



## COFFEE



**THE BIGGEST PROBLEM WITH COFFEE STUDIES** is that they do not specify which kind of coffee was used in the study – and most coffees are sub-par, conventionally-grown, and MOLDY (CONTAINS MYCOTOXINS).

It would be like doing a study on the benefits of orange juice and using only fermented, spoiled juice to determine the effects of OJ on your body.

The research is showing that good, single-origin Arabica coffee, fresh ground and properly prepared is behind reduced Alzheimer's, lower risk of Type-2 Diabetes, improved insulin sensitivity, reduced prostate cancer risk, reduced depression, lower stroke risk, and lower breast cancer risk.

Coffee is a high source of antioxidants, improves fat loss, and increases power output in exercise – both aerobic and anaerobic.

**SO, read this file carefully.** I begin with the PRO-Coffee perspectives, as advanced by Dave Asprey of [BulletProof Executive](http://BulletProof Executive).



**Stay Sharp,**

A handwritten signature in black ink, appearing to read 'David Rainoshek'.

**David Rainoshek, M.A.**

[JuiceFeasting.com](http://JuiceFeasting.com)

[RevolutionaryWebinars.com](http://RevolutionaryWebinars.com)

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<b>Books:</b>	<a href="#"><u>Uncommon Grounds: The History of Coffee and How It Transformed Our World by Mark Pendergrast</u></a>
<b>Articles:</b>	
<b>Audio/Video:</b>	<b>Black Gold (Movie)</b> <b>Preview:</b> <a href="http://video.google.com/videoplay?docid=-1048538768292308772">http://video.google.com/videoplay?docid=-1048538768292308772</a>
<b>Websites:</b>	<a href="#"><u>Bulletproof Upgraded Coffee</u></a>
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<b>Integral Nutrition:</b>	<b>BulletProof Coffee (see below)</b> <b>Coffee on Occasion, in the Context of an Alkalinizing Diet of Whole Foods</b> <b>Hario V60 Coffee Dripper</b>
<b>Conventional:</b>	<b>Coffee is the fuel for doing more of anything. Drink at will.</b> <b>Moldy, old, conventional, bitter coffee with lots of cream and sugar</b>
<b>Terms:</b>	<b>Mycotoxins</b>

## **DAVID RAINOSHEK'S VERSION of the BULLETPROOF COFFEE RECIPE**

Source: David Rainoshek, M.A., inspired by BulletProof Coffee by Dave Asprey at [www.BulletProofExec.com](http://www.BulletProofExec.com)

### **I (DAVID) MAKE THIS COFFEE MOST MORNINGS, AND DRINK 1-2 CUPS.**

Katrina has never been able to drink coffee without being wiggled out – but with *this brew*, all that has changed. We are pretty sure the reason for this shift is a combination of:

- + Single-origin Arabica coffee fresh-ground (NOT MOLDY, multi-origin, old coffee)
- + No sweetener of any kind
- + Grass-Fed Butter instead of cream (butter has almost *no casein* – a dairy protein many people do not digest well)
- + Raw Virgin Coconut Oil
- + High-protein. We use *Undenatured* Whey Protein and Colostrum in the coffee... excellent for building glutathione in the liver (one of your main antioxidants) and healthy brush borders and probiotics in your intestinal tract.

All we can say is that this is *the best coffee we have ever had*. And we make it at home. Here is the recipe, exactly:

## **2 CUP RECIPE for David Rainoshek's Version of BulletProof Coffee**

### **STEP 1: Make Coffee**

2 T Home-Ground Single-Origin Organic Arabica Coffee (no blends)  
2 Cups Water, Boiled

Add the coffee grounds to the water after it has boiled and been turned off. Brew for 3-5 minutes. Then strain through a coffee filter or nut mylk bag into your blender.

### **STEP 2: In the Blender**

2 Cups          Coffee, brewed 3-5 minutes and strained  
2 T                Virgin Organic Coconut Oil  
2-4 T             Grass-Fed Butter

Blend high enough for 20 seconds to create a slight foam

### **STEP 3: Add Into the Blender**

2 tsp             bovine colostrum  
2 T                unrefined whey protein

Blend slowly for 10 seconds and serve. Do not add sugar.

**IMPORTANT NOTE:** The first time you make this coffee (and every time thereafter), definitely use *organic, single-origin, Arabica coffee fresh-ground* (within the last week), and blend with *grass-fed butter*. If you don't use these ingredients, you won't know what this coffee truly is, or your body's real response to Bulletproof Coffee. And don't add sweetener of any kind. You are in for a treat. 😊

## **COFFEE: 5 REASONS YOU CAN PERFORM BETTER & 10 WAYS TO LIVE LONGER**

Source: Dave Asprey, The Bulletproof Executive.

Online: <http://www.bulletproofexec.com/coffee-5-reasons-you-can-perform-better-10-ways-to-live-longer>

Coffee will kill you.



At least that's what some caffeine-deprived people have come to believe. Coffee gets a bad reputation for causing jitters, stomach discomfort, even [cancer](#).

You'll also hear that "acidic" coffee causes osteoporosis. Before explaining how we came around to believing those things, let's look at some of the proven benefits of coffee. I'm writing this from the perspective of someone who had all of those symptoms when I drank coffee, which led me to give up drinking it for five long, dark years. But being a biohacker, I dug into the research and discovered that not all coffee is the same. I drink 1-2 cups of [Bulletproof Coffee](#) every day and experience the health benefits of coffee without the problems coffee allegedly causes.

That said, there are some [valid concerns](#) with coffee.

Many of the studies that "prove" coffee is bad for you are based on epidemiological data, but there is also epidemiological data in favor of coffee consumption, as well as lots of clinical research. It is my belief that most studies showing coffee is unhealthy do not control for the production process behind the coffee. People don't realize it, but different processing methods introduce radically different amounts of potent toxins into the coffee depending on how much and how long the coffee is allowed to ferment and on how damaged the beans were before roasting. That's why I explain [how to find good coffee in your city](#). It's that simple: good coffee = good performance. Bad coffee = bad health.

Observational data doesn't *prove* coffee is good for you, but it's a nice place to start. We will cover some clinical trials at the end of this article that *do* prove coffee is good for you.

## The Epidemiological Data In Favor of Coffee

==> Long term coffee consumption is associated with a [lower risk of type-2 diabetes](#). The more coffee you drink, the [lower the risk](#).

==> Coffee consumption is associated with [increased insulin sensitivity and improved beta cell function](#).

==> People who drink six or more cups of coffee per day are [50 percent less likely to develop diabetes](#).

==> In a [study](#) on 47,911 Americans, there was a correlation between coffee drinking and a lower risk of prostate cancer. Men who consumed the most coffee (six or more cups daily) had a 20% lower risk of developing any form of prostate cancer.

==> Coffee drinking was even more beneficial for severe prostate cancer. Men who drank the most coffee had a 60% lower risk of dying from prostate cancer. Drinking one to three cups of coffee per day was associated with a 30% lower risk of lethal prostate cancer.

==> Women who drink coffee are [less likely to suffer memory loss later in life](#).

==> A Scandinavian [study](#) found people who drink boiled coffee (similar to Turkish or French Press) are less likely to get cancer. (although Bulletproof coffee is paper filtered to remove cafestol, a potent LDL stimulator.)

==> Women who drink coffee are [less likely to develop depression](#).

==> Women who drink coffee are [less likely to get a stroke](#).

==> Women who drink coffee are [less likely to develop breast cancer](#). The difference is small when adjusted for other factors, but statistically significant.

==> In one of the [largest reviews to date](#), coffee drinkers had a slightly less chance of overall death.

There's a fair amount of observational data in support of drinking coffee. Who cares? We don't want to fall into the same trap as high-carb, low fat extremists like Ancel Keys and T. Colin Campbell who torture data until it tells the story they choose. Correlation does not prove causation, but it does create some questions. Like this one:

What can coffee do for you?

Here are five of the reasons I drink coffee for my health and performance, and why you should consider it too;

## 1. Better Memory Recall

When Bulletproof practitioner Andrew took the LSAT, his preferred source of brain fuel was a cup of [Bulletproof Coffee](#). The healthy fats, nutrients, a small amount of added dextrose (and a little caffeine-amplifying [Aniracetam](#)) along with a [few other techniques](#) allowed him to do far better than he would have otherwise.

Besides giving him a burst of energy, caffeine improved his ability to remember the answers. A [study](#) in 2005 showed caffeine could improve short term memory recall. The study didn't use coffee per se, but caffeine tablets, which isolates only one of the complex chemicals in coffee. As long as you aren't drinking decaf (I'm going to cover that topic as well), coffee ought to improve your mental skills before a test or job interview as long as you don't have so much you get overstimulated.

I've written about the cognitive benefits of coffee [before](#). In one [study](#), coffee was able to produce the same mental state as Chi Gong exercises. That's way cool!

Be careful however, one [study](#) showed that chronic [high dose](#) caffeine caused decrease blood flow to the brain. That's why I drink one cup of coffee per day on average, or two on very long days. Smaller doses of coffee on a daily basis are beneficial. Large doses all the time are detrimental.

## 2. High Antioxidant Content

For Americans, coffee is the [number one source of antioxidants](#). This won't be true if you're eating [The Bulletproof Diet](#), but it's important to remember when you think of the average American. If you're eating a Standard American Diet, coffee might be one of your top health foods.

Coffee contains numerous antioxidants, but something many people don't know is that caffeine is an antioxidant. The caffeine in cocoa, tea, and coffee is a powerful antioxidant that can even [protect against Alzheimer's](#).

Roasted coffee beans have a [higher antioxidant content](#), which is why we use a special roasting process for [Bulletproof Upgraded Coffee Beans](#).

## 3. Enhanced Insulin Sensitivity (sort of)

Some [studies](#) indicate caffeine can cause insulin resistance. However, the [research is conflicting](#). An eight week [study](#) in September of 2011 showed no difference between caffeinated coffee, decaf coffee, and water on insulin resistance, insulin secretion, or glucose tolerance. In another [study](#), coffee consumption improved glycemia markers including insulin sensitivity and glucose tolerance.

I'm going to cover this topic in more detail soon, but there's no reason to stop drinking coffee over fears of insulin resistance. Reasonable amounts of caffeine can improve insulin sensitivity and other markers of glucose tolerance. In general, people who drink moderate amounts of caffeine have [better insulin sensitivity](#).

Coffee is also a rich source of polyphenols which [improve carbohydrate metabolism](#).

## 4. Rapid Fat Loss

Coffee is a [potent thermogenic](#). It increases metabolic rate and stimulates movement. It also increases fat mobilization and oxidation which promotes fat loss. If you pair this with our [MCT oil](#) (another thermogenic) and the nutrients from grass-fed butter in Bulletproof Coffee, it's no wonder one of my clients was able to lose 75 pounds in 75 days.

## 5. Improved Performance

Caffeine is an ergogenic aid, meaning it increases power output. This is true for both [aerobic](#) and [anaerobic](#) exercise. If taken before a workout, caffeine could improve your performance and give you an edge over your opponents.

There is some [evidence](#) high doses of caffeine can reduce blood flow to the heart during exercise. The mechanisms aren't fully understood, and it was in extremely large doses.

People respond to caffeine in different ways, so be sure to test its effect on yourself. If you consume reasonable amounts, it will likely improve your performance. The bottom line is, as always, did you go faster or not?

## Summary

Coffee has received an undeserved reputation as being unhealthy, when in reality it improves brain function, scavenges free radicals, and decreases your risk of disease. It's a rich source of polyphenols and antioxidants. The caffeine in coffee can increase memory and improve glucose tolerance, fat loss, and exercise performance.

High amounts of caffeine can cause problems such as decreased insulin sensitivity, impaired brain function, jitters, nervousness, stomach discomfort, and decreased exercise performance. As with any drug, you can overdose. Moderate amounts of coffee will do nothing but good for most people:

1. Coffee can improve memory and [brain function](#).
2. Coffee is an excellent source of antioxidants.
3. Coffee can improve insulin sensitivity.
4. Coffee can accelerate fat loss.
5. Coffee can improve exercise performance.

## My Recommendations

1. Regular coffee consumption is beneficial as long as the coffee is [mycotoxin](#)-free.
2. If you need coffee to function – you're addicted and need to find a better solution.
3. One cup a day is perfect.
4. Two cups a day is okay.
5. Three cups a day is the maximum.
6. Use this [guide](#) to make sure your coffee isn't toxic. Or watch [this video](#).
7. If you want to get the most out of your coffee, read [this and make Bulletproof Coffee](#).

IMPORTANT: You should never drink decaf coffee. Besides its lower antioxidant value (and horrible taste), decaf is guaranteed to contain [mycotoxins](#) or other bad stuff. You'll learn more about those in another article.

