According to the Journal of the American Medical Association, coffee **increases the risk of miscarriage** and can double the rate with just 1 cup (160 mg caffeine) per day!
- Coffee **reduces fertility.** More than 1 cup per day makes a woman half as likely to conceive (American Journal of Epidemiology)!

Please remember that this is by no means an exhaustive list of coffee's effects on the body. Also consider that for each cup (100 mg caffeine) of coffee you should be throwing back 3 cups of purified living water to make up for coffee's dehydrating diuretic effect.

Aside from all these effects, it is vitally important to remember that coffee is acid-forming in the body, and more so if taken with sugar and milk.

Although coffee beans in their original natural state have potent antioxidant properties, once they've been processed and roasted they no longer provide much value to your body. Rather, roasted coffee becomes a strong pro-oxidant (as its oils become rancid), meaning that it greatly increases the oxidation within your body's cells. Simply put, it **causes you to age faster!**

## **Caffeine's Effect on the Adrenal System**

Now that we've discussed many of caffeine's (and coffee's) negative effects on the body, we need to turn our attention to, probably, the most pressing issue – caffeine's impact on your adrenal system.

We mentioned that caffeine stimulates your CNS. Once it does so, your CNS sends hormonal signals (ACTH) to your adrenal glands to produce and secrete the "stress" hormones adrenaline (and noradrenaline) and cortisol.

Adrenaline intensifies and readies your body for the "fight or flight" response. It stimulates your cardiovascular system by revving up your heart rate and constricting your blood vessels, thus raising your blood pressure. These, and many other effects, are part of your body's natural preparation to either "fight" or "flee" a given situation. Too bad, we no longer live in the wild and have to contend with ferocious predatory animals!

**Cortisol**, the other adrenal hormone released upon caffeine intake, is another “fight or flight” hormone whose main role is to break down energy reserves for immediate use. Since the body would naturally need more glucose (for energy) in a “stressed” state, cortisol is released to mobilize fatty acids and glucose from fat reserves and glycogen stores, respectively.

The problem here is that overtime, caffeine’s stimulation of the adrenal glands, combined with day-to-day stress, can overload and **eventually fatigue your adrenal glands!**

## **Caffeine’s High is Followed by a More Pronounced Low and Eventually Exhaustion**

Allow the following authors to describe the impact of caffeine on the adrenals.

*“It doesn't take a genius to see that there might be a downside to all of this neuron activity. In fact, uncontrolled neuron firing creates an emergency situation, which triggers the pituitary gland in the brain to secrete ACTH (adrenocorticotrophic hormone). ACTH tells the adrenal glands to pump out stress hormones—the next major side effect of caffeine.”*

- **Caffeine Blues** By Stephen Cherniske MS, page 56

*“Within five minutes after you drink your morning coffee, the caffeine begins to stimulate your central nervous system, triggering the release of stress hormones in your body, causing a stress (“fight or flight” ) response.*

*The stress hormones are useful if you need to prepare yourself to fight or flee a dangerous situation, but if you are simply sitting at your desk you may feel a short charge of alertness, quickly followed by feelings of agitation.*

*Within the next hour or so, after the stress response dissipates, you will probably feel more tired and hungry. At these low-energy times, many people reach for another cup of coffee, or eat a snack that is often high in sugar to “pep up” and stay alert.*

*However, both caffeine and sugar only give you temporary feelings of increased energy, which quickly dissipate. For some people, this cycle of low energy followed by an infusion of caffeine or food continues the entire day -- leaving them feeling exhausted and unable to focus by 3:00 p.m. because they are drained from the ups and downs in energy their body endured throughout the day.”*

- **Active Wellness** By Gayle Reichler MS RD CDN, page 12

*“Among other things, it (caffeine) stimulates the production of adrenaline, one of the hormones secreted by the adrenal glands to help us in extreme emergency situations. Our adrenals evolved to give our early ancestors the extra strength and alertness needed to escape a saber tooth tiger attack, but we don't often need that much adrenaline these days. Like sugar, coffee constantly stimulates the production of adrenaline, putting excessive wear and tear on the adrenal glands. And let's not forget that green tea and black tea contain caffeine, and even decaf still contains some caffeine. If you're sensitive to caffeine it can keep you awake at night even if you haven't had any since noon. If you're suffering from insomnia, your best bet is to drink non-stimulating herbal teas such as chamomile or mint in*