If you consume reasonable amounts of coffee on a regular basis, you can get all of the benefits with none of the side effects.

Please feel free to tweet this article if you're tired of people giving you crap for your daily cup of coffee!

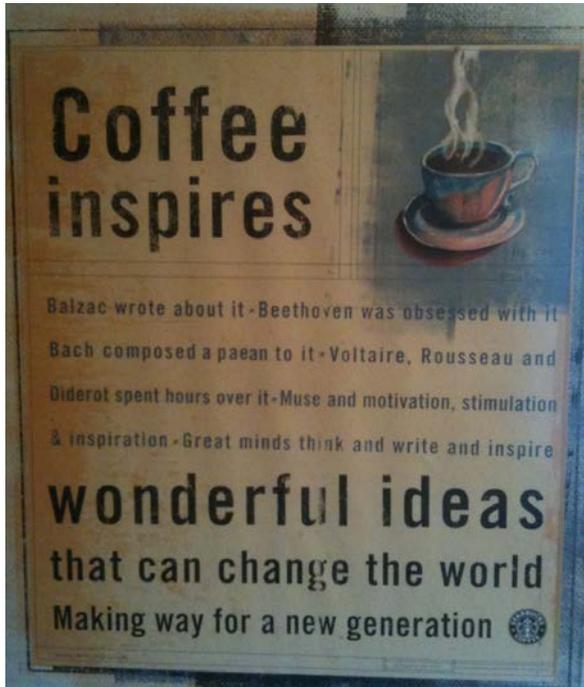
Update: The Washington Post [just ran another article highlighting the benefits of coffee](#). It's worth a read.

## 3 STEPS TO FINDING THE HIGHEST PERFORMANCE COFFEE IN YOUR CITY

Source: Dave Asprey, The Bulletproof Executive.

Online: <http://www.bulletproofexec.com/3-steps-to-finding-the-highest-performance-coffee-in-your-city>

If you want to stay bulletproof while partaking of one of life's greatest pleasures, coffee, it's really important to learn how to avoid getting a cupful of potent neuroactive [mycotoxins](#) along with your caffeine, theobromine, and theophylline.



### Here are the steps to find great coffee in any city.

This came about because one of our readers just wrote and said:

*Just found your site via a mention HackerNews. I Googled "Bulletproof Coffee" and that URL was ranking #1. Do you have any suggestions for where I can buy arabaic wet process coffee online? I went to a high end grocery store in Austin that has at least 50+ coffees and they looked at me like I had a third arm when I asked. Thanks, Jeremy*

The easiest solution is to just grow a third arm, so when you ask about coffee at grocery stores, you can be confident that's why you get those looks. But if [DIY-](#)

[biology](#) isn't your thing, there is still hope.

I used to deal with finding stellar coffee in strange places because I'm often in 3 different cities in a single week to speak at conferences, so productivity and focus is massively important. I need to be [full of energy](#), bulletproofed, and not waste time searching for coffee. The difference in productivity between a bad cup of coffee and a stellar one is so important that I don't mess around. Drinking nasty Starbucks and feeling awful afterwards isn't really an option for me before I go on stage. Plus, coffee toxins can kill you ([video about avoiding mycotoxins](#)).

I often just bring a Hario V60 pour-over, a few spare filters, and a Nalgene full of high-end ground coffee from [Drumroaster Coffee](#), which is honestly the best coffee in all of Canada. Then it takes me 3 minutes to make coffee in my hotel, saving me time vs. waiting in line for bad coffee in a hotel lobby.

[Hario V60 Coffee Dripper – How to guide](#) from [Artazza](#) on [Vimeo](#).

But how did I know Drumroaster was good? To illustrate, I'll walk you through my thought process as I find the best coffee in Austin for Jeremy. I've used this process to find top rated, low toxin coffee in cities around the US and Canada. Here is what I did:

**Step 1:** Google "Best coffee in Austin" Yelp usually comes up with a short list. You can ignore most individual reviews raving about coffee because the average person wouldn't know a great cup of coffee from an average one, so they always use sugar and go by cool the décor and baristas are. However, the aggregate Yelp ranking is pretty useful.

**Step 2:** Visit the top ranked sites of the coffee places from Yelp/Google If a coffee snob who clearly knows his coffee, has commented, you're on the right track. The best tasting coffee is often the coffee that will make you perform best, but not always.

**Step 3:** Look for coffee houses that offer single-origin coffee and do not rely on blended coffee, along with other markers of quality coffee, such as coffee houses that roast their own beans or hire large numbers of people with tattoos and piercings. In this case, the top 3 were:

[Summermoon Coffee Bar](#) These guys look promising. Their site says “artisan” and they wood-roast their organic fair trade coffee. But when I look at their online store, all the beans are blends. That means they take some beans from here, some beans from there, and mix them until they taste ok. Blending is something you do when you don’t have 100% great beans. It dramatically increases your chances of getting some beans that aren’t as close to perfect as possible.

I’d pass on Summermoon unless I was ok with feeling just ok, not bulletproof. Their coffee probably tastes great. The ambience looks great. I haven’t been there. But from the data online, the **odds** are that this coffee isn’t going to make you perform as well as some other coffees that are not blended.

[Caffé Medici](#) One reviewer said, *“By far, the best cup of coffee I had while in Austin. In fact, one of the best cups of coffee I’ve ever had, period. Blue Bottle, LA Mill and Caffè Calabria included...”* That means this is probably a good coffee place. The website says they focus on equipment extensively (another good sign). When I read “Our espresso machine is a La Marzocco FB 80. We pull 1.5-2 oz of espresso at 24 to 26 seconds in 18 gram baskets,” I feel slightly giddy. I’m a coffee hacker too.

But then, that giddiness is shattered by the fact that they serve a blend for their espresso and their French Press. The very best coffee is made by modifying the roast and brewing process to fit the beans, not by mixing beans together. (That is a religious statement to some; to me it’s all about reducing fusarium-infected beans so I can perform that much better.)

[Third Roast Coffee](#) The top Yelp comment for Third Roast said, *“Everything else aside (and there is a lot!), Third Coast has the best coffee in Austin. They have a dizzying variety of single origins and blends, every one of which is delicious...”* When you log in to their website, you can track the origin of your coffee lot number on the home page. They buy their coffee green and roast it themselves. They actually know the people who grew their beans, and offer Central American varieties.

The website doesn’t say how their coffee is processed, but I’d bet that they have a variety of methods. If you called them or showed up and asked for their cleanest, wet process (or washed process), high altitude Central American beans, they wouldn’t look at you like you had a third arm at all. They might instead look at you like they would marry you on the spot, because you were an educated coffee drinker who cared about their craft.

### **And the winner is...**

Site unseen, if I was in Austin, I’d head to Third Roast Coffee to get beans to make [Bulletproof Coffee](#). It doesn’t look like they serve coffee there, which isn’t a problem since Jeremy is looking for a bean source, not a place to drink coffee.

If I was going to drink coffee at a coffee house in Austin, I’d find one that used Third Roast Coffee beans, or I’d try Summermoon for the novelty of the wood fired roasting or Caffè Medici – but I’d be taking a small risk of being less bulletproof if their beans were processed by letting them mold in the sun (known as natural process).

In San Francisco, I head to [Four Barrel](#) NOT [Blue Bottle](#), because, while Blue Bottle has the most fantastic brewing setup ever and is worth seeing just for that, their coffee is mostly blended or natural process, and I can feel the difference in performance from it. Four Barrel is single origin and usually has wet process beans. [Ritual Roasters](#) is a good choice too. In the South Bay, [Red Rock Coffee](#) in Mountain View stocks and brews Four Barrel beans.

At the end of the day, to be bulletproof as you can be, you need to decide to either not drink coffee at all or to drink only really, really good coffee.

## WHAT DR. MERCOLA DIDN'T SAY ABOUT COFFEE, BRAINS, AND MUSCLE

Source: Dave Asprey, The Bulletproof Executive.

Online: <http://www.bulletproofexec.com/what-dr-mercola-didnt-say-about-coffee-brains-and-muscle-video/>



For years, I've been using carefully selected and dosed coffee as a part of my performance-enhancement program that lets me stay lean, muscular, and fully energized on 5 hours of sleep and very little exercise. Aside from Tim Ferriss of Four Hour Body, me, and a few hard-core bodybuilder sites, most everyone seems to think caffeine is at best risky but most likely almost as bad as alcohol. Even most the members of the anti-aging group I run, [Smart Life Forum](#), shake their heads in dismay when I mention the joys of butter and MCT-enhanced [Bulletproof Coffee](#) made with [Upgraded Coffee](#) beans.

So it was a pleasure to see Ori Hofmekler talk

about coffee. He's a fellow biohacker, nutrition expert, and author of [The Warrior Diet](#), [The Anti-Estrogenic Diet](#), [Maximum Muscle Minimum Fat](#). I'm particularly interested in his upcoming book called *Unlocking the Muscle Gene* because [my own book](#) about using nutrition and stress to change your (and your baby's) genes is coming out this year.

Better yet, Dr. Mercola is helping Ori to get his message out. Mercola.com is a high-volume site, and it's about time that people stopped screwing up their metabolisms with evil things like decaf. I don't know if this means that Dr. Mercola has reversed his [long-standing belief that coffee is bad for you](#).

### **But back to the coffee. Here's some of what coffee does:**

- Increases a growth factor called Brain-Derived Neurotrophic Factor (BDNF) which [protects your brain](#) cells. (I also take this [liposomal glutathione](#) to help BDNF work)
- Increase metabolism
- Reduce muscle soreness
- Make you more focused and productive (for some tasks)

### **What Dr. Mercola and Ori didn't say about coffee**

I didn't quite agree when Ori mentioned that decaf coffee was nutritionally devoid of anything useful, because diterpenes survive water processing, and some chlorogenic acid does too. He's dead right that coffee that doesn't smell good is not healthy. But the reasons he provided, oxidized oils and pesticides, are a small part of the problem.

The real reason that cheap coffee and old coffee are bad for you is that they harbor some particularly toxic molds. [Those molds](#) that form when green coffee is stored are tied to cancer, heart disease, high LDL/VLDL cholesterol, and hormone irregularities. Here is a great talk on the problem of mold in food (including coffee) that I gave at a recent anti-aging event:



Source: <http://vimeo.com/26421404#at=0>

Roasting kills the mold but doesn't destroy the mold toxins already present in the beans.

It is these molds that play a major role in whether your cup of coffee will increase or decrease your health.

## **How do you pick a great cup of coffee that will make you perform better, feel better, and live longer?**

### **Here's the Bulletproof Executive way.**

- Avoid almost all decaf. Caffeine protects the beans from more mold and most decaffeination either introduces new organic toxins or contributes to mold.
- Never choose robusta (cheap, instant) beans. These are moldier, which is why they are higher in caffeine too (as a defense against mold on the bush). **Drink arabica.**
- Insist on Bulletproof Process coffee that is tested to be free of histamines and mold toxins like [Upgraded Coffee](#). The next best, but still sometimes mold-contaminated, is wet process beans. Many higher end African coffees use natural process, which means they dry the beans in the sun, giving them time to mold. Wet process coffee uses far less time and rinses the beans, making for lower-toxin coffee.
- Aim for Central American varieties grown at higher elevations where mold is scarce. (Bonus points if they're blessed by shamans, one-armed monks...)
- Single estate is better than major brands. If it is sold by a national coffee house, its mixed with countless other sources, and you can guarantee that some toxic mold made it into the coffee.
- If you can't find good beans, order an Americano because steam helps to break down the toxins.

**The easier way is to say, "Give me the most expensive Central American, wet-process (or washed) beans you have please."**

Beans chosen this way can help to provide antioxidants and fight cancer. But the biggest reason to try this is that the buzz is noticeable cleaner and better, you'll perform better, and, as the CEO of a tech startup recently told me after I shared a cup of my favorite brew roasted by [4 Barrel Coffee](#), served by [Red Rock Coffee](#) in Mountain View, CA. "This is the best cup of coffee I've had in my entire life!"

## **WHY BAD COFFEE MAKES YOU WEAK**

Source: Dave Asprey, The Bulletproof Executive.

Online: <http://www.bulletproofexec.com/why-bad-coffee-makes-you-weak>



## Good coffee is *magic*.

It can [promote brain function, memory, and energy levels](#). It can serve as a [massive source of antioxidants](#) and is associated with all sorts of [positive health outcomes](#). Coffee can even [effect your body and mind like Chi Gong exercises](#). It can even help you build muscle without exercising. However, the wrong coffee can sap your health and hurt your performance.

When I started using espresso in college, I got the highest calculus grades of my life. However, I also had severe joint pain, jitters, anxiety, and (although I didn't know it) I was about to get brain fog. Even bad

coffee was an improvement for me then. But after I biohacked myself, I got used to feeling great.

The only problem is that I didn't feel so great when I drink coffee anymore. Sure, I would get a caffeine driven burst of energy but then I would feel edgy, cranky, and often my joint pain would return. And when the coffee wore off, I was useless mentally.

I thought the negative effects were simply a compromise I would have to live with in order to enjoy coffee. Strangely, I didn't get these problems with every type of coffee. When I traveled to Europe, I could more often enjoy coffee without any of the negative side effects. So I gave up coffee for 5 very long years.

After years of researching ways I could return to the hot, bitter arms of my great love (coffee, ahem), I finally uncovered the secret to my acute onset coffee malaise.

## Why Bad Coffee Is Bad For You

Sometimes your taste buds know best.

You don't like the taste of bad coffee for the same reason you don't like the taste of gasoline: your body is telling you **it's toxic**.

The data on coffee consumption goes back and forth. Some studies show health benefits, while others show negative outcomes. This might seem confusing, but the reason is simple: bad coffee is bad for you, and scientists suck at differentiating *types* of coffee when they run studies on coffee.

Studies on coffee and health don't control for processing methods or the source of the beans. This means the coffee beans are almost always contaminated with [mycotoxins](#). [Mycotoxins](#) are damaging compounds created by molds which grow on coffee beans (among other things). These compounds cause all sorts of health problems like [cardiomyopathy](#), [cancer](#), [hypertension](#), [kidney disease](#), and even [brain damage](#). They also make your coffee taste bitter, like it needs sugar.

Some types of coffee have more mycotoxins than others, which is why you see some studies showing a benefit to drinking coffee, and others showing negative health outcomes. The problem isn't coffee

per se, it's the mold on your coffee. It even can vary by individual batch, especially for large coffee producers. (like ones with big ugly green logos on every street corner)

Mycotoxins are in almost all low quality brands of coffee. **One study showed that 91.7% of green coffee beans were contaminated with mold.** This is before they were processed, which allows even more mold to grow. Another [study](#) showed 52% of green coffee beans and almost 50 percent of brewed coffees are moldy. Coffee is easily one of the largest sources of mycotoxins in the food supply.

As the researchers concluded,

“...regular coffee consumption may contribute to exposure of humans to OA (ochratoxin).”

[Ochratoxin A](#) is bad news. It hits your kidneys, causes cancer, and messes up your immune system. Trust me, I know. I'm an ochratoxin canary, having lived in a house with ochratoxin-generating toxic mold that caused some serious damage to my immune function and autonomic nervous system. (If I can be Bulletproof with all that going on, so can you!)

### **Coffee is only bad for you if it serves as a delivery platform for mold.**

Cheaper coffee varieties cost less because they use poor quality beans and they allow a higher percentage of damaged (moldy) beans, then companies process them with techniques that add flavor but amplify the amount of toxins.

“Blends” of coffee are bad news because they mix cheap beans from multiple areas, almost guaranteeing that you'll get some moldy ones. This is why its important to buy your coffee from a single estate, as outlined in [the process for finding the highest performance coffee in your city](#). If you drink mass market coffee, the beans in your grinder may come from several countries. It's the same logic that tells you not to eat a hamburger made from the meat of 10,000 animals.

Decaf coffee is even worse. Caffeine is a natural anti-insect and antifungal defense mechanism for the plant. It deters mold and other organisms from growing on the beans. Mold is everywhere, but caffeine helps prevent it from growing on the beans while they're in storage. When you remove the caffeine, your beans are defenseless. **Decaf coffee is higher in both [aflatoxin](#) and [ochratoxin](#). This is one of the reasons decaf tastes like camel sweat.**

You might think the more expensive types of coffee will be good for you, but this isn't the case. Arabica beans are typically less moldy than robusta beans. (Robusta is what you find in Folgers and cheap coffee.) But even expensive types of coffee are usually processed with methods that allow mold to grow.

**The natural process method is common in African coffee.** This allows the beans to sit outside where they can collect bird feces and other debris. **They mold.** One of my favorite high end coffee roasters, Carsen at [Drumroaster](#) Coffee, describes natural process beans as, “Delicious, flavorful, and psychedelic” because they affect how his brain works.

Wet process is not much better. Here, coffee growers toss the beans into giant vats and add water, then let the beans spoil for a while (ferment) so it's easier to remove the outer parts of the bean. What grows on each batch of beans is unpredictable, but it usually makes more toxins.

Health "experts" enjoy vilifying coffee almost as much as saturated fat. The evidence is only conflicting if you don't look at the whole picture. The truth is that the right kind of coffee is a health food.

There is a [large body of data](#) showing people who drink coffee are healthier and live higher performance lives. [Drinking coffee lowers your risk of stroke and diabetes](#). Coffee improves focus, memory recall, and exercise performance. Its also the largest source of antioxidants in the Standard American Diet. Coffee is a potent thermogenic which stimulates fat loss. In an upcoming post, I'll explain how coffee grows muscles too.

The [right coffee](#) is good for you. Mold is bad for you. Never mix the two.

Life is simply better when your day starts with [Bulletproof Coffee](#) made with grass-fed butter, especially when you are using properly processed beans. That's why I created Bulletproof [Upgraded Coffee](#) beans!

## THE PROBLEM WITH COFFEE

Source: ALL WOMEN NEED TO READ THIS CHAPTER By Tim O'Shea

[http://www.thedoctorwithin.com/index\\_fr.php?page=articles/all\\_women.php](http://www.thedoctorwithin.com/index_fr.php?page=articles/all_women.php)

Most people realize that coffee has no real food value, but they figure it won't kill them. And the idea of getting going in the morning without coffee would be unthinkable after all these years. Many would probably choose death over withdrawal. You've might even know someone like that.

So why are we talking about coffee in a chapter about HRT? Simple: it's in the loop. Both are locked into the biochemical choreography of the swirling hormones which blink in and out of existence every second. Adrenals, thyroid, and ovaries are not three separate and independent entities. They're more like three instruments in an orchestra, or three ingredients in a cake, or three members of a yacht crew: change any one and the whole outcome is threatened.

**Coffee is an adrenal stimulator.** So are white sugar, a leopard in your living room, and the morning commute. The adrenal hormones trigger the fight-or-flight thing, a leftover from the earlier days of our species' evolution. Stress. Like from modern, empty foods, toxic exposure, and emotional worry - you know the list - which send constant messages to the adrenal glands. The message is : either prepare me for battle or get me out of here. Now if you have a friend who calls you on the phone fifty times a day because there's an emergency, pretty soon you won't get so worked up about the next

call. Same with the adrenals. Only it's probably closer to several hundred calls a day, if you're in Silicon Valley, or any metropolitan American city. After awhile the adrenal glands get fried, depleted, out of gas, used up.

As the most evolved system in the universe, the body's got back-up plans for everything. And the first of the Plan B's for spent adrenal glands is to convert another hormone into adrenal hormone, thereby taking the burden off the adrenals themselves. Guess which hormone is first on the list for this understudy duty? Right: progesterone. Remember, progesterone is the precursor, or basic raw material, for all the steroid hormones (see above chart).

So for many women who are really stressed and have been for years, they are relying in large measure upon alternative sources of adrenal hormones. **With progesterone being the first of the volunteers to be changed into adrenal hormones, this leaves little or no progesterone left to perform its primary function, which was what? Right again, to maintain the dynamic balance with estrogen. The result: further promotion of estrogen dominance, which you know all about, from the above pages.**

Sumption, the nutritionist cited above, lists the **B-complex vitamins that are depleted by coffee - the same ones that are depleted by estrogen.** Without B vitamins, the body is drained of energy.

**Coffee does not give you energy; coffee gives you the illusion of energy.** Coffee actually drains the body of energy and makes you more tired, because of vitamin and adrenal depletion. What is the number one symptom that the most people have? Give up? Fatigue is the what more Americans have than any other daily complaint. Many people don't sleep at night as much as collapse from simple exhaustion. A sign of this is when you wake up in the morning exhausted, not refreshed. The body is tired from all that repair work it had to do while you were asleep. There is no feeling of waking refreshed and renewed. So what do we do, to crank it up one more time? Coffee. Decaf? I don't think so. It's not the taste that you're addicted to. Decaf causes the same overwrought cycle of fatigue in a different way. Any coffee is a metabolic burden that has to be dealt with. It contributes nothing to nutrition - no vitamins, no minerals, no enzymes. **Beats up the adrenals, uses up progesterone, promotes estrogen dominance.** And now you know what that means.

**There are at least two different ways that coffee contributes to osteoporosis:**

- promotes estrogen dominance
- raises the acidity in the blood

We've already seen how estrogen dominance leads to osteoporosis. **With acidifying of the blood, calcium is pulled from bones** and teeth in order to keep the blood from becoming too acid. This is called **buffering** - a basic survival mechanism.

**The increased rate of hip fractures with coffee intake was clearly shown in a 1995 study in, *New England J Med (Cummings)* Another study in *American Journal of Clinical Nutrition* of over 85,000 nurses showed three times the rate of hip fractures in the group who drank the most coffee. Promotion of osteoporosis from coffee is not just a theory.**

## COFFEE CAUSES INFLAMMATION MARKERS INCREASE

Metabolic Syndrome

The Twenty-First Century Epidemic By Steven V. Joyal, MD

Source: Life Extension Magazine July 2006: [http://search.lef.org/cgi-src-](http://search.lef.org/cgi-src-bin/MsmGo.exe?grab_id=0&page_id=4754&query=coffee&hiword=COFFEA%20COFFEEES%20COFFEY%20coffee)

[bin/MsmGo.exe?grab\\_id=0&page\\_id=4754&query=coffee&hiword=COFFEA%20COFFEEES%20COFFEY%20coffee](http://search.lef.org/cgi-src-bin/MsmGo.exe?grab_id=0&page_id=4754&query=coffee&hiword=COFFEA%20COFFEEES%20COFFEY%20coffee)

Coffee can cause insomnia and may induce high blood pressure in some people, largely due to its caffeine content. Moreover, results of the 2004 ATTICA study showed that coffee consumption dramatically increases markers of inflammation like **C-reactive protein, interleukin-6, and tumor necrosis factor-alpha**.<sup>54</sup>

54. Zampelas A, Panagiotakos DB, Pitsavos C, Chrysohoou C, Stefanadis C. Associations between coffee consumption and inflammatory markers in healthy persons: the ATTICA study. Am J Clin Nutr. 2004 Oct;80(4):862-7.

## COFFEE: HOW BAD IS IT REALLY?

By Dr. Joseph Mercola with Rachael Droege

Source: <http://www.mercola.com/2003/dec/10/coffee.htm>

Although coffee is one of the most heavily researched commodities and studies have spanned decades, there is still much controversy surrounding its ill effects, or lack thereof, on health. Study after study is performed--often with conflicting results--and it seems there is always a new study out to discount the last one. **Still, the average American adult consumes over 10 pounds of coffee per year**, which amounts to a total of 2.4 billion pounds a year in the United States alone.

It appears that drinking coffee **may interfere with your body's ability to keep homocysteine and cholesterol levels in check, most likely by inhibiting the action of the vitamins folate, B12 or B6. Coffee has been previously associated with increased risk of stroke and rheumatoid arthritis.** Studies have also shown that caffeine in coffee can raise blood pressure and levels of stress hormones, and if consumed in large quantities it can lead to heart palpitations, jitters and nervousness.

With that said, coffee is clearly not the healthiest liquid to drink--the best choice is pure water--but coffee and caffeine are far less dangerous than [fruit juice](#) or [soda](#). While I do believe that eliminating, or at the very least limiting, coffee should be one of your goals, if you are in the midst of other dietary changes, such as those outlined in my [nutrition plan](#) eliminating coffee can be put toward the bottom of the list, and you should strive to eliminate soda and fruit juice from your beverage list first.

There are, however, some important facets of coffee that you should know before you have your next morning cup.

### Coffee and Pregnant Women

**Pregnant women should NEVER drink coffee.** Caffeine is a stimulant drug that easily passes through the placenta to the developing fetus and is also transferred through breast milk.

**During pregnancy and in infants the half-life of caffeine is increased, which means that it will stay in your body, and your infant's body, longer. Moreover, fetuses have no ability to detoxify caffeine.**

**Research suggests that drinking more than 300 mg of coffee daily, or the equivalent of two to three 8-ounce cups, may increase the risk of miscarriage, birth defects such as cleft palate and low birth weight,** although as I mentioned above I don't believe that ANY amount coffee is safe for pregnant women.