*the evening. If you need a boost in the afternoon, try a cup of ginseng tea.“*

- **Prescription Alternatives** by Earl Mindell RPh PhD and Virginia Hopkins MA, page 388

*“Although we think of caffeine in coffee as the “wake-me-up” chemical, chronic use of it may cause fatigue, headache, moodiness, and depression in some people. Because caffeine boosts energy through increasing the production of ATP, the basic unit of energy production in your body, one school of thought suggests that chronically stimulating this system may deplete it, sort of like overworking the soil in farmland.”*

- **Doctors Complete Guide Vitamins Minerals** by Mary D Eades MD, page 324

The common thread in all of these passages is that caffeine exerts a stimulatory effect on the adrenal glands. With time, this constant stimulation eventually wears down your adrenals. As a result, they aren't able to function properly and their ability to produce and secrete their hormones is compromised. The result – adrenal fatigue - can be devastating to your health and energy levels.

Let's look at two examples...

## **Adrenal Fatigue and Blood Sugar Problems**

When your adrenals are fatigued, their cortisol output is diminished and you have lower levels of circulating blood cortisol. As a result, your liver has more difficulty converting glycogen (stored blood sugar) into glucose (active blood sugar).

Fats and carbohydrates, which normally are converted into glucose, now cannot be readily converted into glucose.

Further complicating this matter is that during stress, insulin levels are increased because the demand for energy in the cells is greater. Insulin is released as it permits the uptake of glucose into the cells for energy.

However, without adequate cortisol levels to facilitate the breakdown of glycogen and fats to new glucose supplies, this increased demand is difficult or impossible to meet. All this combines to produce low blood sugar.

This produces a real dilemma for those who suffer from adrenal fatigue and experience chronic stress. They simply cannot get enough glucose to meet their body's needs. This can lead to light-headedness, dizziness, fatigue, confusion, loss of muscular strength, and many other unpleasant symptoms.

But what do most people do to deal with their stress and plummeting blood sugar levels? They seek out further stimulation to bring them back to normal, right? So, most people handle their low-adrenal related hypoglycemia symptoms with a double-edged sword – they eat something sweet or drink a cup of coffee or cola.

This is a short-term emergency remedy that only furthers the problem because any of these options will only cause blood sugar levels to go through the roof. And when they do, insulin will be released to remove excess glucose from the blood, forcing blood sugar levels to

plummet toward the basement!

And the vicious cycle continues.

## Adrenal Fatigue, Aldosterone, and Cellular Dehydration

Assuming you get to a state of adrenal fatigue, another important hormone produced by the adrenals will be compromised. **Aldosterone**, a vital hormone that helps regulate water, sodium, potassium, magnesium, and chloride levels in the body, will be affected.

Under normal healthy conditions, your adrenal glands secrete adequate amounts of aldosterone to properly manage fluid and sodium levels in the cells and body fluids. The relationship between aldosterone and sodium is the easiest to understand. As the concentration of aldosterone rises, so too does the concentration of sodium in the blood and interstitial fluid (fluid between cells). And wherever sodium goes, water follows. Therefore, water is retained within the body and the cells remain properly hydrated.

However, in times of adrenal stress and fatigue, aldosterone levels decrease, meaning that less sodium is retained (more of it is excreted in the urine) and, as a result, your body becomes body becomes dehydrated as both water and sodium are “peed” out of the body. Living in chronic dehydration is not something you want to experience. Just like planet earth, our body is composed of over 70% water. Aside from oxygen, water is the most vital nutrient your body needs to operate and thrive.

Having adequate water in your body is essential for daily functioning. It is also a critical component of detoxification as water helps flush out waste from your cells and tissues. Less water means toxins can accumulate and remain in your body. At a macro level, this can manifest as constipation.

So the next time you have the urge to reach for that cup of coffee or go to your local café for your morning fix, think of the long-term effects your choices are having on your body. When you drink coffee (caffeine) your body essentially thinks that it's under attack from overstimulation.

Why not allow your body the rest and recovery it needs? Wouldn't it be great if you could wake up feeling absolutely energized without the presence of coffee?

Source: <http://www.totalwellnesscleanse.com/>