**Even with moderate caffeine intake, when the woman experiences no effects, studies have found changes in both the mother's and the fetal heart rate and blood pressure. Preliminary studies also suggest that drinking four cups of coffee or more per day may put the infant at an increased risk of sudden infant death syndrome (SIDS). Caffeine may also make it more difficult for women to maintain necessary levels of iron and calcium, which are especially important during pregnancy.**

It also appears that coffee consumption is associated with increased estrogen levels, which means an increased risk of breast and endometrial cancer.

Coffee also has the issue of pesticide contamination, which is [particularly harmful during pregnancy](#). You can read more about this issue below.

## **Coffee and Pesticides**

Coffee is usually not grown in the United States and we therefore have no control over how many pesticides are sprayed on coffee crops. As such, coffee is a heavily sprayed crop, so drinking coffee is likely to expose you to a dose of pesticides with each cup.

Pesticides have been associated with a number of health problems such as:

- Prostate cancer and [other cancers](#)
- [Parkinson's Disease](#)
- [Miscarriages](#)

If you choose to drink coffee, drinking organic coffee might reduce or eliminate the exposure to toxic herbicides, pesticides and fertilizers. The only drawback is that the countries where coffee is produced probably have less control and monitoring for compliance to organic practices along with pesticide use. Another plus of organic coffee is that you will also be helping to protect the health of the people working in the coffee fields, as you will be helping to reduce their exposure to toxins as well.

## **Avoid Coffee if You Have High Blood Pressure, Insomnia or Anxiety**

Since coffee is a stimulant it will only worsen the symptoms of insomnia and anxiety and should definitely be avoided. People with panic or anxiety disorders may find that they are especially sensitive to caffeine and may find that even a small amount of the stimulant exacerbates their symptoms. Similarly, the caffeine will linger in your body for hours after you drink it, so it may keep you up at night even if you drink it long before bedtime.

For those with high blood pressure, a general rule is that the more caffeine you drink in a day, the higher your blood pressure will be. So if you are already at the higher end of the scales, drinking coffee will only increase your blood pressure further.

## How to Wean Yourself Off Coffee

If you try to stop drinking coffee "cold turkey" you will likely experience symptoms of withdrawal that can include severe headache, fatigue and depression. This can be avoided by cutting down the amount you drink gradually over a period of days or even weeks. It's also important to drink plenty of water during the process in order to keep your body well hydrated.

If you find that you miss your morning coffee-drinking ritual, replace it with a new tradition that will also boost your health and energy. Vegetable juice makes a great coffee replacement, and if you're in a hurry you can try [Living Fuel Rx Superfood](#). Both options will give you the energy boost that you're looking for in the morning without the negative effects of caffeine.

While you're in the process of weaning yourself off coffee, here are some tips to reduce the chance of harmful effects until you can completely eliminate it:

- **Use organic coffee.** As mentioned above, coffee is a heavily sprayed crop, so drinking organic coffee might reduce or eliminate your exposure to toxic herbicides, pesticides and fertilizers. It will also help the people working in the coffee fields, as they will be exposed to fewer pesticides as well.
- **Try "Swiss Water Process" decaf.** If you are going to drink decaffeinated coffee, be sure that it uses a non-chemical based method of decaffeination. The "Swiss Water Process" is a patented method and is the best choice. Most of the major brands are chemically decaffeinated, even if it says "naturally decaffeinated" right on the container. If you are unsure of the methods, contact the manufacturer.
- **Avoid sugar and milk.** These are actually much worse for you than the coffee itself. Don't compound the detrimental health effects by adding [milk](#) or [sugar](#) to your coffee.
- **Only use unbleached filters.** If you use a "drip" coffee maker, be sure to use non-bleached filters. The bright white ones, which most people use, are chlorine bleached and some of this chlorine will be extracted from the filter during the brewing process.

## ADDICTED TO COFFEE? YOU MAY BE DOPAMINE DEFICIENT

Source: Sunday, July 08, 2012 by: PF Louis, [http://www.naturalnews.com/036412\\_coffee\\_dopamine\\_caffeine.html](http://www.naturalnews.com/036412_coffee_dopamine_caffeine.html)

Many of us depend on an early morning "Jo" to get us on the go. Some of us need refills as the day progresses.

**Still others use coffee to get over depression or anxiety, even though caffeine can create more fight or flight hormones and tax our adrenal glands by pumping us with adrenaline.** The adrenaline rushes lead to more retention of cortisol, leading to a vicious cycle of more stress and anxiety.

Many of us may have to look into our coffee drinking habits to determine whether to decrease consumption or quit altogether, even with the threat of withdrawal symptoms.

Although caffeine is in some foods and beverages, for example chocolate and tea, the bulk of our caffeine consumption is carried by coffee.

The first thing to consider is whether you can do without. If not, there is some level of addiction. There is a way to ease caffeine withdrawal mentioned later in this article.

## **How coffee elevates our moods and gets us going**

**Caffeine is a naturally occurring chemical stimulant called trimethylxanthine. It can be addictive and debilitating as well as helpful, as both Bach and Beethoven, heavy coffee drinkers, would attest.**

**Caffeine stimulates the brain to produce the neurotransmitter dopamine** by occupying the brain's adenosine receptors. Adenosine is what helps us feel like sleeping, but the adenosine receptors don't discriminate between adenosine and caffeine.

**Dopamine elevates our moods to make us feel better and stave off depression, which is why there is so much coffee consumption in areas that lack sunshine for extended periods, such as the USA Pacific Northwest and Scandinavia.** Dopamine also helps create motivation and contributes toward conscious body motion.

Some research even points to coffee drinkers having fewer problems with depression and Alzheimer's disease than non-coffee drinkers. While feeling better from the dopamine, the caffeine also increases the brain's activity and neuron firing.

This alerts the pituitary gland to release hormones that signal the adrenal glands to produce adrenaline (aka epinephrine) for "fight or flight." The adrenaline rush makes you more alert.

Adrenaline injections are sometimes administered to help overcome extreme breathing problems or cardiac issues. Caffeine can help get over an asthma attack by elevating one's mood, increasing heart rate, and dilating bronchial passages.

## **Coffee's adverse effects and kicking the habit**

But as the adrenaline wears off toward a crash, cortisol slowly builds up. If this cycle is repeated often enough, the cortisol builds up and creates the same effects as chronic stress: Fatigue, anxiety, nervousness, irritability, and lowered immunity.

A recipe for disaster is working a stressful job and drinking lots of coffee to cope with it! Adrenaline rushes can be addictive, just ask any gambler or sports nut.

But it appears dopamine's mood elevation may be the hook that makes it hard to kick caffeine and remove the adrenal stress that causes long term negative health effects.

Sometimes the caffeine from drinking coffee habitually can cause gluten intolerance or Celiac disease. Caffeine is a cross reactive substance, meaning it can create gluten intolerance even though it doesn't contain wheat. Ironically, wheat products usually accompany that cup of Jo.

Many experts consider the caffeine cure for dopamine deficiency the most addictive quality of coffee drinking. Getting off caffeine slowly or cold-turkey can create withdrawal symptoms such as headaches, irritability, mild depression, and mental foginess.

Nutritional consultant and author of The Body Ecology Diet, Donna Gates, recommends a naturally sourced non-essential amino acid supplement L-Tyrosine to help you kick the caffeine habit effortlessly. It is a natural precursor to the brain's dopamine production and it helps people be alert.

### Sources for this article include:

<http://thedailylove.com>

<http://science.howstuffworks.com/caffeine.htm>

<http://www.vitaminsdiary.com/nutrients/dopamine.html>

<http://www.gethelpfordepression.info/lowdopamine.aspx>

<http://cortisol.com/quick-facts/#1>

[http://en.wikibooks.org/wiki/Demystifying\\_Depression/The\\_Stress\\_System](http://en.wikibooks.org/wiki/Demystifying_Depression/The_Stress_System)

## COFFEE MAY DAMAGE BLOOD VESSELS

Source: [http://www.mercola.com/2000/sep/17/coffee\\_blood\\_vessels.htm](http://www.mercola.com/2000/sep/17/coffee_blood_vessels.htm)

Drinking coffee has potentially harmful effects on blood vessels, according to new research. Australian researchers presented data linking caffeine consumption with alterations in the aorta, the main artery supplying blood to the body.

- In the study, 18 middle-aged healthy volunteers consumed 250 mg of caffeine (equivalent to 2 or 3 cups of coffee).
- The results showed that caffeine led to ***a loss of aortic elasticity, and raised blood pressure.***

In another study of fifteen healthy volunteers, Swiss researchers measured blood pressure, heart rate and other parameters before and after drinking coffee (triple espresso), decaffeinated triple espresso, getting an intravenous infusion of caffeine, or placebo.

The results showed, for the first time, that coffee drinking results in ***a pronounced blood pressure increase***, although this effect was only apparent in non-habitual coffee drinkers, but not in regular coffee drinkers.

## COFFEE AND YOUR BRAIN / MIND: DOES IT HELP WITH ALERTNESS, LEARNING, CREATIVITY?

Source: *HyperLearning* by David Rainoshek, M.A. Online: <http://www.HyperLearning.Me>



The very aroma of hot coffee brewing stimulates our senses and perks up the neurons in our brain. But does this mean we can use coffee specifically to enhance HyperLearning, and if so, how? In what ways does it benefit short-term memory? Long-term memory? Physical Health?

### ***We will break this section down into:***

Short-Term Memory, Long-Term Memory, Physical Health Effects, and Skillful Use of Coffee

### **Short-Term Memory**

We all know that coffee can be quick pick-me-up, and though long term reliance on caffeine can contribute to imbalances that would ultimately have a negative effect on learning, research shows that when used infrequently, caffeine can offer a boost to our short term memory.

In a study that was presented at an annual meeting of the Radiological Society of North America, researchers demonstrated that caffeine modulates short-term working memory, allowing participants in the study to make correct replies to simple questions about what they had been presented with.

Finally on short-term memory research and coffee, it has been found that while *multitasking* on multiple unrelated items and drinking coffee, mental performance is *diminished*. What does this mean?

Coffee works best for short-term memory when not used everyday, and when you drink it, do so in the context of no distractions so you can focus on the one task at hand. *THEN* you will find coffee helps with information processing, recall, creativity, and mental focus for a good 45 minute burst of learning, research, creativity, or productivity.

## Long-Term Memory

There is mixed research on coffee in the long term. Some studies suggest that it may have benefits and others suppose the opposite. If you are looking for a good place to start finding out more about the long-term effects that coffee can have on cognition, you can start here:

<http://www.sharpbrains.com/blog/2009/10/24/does-coffee-boost-brain-cognitive-functions-over-time/>

## Physical Health Effects

I have a huge file on this topic, which you can access for free here:

[David Rainoshek's Coffee file](#)

The long and short of it is that regular use of coffee **beyond a cup 2-3 days a week** for healthy people who are not pregnant... **is not advisable**. Overuse of coffee to get you going is both a symptom of underlying health conditions (such as low thyroid function, unstable blood sugar, dehydration) and a contributing factor of health challenges (arthritis, hypertension, diabetes, kidney disorders, hypothyroidism, candidiasis, cardiovascular disease).

That being said, in the context of a healthy diet and lifestyle, coffee can be enjoyable and skillfully used to enhance short-term learning.

## Skillful Use of Coffee

For many people reading this book, your Coffee consumption could probably stand to be reduced. The power that a cup a coffee can have to aid you in really focusing on a project with incredible intensity, is greatly diminished by consistent or habitual use.

That said, be aware that the effect of caffeine on brain function is greatest 20 minutes after consuming and dissipates about 45 minutes thereafter. So when you have a specific need to be intensely focused on one task – uninterrupted - for 20 to 35 minutes, a cup of coffee may just do the trick if you are into it.

**That being said, Coffee is not in the lofty category of Green Tea**, which can be had many times a day, every day, with immense benefits, as you will now see.

## Green Tea



This is a miracle superfood that addresses physical, mental, emotional, and spiritual health. Benefit one and you improve all. The research on Green Tea is extensive, and positive in its effects on:

- + Longevity
- + Memory and Learning
- + Weight Control
- + Skin Protection
- + Lowering Cholesterol
- + Managing Diabetes and Blood Glucose Levels
- + Preventing Heart Disease
- + Hypertension
- + Preventing Stroke

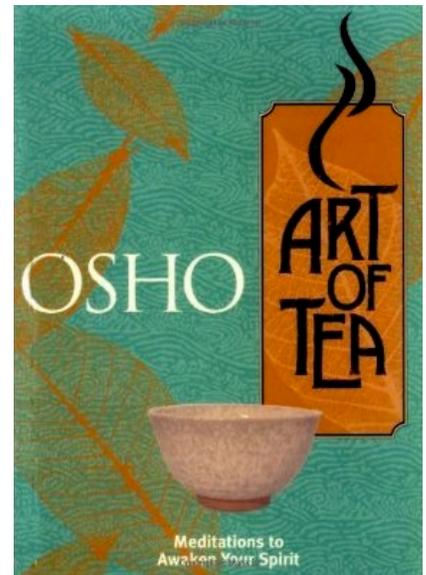
- + Reducing Alzheimer's and Parkinson's Disease
- + Exercise Endurance
- + Oxygenation
- + Quitting Smoking
- + Bone Health
- + Preventing Tooth Decay
- + Reducing Arthritis Inflammation
- + Liver Protection
- + Gastrointestinal Health

A great post on these benefits, with linked research, can be found here:

[Green Tea: The Marvelous Drink](#)

Specifically for **Memory and Learning**, in Japan there was revealed<sup>1</sup> that high green tea drinking maintains cognitive function. Also, green tea consumption may enhance learning and memory ability.<sup>2</sup>

The main components of green tea that are thought to work on improving brain function are polyphenols, epigallocatechin-3-gallate (EGCG), a very strong antioxidant. The high use of oxygen during the metabolic processes leads to the generation of a large number of free radicals (highly reactive molecules). EGCG can penetrate the brain's blood barrier and is able to enact its antioxidative affects on the free radicals that cause damage in the brain.



Preparing and drinking Tea can also be a contemplative act to generate greater equanimity, groundedness, and presence of mind. There is a whole art to it, as illustrated by Osho in his wonderful book, [Art of Tea](#).

**Bottom line:** Green Tea exhibits a positive effect simultaneously, both short- and long-term on multiple aspects of your health and well-being. Enjoy the heck out of it for body and brain health.

**CAFFEINE HABIT ELEVATES HEART RATE, RISK**

Source: [http://www.mercola.com/1998/archive/caffeine\\_elevates\\_heart\\_rate.htm](http://www.mercola.com/1998/archive/caffeine_elevates_heart_rate.htm)

Studies have shown that caffeine elevates both blood pressure (BP) and heart rate, which may come as no surprise to coffee drinkers familiar with the lift that the beverage delivers. The investigators found

<sup>1</sup> Kuriyama S, Hozawa A, Ohmori K, Shimazu T, Matsui T, Ebihara S, Awata S, Nagatomi R, Arai H, Tsuji I. Green tea consumption and cognitive function: the Tsurugaya Project 1. Am J Clin Nutr. 2006 Feb;83(2):355-61.

<sup>2</sup> Kaur T, Pathak CM, Pandhi P, Khanduja KL. Green tea extract and learning, memory, behavior and acetylcholinesterase activity in young and old male rats. Brain Cogn. 2007 Dec 8 [PubMed](#)

that caffeine raised average blood pressure by about 4 points, and pushed average heart rate up by about 3 beats per minute.

**The researchers caution that, if sustained by regular coffee-drinking over a lifetime, these increases in blood pressure and heart rate will elevate the risk of stroke and heart disease.** Many other studies, some including tens of thousands of subjects followed over decades, have failed to establish a conclusive link between even heavy coffee consumption and cardiovascular disease. The investigators explained that those epidemiologic studies have not focused specifically on coffee consumption, and often rely on subjective measurements of caffeine intake.

**Psychosomatic Medicine May/June 1998; 60.**

## **DECAF COFFEE INCREASES RHEUMATOID ARTHRITIS RISK**

Source: [http://www.mercola.com/2001/dec/1/decaf\\_coffee.htm](http://www.mercola.com/2001/dec/1/decaf_coffee.htm)

Decaffeinated coffee consumption is an important yet modifiable risk factor in the development of rheumatoid arthritis. Given the global popularity of coffee, the findings have potential public health implications.

**The researchers followed more than 31,000 women aged 55 to 69 included in the Iowa Women's Health Study from 1986 through 1997.** They tracked the 158 women who developed rheumatoid arthritis during that time period and compared them with women who did not develop the disease.

In rheumatoid arthritis, the immune system attacks the lining of the joints, causing pain, stiffness and inflammation.

**Women drinking four or more cups a day of decaffeinated coffee were at more than twice the risk of developing rheumatoid arthritis.**

However, women drinking regular coffee were not at increased risk, while those drinking more than three cups of tea had a 60% reduced risk of developing the disease.

They found no association with daily caffeine intake or caffeinated coffee use and the risk of developing rheumatoid arthritis. The researchers took into account other possible contributing factors, such as age, smoking history, marital status and the use of hormone replacement therapy. The association persisted even after accounting for other factors that may be associated with rheumatoid arthritis.

In a similar study, researchers evaluated risk factors for developing rheumatoid arthritis among 64,000 black women followed since 1995 as part of the Black Women's Health Study.

**The researchers reported that drinking more than one cup a day of decaffeinated coffee seemed to quadruple the risk of developing rheumatoid arthritis.**

As far as the researchers knew, these were the first observations of decaffeinated coffee having an association with any metabolic disorder. They speculated that the use of industrial solvents in the decaffeination process may play a role. There is accumulating evidence that environmental factors play an important role in the development of rheumatoid arthritis.

**American College of Rheumatology's annual meeting San Francisco November 13, 2001**

## **COFFEE STUDIES SHOWING HARM**

Source: [http://www.mercola.com/2001/dec/1/decaf\\_coffee.htm](http://www.mercola.com/2001/dec/1/decaf_coffee.htm)

- ↘ [Caffeine, postmenopausal estrogen, and risk of Parkinson's disease.](#)
- ↘ [Effects of caffeine on human health.](#)
- ↘ [Effects of coffee and caffeine on fertility, reproduction, lactation, and development. Review of human and animal data.](#)
- ↘ [Caffeine: an update.](#)
- ↘ [Coffee, tea, and caffeine consumption and breast cancer incidence in a cohort of Swedish women.](#)
- ↘ [Effects of caffeine on bone and the calcium economy.](#)
- ↘ [Caffeine and coffee: effects on health and cardiovascular disease.](#)
- ↘ [Caffeine intake and low birth weight: a population-based case-control study.](#)
- ↘ [Selected health and behavioral effects related to the use of caffeine.](#)
- ↘ [Regular caffeine consumption: a balance of adverse and beneficial effects for mood and psychomotor performance.](#)
- ↘ [Caffeine affects cardiovascular and neuroendocrine activation at work and home.](#)
- ↘ [Effect of coffee consumption on intraocular pressure.](#)
- ↘ [Coffee intake and risk of hypertension: the Johns Hopkins precursors study.](#)
- ↘ [Coffee, caffeine and blood pressure: a critical review.](#)
- ↘ [The effect of caffeine on ambulatory blood pressure in hypertensive patients.](#)
- ↘ [A prospective study of coffee drinking and suicide in women.](#)
- ↘ [Coffee consumption and risk of ischaemic heart disease - a settled issue?](#)
- ↘ [Coffee intake and coronary heart disease.](#)
- ↘ [Coffee consumption and cause-specific mortality. Association with age at death and compression of mortality.](#)
- ↘ [Cardiovascular effects of coffee consumption in the aged: the CASTEL epidemiologic study.](#)
- ↘ [Mortality patterns among hypertensives by reported level of caffeine consumption.](#)
- ↘ [Coffee consumption and blood pressure: an Italian study.](#)
- ↘ [Coffee consumption and the incidence of coronary heart disease.](#)
- ↘ [Coffee and health.](#)
- ↘ [Coffee consumption and the risk of coronary heart disease and death.](#)
- ↘ [Coffee and tea consumption in the Scottish Heart Health Study follow up: conflicting relations with coronary risk factors, coronary disease, and all cause mortality.](#)
- ↘ [Coffee consumption and coronary heart disease in women. A ten-year follow-up.](#)

Coffee contains a complex mixture of chemical compounds. Some components, particularly those related to the aroma, are produced during roasting of the green beans. The substances which during "brewing" dissolve in water to form the beverage are classified as nonvolatile taste components (including caffeine, trigonelline, chlorogenic acid, phenolic acids, amino acids, carbohydrates, and

minerals) and volatile aroma components including organic acids, aldehydes, ketones, esters, amines, and mercaptans.

The major physiologically active substance in coffee is the alkaloid caffeine (C<sub>8</sub>H<sub>10</sub>O<sub>2</sub>N<sub>4</sub>H<sub>2</sub>O), also called guaranine or methyltheobromine, which acts as a mild stimulant. Caffeine is a naturally occurring substance found in the leaves, seeds or fruits of more than 60 plants, including coffee and cocoa beans, cola nuts and tea leaves. These are used to make beverages such as coffee, tea and cola drinks, and foods such as chocolate. Caffeine is also contained in many over-the-counter (OTC) and prescription medications. In the United States, most of the population uses caffeine in some form.

A cup of coffee, depending on the strength, may contain some 20-100mg of caffeine. Some types of coffee may also contain significant amounts of the B-vitamin niacin, although this nutrient is of course readily available from other foods as well. Caffeine-containing tablets or medications should not be taken as well as cups of coffee or tea, since this would increase the true dosage. The effects of caffeine vary from person to person; some individuals can drink several cups of coffee in an hour and notice no effects, while others may feel a strong effect after just one serving. Caffeine is prohibited for competition athletes.

People who wish to avoid or minimise caffeine intake (see below) often use decaffeinated coffee, or coffee substitutes. One method of decaffeination is by treating the green beans (before roasting) with chlorinated hydrocarbon solvents; other methods are also used. Important coffee substitutes are chicory, and roasted cereals such as barley; although these are commonly used not as total substitutes but as "extenders". Under U.S. law, the addition of chicory or any other substance must be clearly stated on the label.

## Short-term effects

Caffeine is a drug that has been widely used for centuries. Its main effect is that it is a mild stimulant of the central nervous system (CNS), helping to reduce feelings of drowsiness and fatigue. However, regular use may lead to "habituation"; that is, no net benefit from use but, rather, a negative effect if the drug is not taken.

Besides the above-mentioned CNS stimulant effect, caffeine also temporarily increases heartbeat, increases the blood pressure, and stimulates the action of the lungs; increases basal metabolic rate (BMR), and promotes urine production; and it relaxes smooth muscles, notably the bronchial muscle. Caffeine is used in treating migraine, either alone or in combination. It enhances the action of the ergot alkaloids used for the treatment of this problem, and also increases the potency of analgesics such as aspirin. It can somewhat relieve asthma attacks by dilating the bronchial airways.

Too much caffeine can produce restlessness, nausea, headache, tense muscles, sleep disturbances, and cardiac arrhythmias (irregular heartbeats). Because caffeine increases the production of stomach

acid it may worsen ulcer symptoms or cause acid reflux ("heartburn"). Evening use of caffeine may disrupt sleep and cause insomnia.

Caffeine should be used with caution by people with heart disease and high blood pressure (hypertension), and by those suffering from the eye disease glaucoma. Caffeine medications should generally not be used in children. Many children are already consuming significant amounts of caffeine in drinks and food. In this connection, a nutritional concern is that children may choose fizzy drinks in preference to milk, thus getting "empty" calories at the expense of valuable nutrients.

## **Long-term effects**

As already mentioned, some potentially harmful effects of coffee are recognized, particularly for people who should take few or no stimulants. Beyond this however, scientific studies of the effects of caffeine have in general failed to prove negative effects, although some have produced contradictory conclusions. An individual study may produce interesting results which may suggest fruitful directions for further research, but usually it is only when several independent studies confirm one another, and any contradictory results can be accounted for, that one can have reasonable confidence in the safety of a drug -- particularly an "optional" one like coffee.

Although caffeine does not fall into the class of "addictive" drugs, it may be habit-forming. Some people may experience headache, fatigue, irritability and nervousness when their daily intake of caffeine is quickly and substantially altered.

Such "withdrawal effects" may be responsible for confusing results in some studies. There are many complicating factors in long-term studies. One is the familiar "convergence of risk-factors" (e.g. that coffee-drinkers may be more likely to be smokers). Another is that many of the study subjects may deliberately change (or have previously changed) their consumption habits or behaviour, e.g. in response to discovering that they suffer from hypertension. There may also be significant differences in methods of coffee preparation between study populations, or over long periods of time.

Moderate caffeine consumption during pregnancy is generally considered safe. A study has not found any effect on low birth-weight or incidence of premature births. However, although it has been suggested that caffeine may stimulate milk production, cautious mothers may prefer to avoid such beverages during pregnancy or while breastfeeding.

Furthermore, a large study has not shown any connection of coffee or tea consumption with breast-cancer incidence. Osteoporosis is another condition which particularly affects women. Previous studies have suggested caffeine consumption as a risk-factor, but a recent analysis concludes that such an effect is probably not significant except in conditions of calcium-deficiency, which can be

easily corrected.

There is even some actual positive news. The effect of caffeine on the risk of developing Parkinson's disease, which usually affects older people, has been found to be favourable for men. For women, previous results have been confusing; but a recent study suggests that a crucial factor may be the effect of hormone levels. Often caffeine may have a favourable effect against developing this disease; but when combined with hormone replacement therapy (HRT), it may have a negative one.

One study has found (for women) a strong inverse association between coffee intake and risk of suicide. However, even if confirmed, to determine whether this might be actual cause and effect is, as usual, a much more challenging problem.



## **Caffeine, postmenopausal estrogen, and risk of Parkinson's disease.**

**Sabate J.**

Departments of Nutrition (Drs. Ascherio and Chen), Epidemiology (Drs. Ascherio, Zhang, and Colditz), and Environmental Health (Dr. Speizer), Harvard School of Public Health.

**Neurology 2003 Mar 11;60(5):790-5 Related Articles, Links**

**BACKGROUND:** Men who regularly consume caffeinated drinks have a lower risk of PD than do nondrinkers, but this relation has not been found in women. Because this sex difference could be due to hormonal effects, the authors examined prospectively the risk of PD according to use of postmenopausal hormones and caffeine intake among participants in the Nurses' Health Study. **METHODS:** The study population comprised 77,713 women free of PD, stroke, or cancer at baseline, who were postmenopausal at baseline or reached menopause before the end of the study. During 18 years of follow-up the authors documented 154 cases of PD. **RESULTS:** Overall, the risk of PD was similar in women using hormones and women who never used hormones (relative risk 1.02, 95% CI 0.69 to 1.52). Use of hormones, however, was associated with a reduced risk of PD among women with low caffeine consumption (RR 0.39, 95% CI 0.13 to 1.17), and with increased risk among women with high caffeine consumption (RR 2.44, 95% CI 0.75 to 7.86; p for interaction = 0.01). Among hormone users, women consuming six or more cups of coffee per day had a fourfold higher risk of PD (RR 3.92, 95% CI 1.49 to 10.34; p = 0.006) than did women who never drink coffee. **CONCLUSION:** These results suggest that caffeine reduces the risk of PD among women who do not use postmenopausal hormones, but increases risk among hormone users. Clinical trials of caffeine or estrogens in women should avoid the combined use of these agents.



## **Effects of caffeine on human health.**

**Nawrot P, Jordan S, Eastwood J, Rotstein J, Hugenholtz A, Feeley M.**

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Caffeine is probably the most frequently ingested pharmacologically active substance in the world. It is found in common beverages (coffee, tea, soft drinks), in products containing cocoa or chocolate, and in medications. Because of its wide consumption at different levels by most segments of the population, the public and the scientific community have expressed interest in the potential for caffeine to produce adverse effects on human health. The possibility that caffeine ingestion adversely affects human health was investigated based on reviews of (primarily) published human studies obtained through a comprehensive literature search. Based on the data reviewed, it is concluded that for the healthy adult population, moderate daily caffeine intake at a dose level up to 400 mg day<sup>-1</sup> (equivalent to 6 mg kg<sup>-1</sup> body weight day<sup>-1</sup> in a 65-kg person) is not associated with adverse effects such as general toxicity, cardiovascular effects, effects on bone status and calcium balance (with consumption of adequate calcium), changes in adult behaviour, increased incidence of cancer and effects on male fertility. The data also show that reproductive-aged women and children are 'at risk' subgroups who may require specific advice on moderating their caffeine intake. Based on available evidence, it is suggested that reproductive-aged women should consume < bw kg<sup>-1</sup> mg ="2.5" < consume should children while person) 65-kg a for day<sup>-1</sup> 4.6 to (equivalent day per caffeine>



### **Effects of coffee and caffeine on fertility, reproduction, lactation, and development. Review of human and animal data.**

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**J Gynecol Obstet Biol Reprod (Paris) 1994;23(3):241-56**

In the present review, we have examined the effects of coffee ingestion on fertility, reproduction, lactation and development. The potential effects of coffee consumption on fertility, spontaneous abortion and prematurity are not clearly established but appear to be quite limited. In rodents, caffeine can induce malformations but this effect appears in general at doses never encountered in humans. Indeed, as soon as the quantity of caffeine is divided over the day, as is the case for human consumption, the teratogenic effect of caffeine disappears in rodents. Coffee ingested during gestation induces a dose-dependent decrease in birth weight, but usually only when ingested amounts are high (i.e. more than 7 cups/day), whereas coffee has no effect at moderate doses. Caffeine consumption during gestation affects hematologic parameters of the new-born infant or rat. In animals, caffeine induces long-term consequences on sleep, locomotion, learning abilities, emotivity and anxiety, whereas, in children, the effects of early exposure to coffee and caffeine on behavior are not clearly established. The quantities of caffeine found in maternal milk vary with authors, but it appears clearly that caffeine does not change maternal milk composition and has a tendency to stimulate milk production. In conclusion to this review, it appears that maternal coffee or caffeine consumption during gestation and/or lactation does not seem to have measurable consequences on the fetus of the newborn, as long as ingested quantities remain moderate.

Therefore, pregnant mothers should be advised to limit their coffee and caffeine intake to 300 mg caffeine/day (i.e. 2-3 cups of coffee or 2.5-3 l of coke) especially because of the increase of caffeine half-life during the third trimester of pregnancy and in the neonate.



### **Caffeine: an update.**

**Oser BL, Ford RA.**

**Drug Chem Toxicol 1981;4(4):311-29**

While the total annual volume of caffeine has increased over the years, the actual per capita daily intake has not. This is based on the fact that the quantity of caffeine in a soft drink is about the same or, in the case of diet drinks, less than in 1961 when the original GRAS (Generally Recognized as Safe) determinations were made. Since that time, there have been numerous studies on the effect of caffeine on animals and humans. The Select Committee on GRAS Substances (SCOGS) of the Federation of American Societies for Experimental Biology (FASEB) in 1978 reviewed all the data available at that time and concluded that there is "no evidence in the available information on caffeine [that] demonstrates a hazard to the public when it is used in cola-type beverages at levels that are now current and in the manner now practiced...", although they did suggest further study was necessary. The Flavor and Extract Manufacturers' Association (FEMA) Expert Panel has now reviewed not only the same data as the FASEB (SCOGS) Committee, but several more recent studies. On the basis of this review, the Panel reaffirms the GRAS status of caffeine under conditions of its current use as an international ingredient in nonalcoholic beverages.



### **Coffee, tea, and caffeine consumption and breast cancer incidence in a cohort of Swedish women.**

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**Ann Epidemiol 2002 Jan;12(1):21-6**

**PURPOSE:** Coffee, caffeinated tea, and caffeine have been suggested to play a role in breast carcinogenesis or in the promotion or inhibition of tumor growth. Prior epidemiologic evidence has not supported an overall association between consumption of caffeinated beverages and risk of breast cancer, but consumption in some studies was low. **METHODS:** We studied this relation in the Swedish Mammography Screening Cohort, a large population-based prospective cohort study in Sweden comprising 59,036 women aged 40-76 years. Sweden has the highest coffee consumption per capita in the world. **RESULTS:** During 508,267 person-years of follow-up, 1271 cases of invasive breast cancer were diagnosed. Women who reported drinking 4 or more cups of coffee per day had a covariate-adjusted hazard ratio of breast cancer of 0.94 [95% confidence interval (CI) 0.75-1.28] compared to women who reported drinking 1 cup a week or less. The corresponding hazard ratio for tea consumption was 1.13 (95% CI 0.91-1.40). Similarly, women in the highest quintile of self-reported caffeine intake had a hazard ratio of breast cancer of 1.04 (95% CI 0.87-1.24) compared to women in the lowest quintile. **CONCLUSIONS:** In this large cohort of Swedish women, consumption

of coffee, tea, and caffeine was not associated with breast cancer incidence.



### **Effects of caffeine on bone and the calcium economy.**

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**Food Chem Toxicol 2002 Sep;40(9):1263-70**

Caffeine-containing beverage consumption has been reported to be associated with reduced bone mass and increased fracture risk in some, but not most, observational studies. Human physiological studies and controlled balance studies show a clear but only a very small depressant effect of caffeine itself on intestinal calcium absorption, and no effect on total 24-h urinary calcium excretion. The epidemiologic studies showing a negative effect may be explained in part by an inverse relationship between consumption of milk and caffeine-containing beverages. Low calcium intake is clearly linked to skeletal fragility, and it is likely that a high caffeine intake is often a marker for a low calcium intake. The negative effect of caffeine on calcium absorption is small enough to be fully offset by as little as 1-2 tablespoons of milk. All of the observations implicating caffeine-containing beverages as a risk factor for osteoporosis have been made in populations consuming substantially less than optimal calcium intakes. There is no evidence that caffeine has any harmful effect on bone status or on the calcium economy in individuals who ingest the currently recommended daily allowances of calcium.



### **Caffeine and coffee: effects on health and cardiovascular disease.**

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**Comp Biochem Physiol C Pharmacol Toxicol Endocrinol 1994 Oct;109(2):173-89**

Caffeine is a methylxanthine whose primary biological effect is the competitive antagonism of the adenosine receptor. Its presence in coffee, tea, soda beverages, chocolate and many prescription and over-the-counter drugs makes it a commonly consumed stimulant. Coffee and/or caffeine consumption has been linked to many human diseases in epidemiologic studies. Causal relationships have been difficult to substantiate. Initial investigations, showing an association between coffee and coronary heart disease, suffer from confounding variables and have been difficult to replicate. Recent studies, showing a significant effect over long follow-up periods and with high coffee intake, have again raised the question of a role for coffee and/or caffeine consumption in the pathogenesis of atherosclerotic heart disease. Contrary to common belief, the published literature provides little evidence that coffee and/or caffeine in typical dosages increases the risk of infarction, sudden death or arrhythmia.



### **Caffeine intake and low birth weight: a population-based case-control study.**

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**Am J Epidemiol 1998 Apr 1;147(7):620-7**

The authors conducted a matched case-control study to investigate the effects of caffeine intake during pregnancy on birth weight. From January to November 1992, in the first 24 hours after delivery, 1,205 mothers (401 cases and 804 controls) were interviewed and their newborns were examined to assess birth weight and gestational age by means of the method of Capurro et al. (J Pediatr 1978;93:120-2). The cases were children with birth weight < 2,500 g and gestational age > or = 28 weeks. Cases and controls were matched for time of birth and hospital of delivery and were recruited from the four maternity hospitals in Pelotas, southern Brazil. Daily maternal caffeine intake during pregnancy for each trimester was estimated. To assess caffeine intake, 10% of the mothers were reinterviewed at their households and samples of reported information on drip coffee and mate (a caffeine-containing drink widely used in South America) were collected and sent to the laboratory for caffeine determination through liquid chromatography. When instant coffee was reported, the weight of powder was measured using a portable scale, and caffeine intake was estimated from a reference table. Caffeine intake from tea, chocolate, soft drinks, and medicines was estimated from a reference table. Analyses were performed by conditional logistic regression. Crude analyses showed no effect of caffeine on low birth weight, preterm births or intrauterine growth retardation. The results did not change after allowing for confounders.



## **Selected health and behavioral effects related to the use of caffeine.**

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**J Community Health 1994 Dec;19(6):449-66**

This paper reviews the research literature concerning health and selected behavioral effects of caffeine. Epidemiological and laboratory findings are reviewed to determine the health risks associated with both acute and chronic caffeine exposure. Common sources of caffeine, its properties, and physiological effects are considered. The relationships between caffeine and various health conditions are examined including caffeine's association with heart disease, cancer, and benign breast disease. Caffeine's possible contribution to enhanced exercise performance is discussed along with a brief overview of caffeine's effects on mental and emotional health. Over 100 references cited in this review were part of a more extensive literature base obtained from several on-line services including MEDLINE and LEXIS/NEXIS medical data bases. Other sources of relevant literature included manual searches of research journals and the use of selected references from appropriate articles. The relationship between caffeine consumption and various illnesses such as cardiovascular disease and cancer remains equivocal. Prudence might dictate that pregnant women and chronically ill individuals exercise restraint in their use of caffeine, although research suggests relatively low or nonexistent levels of risk associated with moderate caffeine consumption.



## **Regular caffeine consumption: a balance of adverse and beneficial effects for mood and psychomotor performance.**

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**Pharmacol Biochem Behav 1998 Apr;59(4):1039-45**

It has often been pointed out that caffeine is the most widely "used" psychoactive substance in the world, and accordingly, there is a very large amount of research available on the effects of caffeine on body and mind. In particular, a psychostimulant action of caffeine is generally accepted as well established; for example, caffeine has been found to quicken reaction time and enhance vigilance performance, and to increase self-rated alertness and improve mood. There is, however, a real difficulty in determining the net effects of caffeine. In a typical experiment the subjects have a history of regular caffeine consumption, and they are tested on caffeine and a placebo after a period of caffeine deprivation (often overnight). The problem with relying solely on this approach is that it leaves open the question as to whether the results obtained are due to beneficial effects of caffeine or to deleterious effects of caffeine deprivation. The present article briefly reviews this evidence on the psychostimulant effects of caffeine, and presents some new data testing the hypothesis that caffeine may enhance cognitive performance to a greater extent in older adults than in young adults. No age-related differences in the effects of caffeine on psychomotor performance were found. We conclude that overall there is little unequivocal evidence to show that regular caffeine use is likely to substantially benefit mood or performance. Indeed, one of the significant factors motivating caffeine consumption appears to be "withdrawal relief."



## **Caffeine affects cardiovascular and neuroendocrine activation at work and home.**

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**Psychosom Med 2002 Jul-Aug;64(4):595-603**

**OBJECTIVE:** This study investigated the effects of moderate doses of caffeine on ambulatory blood pressure and heart rate, urinary excretion of epinephrine, norepinephrine, and cortisol, and subjective measures of stress during normal activities at work and at home in the evening. **METHODS:** Healthy, nonsmoking, habitual coffee drinkers (N = 47) participated in 3 days of ambulatory study. After a day of ad lib caffeine consumption, caffeine (500 mg) and placebo were administered double-blind in counter-balanced order on separate workdays. Ambulatory blood pressure and heart rate were monitored from the start of the workday until bedtime. Urinary excretion of catecholamines and cortisol was assessed during the workday and evening. **RESULTS:** Caffeine administration significantly raised average ambulatory blood pressure during the workday and evening by 4/3 mm Hg and reduced average heart rate by 2 bpm. Caffeine also increased by 32% the levels of free epinephrine excreted during the workday and the evening. In addition, caffeine amplified the increases in blood pressure and heart rate associated with higher levels of self-reported stress during the activities of the day. Effects were undiminished through the evening until bedtime. **CONCLUSIONS:** Caffeine has significant hemodynamic and humoral effects in habitual coffee drinkers that persist for many hours during the activities of everyday life. Furthermore,

caffeine may exaggerate sympathetic adrenal-medullary responses to the stressful events of normal daily life. Repeated daily blood pressure elevations and increases in stress reactivity caused by caffeine consumption could contribute to an increased risk of coronary heart disease in the adult population.



### **Effect of coffee consumption on intraocular pressure.**

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**Ann Pharmacother 2002 Jun;36(6):992-5**

**BACKGROUND:** Many ophthalmologists instruct patients with glaucoma to avoid coffee, although data supporting this practice are insufficient. **OBJECTIVE:** To estimate the effect of drinking coffee on intraocular pressure (IOP). **METHODS:** In this crossover study, the effect of the consumption of regular (180 mg caffeine in 200 mL beverage) and decaffeinated coffee (3.6 mg caffeine in 200 mL beverage) was compared in patients with normotensive glaucoma (n = 6) or ocular hypertension (n = 22). IOP was monitored in both groups at 30, 60, and 90 minutes after coffee ingestion. **RESULTS:** In patients with normotensive glaucoma who drank regular coffee, the mean +/- SD changes in IOP at 30, 60, and 90 minutes were 0.9 +/- 0.5, 3.6 +/- 1.1, and 2.3 +/- 0.66 mm Hg, respectively; in those who drank decaffeinated coffee, they were 0.75 +/- 0.36, 0.70 +/- 0.4, and 0.4 +/- 0.6 mm Hg, respectively. The corresponding values in patients with ocular hypertension were as follows: after regular coffee, 1.1 +/- 0.7, 3.4 +/- 1.0, and 3.0 +/- 2.7 mm Hg; and after decaffeinated coffee, 0.6 +/- 0.4, 0.9 +/- 0.2, and 0.5 +/- 0.5 mm Hg. The difference in the change in IOP from baseline after ingestion of regular versus decaffeinated coffee was statistically significant in each group at 60 and 90 minutes. Subjects who drank regular coffee demonstrated a greater elevation in IOP; this elevation may be clinically significant. **CONCLUSIONS:** Intake of caffeinated beverage (>=180 mg caffeine) may not be recommended for patients with normotensive glaucoma or ocular hypertension.



### **Coffee intake and risk of hypertension: the Johns Hopkins precursors study.**

**Klag MJ, Wang NY, Meoni LA, Brancati FL, Cooper LA, Liang KY, Young JH, Ford DE.**

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**Arch Intern Med 2002 Mar 25;162(6):657-62**

**BACKGROUND:** Whether the increase in blood pressure with coffee drinking seen in clinical trials persists over time and translates into an increased incidence of hypertension is not known. **METHODS:** We assessed coffee intake in a cohort of 1017 white male former medical students (mean age, 26 years) in graduating classes from 1948 to 1964 up to 11 times over a median follow-up of 33 years. Blood pressure and incidence of hypertension were determined annually by self-report, demonstrated to be accurate in this cohort. **RESULTS:** Consumption of 1 cup of coffee a day raised

systolic blood pressure by 0.19 mm Hg (95% confidence interval, 0.02-0.35) and diastolic pressure by 0.27 mm Hg (95% confidence interval, 0.15-0.39) after adjustment for parental incidence of hypertension and time-dependent body mass index, cigarette smoking, alcohol drinking, and physical activity in analyses using generalized estimating equations. Compared with nondrinkers at baseline, coffee drinkers had a greater incidence of hypertension during follow-up (18.8% vs. 28.3%;  $P = .03$ ). Relative risk (95% confidence interval) of hypertension associated with drinking 5 or more cups a day was 1.35 (0.87-2.08) for baseline intake and 1.60 (1.06-2.40) for intake over follow-up. After adjustment for the variables listed above, however, these associations were not statistically significant. **CONCLUSION:** Over many years of follow-up, coffee drinking is associated with small increases in blood pressure, but appears to play a small role in the development of hypertension.



### **Coffee, caffeine and blood pressure: a critical review.**

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**Eur J Clin Nutr 1999 Nov;53(11):831-9**

**OBJECTIVE:** We review the published data relating to intake of coffee and caffeine on blood pressure in man. We also refer to studies on the possible mechanisms of actions of these effects of caffeine. **DESIGN:** The MEDLINE and Current Contents databases were searched from 1966 to April 1999 using the text words 'coffee or caffeine' and 'blood pressure or hypertension'. Controlled clinical and epidemiologic studies on the blood pressure effects of coffee or caffeine are reviewed. We also refer to studies on the possible mechanisms of action of these effects of caffeine. **RESULTS:** Acute intake of coffee and caffeine increases blood pressure. Caffeine is probably the main active component in coffee. The pressor response is strongest in hypertensive subjects. Some studies with repeated administration of caffeine showed a persistent pressor effect, whereas in others chronic caffeine ingestion did not increase blood pressure. Epidemiologic studies have produced contradictory findings regarding the association between blood pressure and coffee consumption. During regular use tolerance to the cardiovascular responses develops in some people, and therefore no systematic elevation of blood pressure in long-term and in population studies can be shown. **CONCLUSIONS:** We conclude that regular coffee may be harmful to some hypertension-prone subjects. The hemodynamic effects of chronic coffee and caffeine consumption have not been sufficiently studied. The possible mechanisms of the cardiovascular effects of caffeine include the blocking of adenosine receptors and the inhibition of phosphodiesterases.



### **The effect of caffeine on ambulatory blood pressure in hypertensive patients.**

**Rachima-Maoz C, Peleg E, Rosenthal T.**

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**Am J Hypertens 1998 Dec;11(12):1426-32**

Because the potential impact of habitual caffeine intake on blood pressure is a controversial issue, a study was carried out to explore the relationship between caffeine and various humoral factors that

could account for a coffee-induced rise in blood pressure. Twenty-three hypertensive patients who refrained from caffeine for 2 to 3 weeks were given 250 mg oral caffeine powder dissolved in water. Blood pressure was recorded every 15 min by blood pressure monitor. Caffeine blood level, renin and endothelin were measured before and 1, 2, 3, and 6 h after caffeine intake. Urinary electrolytes and catecholamines were measured under caffeine influence (period I), and for the next 6 h (period II). A significant increase in systolic ( $P = .017$ ) and diastolic blood pressure ( $P = .023$ ) occurred in 13 subjects who were  $58 \pm 10.4$  years old. Nonresponders were younger ( $44.5 \pm 15.8$  years). A statistically significant decrease in heart rate was seen during the first hour after caffeine intake in both responders ( $P = .008$ ) and nonresponders ( $P = .004$ ). Marked diuresis and natriuresis were observed during period I in both groups. Renin and endothelin levels were unchanged. Although chronic studies point to development of tolerance to long-term caffeine ingestion, acute studies like the one described are essential to obtain data on the immediate effects that can be of practical importance, especially in the elderly.



### **A prospective study of coffee drinking and suicide in women.**

**Kawachi I, Willett WC, Colditz GA, Stampfer MJ, Speizer FE.**

Channing Laboratory, Department of Medicine, Harvard Medical School, Boston, Mass., USA.

**Arch Intern Med 1996 Mar 11;156(5):521-5**

**BACKGROUND:** Among the many reported central nervous system effects of long-term caffeine use is improvement in mood. **OBJECTIVE:** To examine prospectively the relationship of coffee and caffeine intake to risk of death from suicide. **METHODS:** We conducted a 10-year follow-up study (1980 to 1990) in an ongoing cohort of 86 626 US female registered nurses aged 34 to 59 years in 1980, who were free of diagnosed coronary heart disease, stroke, or cancer. Information on coffee and caffeine intake was collected by a semiquantitative food frequency questionnaire in 1980. Deaths from suicide were determined by physician review of death certificates. **RESULTS:** Fifty-six cases of suicide occurred during 832 704 person-years of observation. Compared with non-drinkers of coffee, the age-adjusted relative risk of suicide in women who consumed two to three cups per day was 0.34 (95% confidence interval [CI, 0.17 to 0.68) and 0.42 (95% CI, 0.21 to 0.86) in women who consumed four or more cups per day ( $P$  for linear trend=.002). These findings remained essentially unchanged after adjusting for a broad range of potential confounding factors, including smoking habit, alcohol intake, medication use (diazepam and phenothiazine), history of comorbid disease (hypertension, hypercholesterolemia, or diabetes), marital status, and self-reported stress. A strong inverse relationship was similarly found for caffeine intake from all sources and risk of suicide. **CONCLUSIONS:** The data suggest a strong inverse association between coffee intake and risk of suicide. Whether regular intake of coffee or caffeine has clinically significant effects on the maintenance of affect or the prevention of depression merits further investigation in clinical trials and population-based prospective studies.



### **Coffee consumption and risk of ischaemic heart disease--a settled issue?**

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**OBJECTIVE.** Based on a meta-analysis, it was recently stated that there is no association between coffee consumption and the risk of coronary heart disease. Why then, have studies on the issue shown quite variable results? **DESIGN SETTING AND SUBJECTS.** A prospective study was performed in the Copenhagen Male Study on 2975 men (53-74 years) without cardiovascular disease at baseline in 1985/1986. They were classified according to self-reported consumption of filter coffee. Some 147 men (5%) were coffee abstainers. Potential confounders were alcohol use, physical activity, smoking, serum cotinine, serum lipids, serum selenium, body mass index, blood pressure, Lewis blood group, hypertension, non-insulin-dependent diabetes mellitus and social class. **MAIN OUTCOME MEASURES.** The incidence of ischaemic heart disease (IHD) 1985/86-1991. **RESULTS.** Some 184 men had a first IHD event. There was no significant difference between those consuming 1-4, 5-8 or  $\geq 9$  cups per day after controlling for confounders (P-value of trend test: 0.14). The crude incidence rates were 6.8, 6.7 and 4.6%, respectively; the adjusted rates were 6.8, 6.7 and 4.0%, respectively. Coffee consumption was significantly ( $P < 0.05$ ) inversely correlated with serum selenium concentration (never previously described) and, positively or negatively, with a number of other potential risk factors: smoking, alcohol use, serum triglycerides, serum cholesterol, blood pressure, social class, body mass index, and serum selenium. In nonsmokers and smokers of only a small amount of tobacco, coffee consumption was associated with a lower risk of IHD ( $P < 0.05$ ). **CONCLUSION.** We conclude that the association between coffee consumption and risk of IHD is conditioned by known risk factors correlated with use of coffee, which may partly explain the inconsistencies in the results of previous studies.



### **Coffee intake and coronary heart disease.**

**Klag MJ, Mead LA, LaCroix AZ, Wang NY, Coresh J, Liang KY, Pearson TA, Levine DM.**

Department of Medicine, Johns Hopkins University School of Medicine, Baltimore.

**Ann Epidemiol 1994 Nov;4(6):425-33**

We examined the risk of coronary heart disease (CHD) associated with coffee intake in 1040 male medical students followed for 28 to 44 years. During the follow-up, CHD developed in 111 men. The relative risks (95% confidence interval) associated with drinking 5 cups of coffee/d were 2.94 (1.27, 6.81) for baseline, 5.52 (1.31, 23.18) for average, and 1.95 (0.86, 4.40) for most recent intake after adjustment for baseline age, serum cholesterol levels, calendar time, and the time-dependent covariates number of cigarettes, body mass index, and incident hypertension and diabetes. Risks were elevated in both smokers and nonsmokers and were stronger for myocardial infarction. Most of the excess risk was associated with coffee drinking prior to 1975. The diagnosis of hypertension was associated with a subsequent reduction in coffee intake. Negative results in some studies may be due to the assessment of coffee intake later in life or to differences in methods of coffee preparation between study populations or over calendar time.



### **Coffee consumption and cause-specific mortality. Association with age at death**

## **and compression of mortality.**

**Lindstedt KD, Kuzma JW, Anderson JL.**

Loma Linda University, CA 92354.

**J Clin Epidemiol 1992 Jul;45(7):733-42**

The relationship between reported coffee consumption and specific causes of death was examined in 9484 males enrolled in the Adventist Mortality Study in 1960 and followed through 1985. Coffee consumption was divided into three levels: less than 1 cup per day, 1-2 cups per day, and greater than or equal to 3 cups per day. Approximately one third of the subjects did not drink coffee. Cause-specific mortality rates were compared using survival analysis including Cox's proportional hazard model, and controlling for potential confounders such as body mass index, heart disease and hypertension at baseline, race, physical activity, marital status, educational level, smoking history, and dietary pattern. Inclusion of interaction terms between coffee consumption and attained age as time-dependent covariates allowed the hazard ratio to vary with age. Univariate analyses showed a statistically significant association ( $p$  less than 0.05) for coffee consumption and mortality for most endpoints. Multivariate analyses showed a small but statistically significant association between coffee consumption and mortality from ischemic heart disease, other cardiovascular diseases, all cardiovascular diseases, and all causes of death. For the major causes of death, the hazard ratios decreased from about 2.5 at 30 years of age to 1.0 around 95 years of age. These results indicate that abstinence from coffee leads to compression of mortality rather than an increase in lifespan.



## **Cardiovascular effects of coffee consumption in the aged: the CASTEL epidemiologic study.**

**Casiglia E, Mormino P, Spolaore P, Maschio O, Cernetti C, Costa F, Colangeli G, Ambrosio GB.**

Clinica Medica I, Universita degli Studi, Padova.

**Cardiologia 1990 Oct;35(10):827-32**

The data obtained from 2240 subjects aged 65 years or more from the general population of Castelfranco Veneto (Italy) included in the CASTEL (CARDiovascular STudy in the ELderly) epidemiological Italian project were analyzed in relation to coffee consumption. Subjects were divided into 3 classes: class 1 (N = 109): non coffee drinkers; class 2 (N = 1554): 1 to 2 cups of coffee per day; class 3 (N = 577): 3 or more cups per day. The results were described by ANOVA, Tukey post hoc test and Pearson correlation coefficient with Bonferroni's conservative correction. In classes 2 and 3 total cholesterol, apolipoprotein B100 and calculated LDL-cholesterol were higher than in class 1. The number of cups of coffee per day directly correlated to both the number of cigarettes per day and the number of drinks per week. Although these data seem to indicate a convergence of risk factors (cholesterol, smoking, alcohol) in coffee drinkers, no increase in the prevalence of cardiovascular events was found in coffee drinkers in comparison with non drinkers. This could be attributed to the fact that prevalence of hypertension and diabetes did not increase with increasing coffee consumption; on the contrary, they were lower in classes 2 and 3 than in class 1.



## **Mortality patterns among hypertensives by reported level of caffeine consumption.**

**Martin JB, Annegers JF, Curb JD, Heyden S, Howson C, Lee ES, Lee M.**

School of Allied Health Sciences, Program in Nutrition and Dietetics, University of Texas Health Science Center 77225.

**Prev Med 1988 May;17(3):310-20**

The effect of caffeine consumption on mortality was evaluated in a historical cohort study of 10,064 diagnosed hypertensive individuals participating in the Hypertension Detection and Follow-up Program from 1973 to 1979. Total caffeine intake level from beverages (coffee and tea) and certain medications, was estimated at the 1-year visit. No evidence was found supporting an association between increased level of caffeine consumption and increased all-cause mortality or cardiovascular disease mortality during the following 4 years. Cigarette smoking was significantly associated with mortality; the association being more pronounced among non- and low-caffeine consumers for all-cause mortality and among non-caffeine consumers for all cardiovascular mortality except cerebrovascular mortality.



## **Coffee consumption and blood pressure: an Italian study.**

**Periti M, Salvaggio A, Quaglia G, Di Marzio L.**

**Clin Sci (Lond) 1987 Apr;72(4):443-7**

The relation between habitual coffee consumption and blood pressure was studied in 500 Italian subjects, males and females, aged 18-62 years. After allowing for sex, age and weight, the pressure levels showed a significant decrease with increasing coffee consumption. Systolic blood pressure (SBP) and diastolic blood pressure (DBP) were respectively 130.4 +/- 1.8 (SE) mmHg and 81.5 +/- 1.1 mmHg for non-coffee drinkers, 129.4 +/- 1.4 and 82.2 +/- 0.9 mmHg for 1 cup per day, 128.4 +/- 0.8 and 81.4 +/- 0.5 mmHg for 2-3 cups per day, 124.9 +/- 1.1 and 78.8 +/- 0.7 mmHg for 4-6 cups per day, and 124.1 +/- 2.5 and 78.7 +/- 1.6 mmHg for more than 6 cups of coffee daily (analysis of covariance: SBP F = 3.46, 4 df, P less than 0.01; DBP F = 3.46, 4 df, P less than 0.01). Even after correcting pressure levels for habitual alcohol intake and cigarette smoking, we observed a mean reduction in SBP and DBP of 0.80 mmHg and 0.48 mmHg respectively per cup per day.



## **Coffee consumption and the incidence of coronary heart disease.**

**LaCroix AZ, Mead LA, Liang KY, Thomas CB, Pearson TA.**

**N Engl J Med 1986 Oct 16;315(16):977-82**

We conducted a prospective investigation of the effect of coffee consumption on coronary heart disease in 1130 male medical students who were followed for 19 to 35 years. Changes in coffee consumption and cigarette smoking during follow-up were examined in relation to the incidence of clinically evident coronary disease in comparisons of three measures of coffee intake--base-line intake, average intake, and most recent intake reported before the manifestation of coronary

disease. Clinical evidence of coronary disease included myocardial infarction, angina, and sudden cardiac death. In separate analyses for each measure of coffee intake, the relative risks for men drinking five or more cups of coffee per day, as compared with nondrinkers, were approximately 2.80 for all three measures in the univariate analyses (maximum width of 95 percent confidence intervals, 1.27 to 6.51). After adjustment for age, current smoking, hypertension status, and base-line level of serum cholesterol, the estimated relative risk for men drinking five or more cups of coffee per day (using the most recent coffee intake measure), as compared with those drinking none, was 2.49 (maximum width of 95 percent confidence interval, 1.08 to 5.77). The association between coffee and coronary disease was strongest when the time between the reports of coffee intake and the coronary event was shortest. These findings support an independent, dose-responsive association of coffee consumption with clinically evident coronary heart disease, which is consistent with a twofold to threefold elevation in risk among heavy coffee drinkers.



## Coffee and health.

**Czok G.**

**Z Ernährungswiss 1977 Dec;16(4):248-55**

Coffee as a rule develops stimulating effects on the central nervous system, heart and circulation which are mainly caused by caffeine. In certain cases coffee may also have a sedative effect and sometimes even it is useful to fall asleep quickly. Furthermore coffee may be advantageous in the treatment of some functional disorders caused by lacking of dopamine, because coffee is able to increase the dopamine formation in brain. Concerning the effects of coffee in the gastrointestinal-tract and liver-bile system caffeine is only of secondary importance. Hereby certain roasting substances, possibly also chlorogenic acid or caffeic acid should be responsible for the stimulating effects observed in these organs. These stimulating effects could be caused whether directly or indirect e.g. by liberating gastrin or other gastrointestinal hormones. Vitamin niacin, which is formed in greater amounts from trigonelline during the roasting process, may also be important from the nutritional standpoint. Therefore coffee may be prescribed as a true drug in cases of deficiency in vitamin niacin or also in the pellagra disease. By extensive epidemiological studies performed lately it could be demonstrated that there exists no correlation between coffee consumption and certain risk factors as hypertension, heart infarction, diabetes, gout or cancer diseases. Furthermore there was no evidence that coffee or its caffeine content are able to induce genetic alterations or even malformations.



## Coffee consumption and the risk of coronary heart disease and death.

**Kleemola P, Jousilahti P, Pietinen P, Vartiainen E, Tuomilehto J.**

Division of Nutrition, University of Helsinki, PO Box 27, Latokartanonkaari 9, 00014 University of Helsinki, Finland.

**Arch Intern Med 2000 Dec 11-25;160(22):3393-400**

OBJECTIVES: To study prospectively the relation of coffee drinking with fatal and nonfatal coronary

heart disease (CHD) and all-cause mortality and to perform a cross-sectional analysis at baseline on the association between coffee drinking and CHD risk factors, diagnosed diseases, self-reported symptoms, and use of medicines. METHODS: The study cohort consisted of 20 179 randomly selected eastern Finnish men and women aged 30 to 59 years who participated in a cross-sectional risk factor survey in 1972, 1977, or 1982. Habitual coffee drinking, health behavior, major known CHD risk factors, and medical history were assessed at the baseline examination. Each subject was followed up for 10 years after the survey using the national hospital discharge and death registers. Multivariate analyses were performed by using the Cox proportional hazards model. RESULTS: In men, the risk of nonfatal myocardial infarction was not associated with coffee drinking. The age-adjusted association of coffee drinking was J shaped with CHD mortality and U shaped with all-cause mortality. The highest CHD mortality was found among those who did not drink coffee at all (multivariate adjusted). Also, in women, all-cause mortality decreased by increasing coffee drinking. The prevalence of smoking and the mean level of serum cholesterol increased with increasing coffee drinking. Non-coffee drinkers more often reported a history of various diseases and symptoms, and they also more frequently used several drugs compared with coffee drinkers. CONCLUSIONS: Coffee drinking does not increase the risk of CHD or death. In men, slightly increased mortality from CHD and all causes in heavy coffee drinkers is largely explained by the effects of smoking and a high serum cholesterol level.



## **Coffee and tea consumption in the Scottish Heart Health Study follow up: conflicting relations with coronary risk factors, coronary disease, and all cause mortality.**

**Woodward M, Tunstall-Pedoe H.**

Department of Applied Statistics, University of Reading.

**J Epidemiol Community Health 1999 Aug;53(8):481-7**

STUDY OBJECTIVE: To relate habitual (cups per day) tea and coffee consumption to conventional coronary risk factors and subsequent risk of coronary heart disease and death. DESIGN: Cohort study. SETTING: Nationwide random population study. PARTICIPANTS: Over 11,000 men and women aged 40-59 who took part in the Scottish Heart Health Study lifestyle and risk factor survey in 1984-87. Participants were followed up to the end of 1993, an average of 7.7 years, for all cause mortality, coronary death, or any major coronary event (death, non-fatal infarction or coronary artery surgery). Cox's proportional hazards regression model was used to estimate the hazard in consumers of tea and coffee relative to the zero consumption group, both before and after correction for other factors. MAIN RESULTS: Coffee and tea consumption showed a strong inverse relation. For many conventional risk factors, coffee showed a weak, but beneficial, gradient with increasing consumption, whereas increasing tea consumption showed the reverse. Increasing coffee consumption was associated with beneficial effects for mortality and coronary morbidity, whereas tea showed the opposite. Adjusting for age and social class had some effect in reducing associations. Multiple adjustment for other risk factors removed the associations for tea and most of those for coffee although there was a residual benefit of coffee consumption in avoiding heart disease among men. CONCLUSIONS: The epidemiological differences shown in this study occurred

despite the pharmacological similarities between tea and coffee. Either they differ more than is realised, or they identify contrasting associated lifestyle and health risks, for which this multiple adjustment was inadequate.



### **Coffee consumption and coronary heart disease in women. A ten-year follow-up.**

**Willett WC, Stampfer MJ, Manson JE, Colditz GA, Rosner BA, Speizer FE, Hennekens CH.**

Channing Laboratory, Boston, MA 02115, USA.

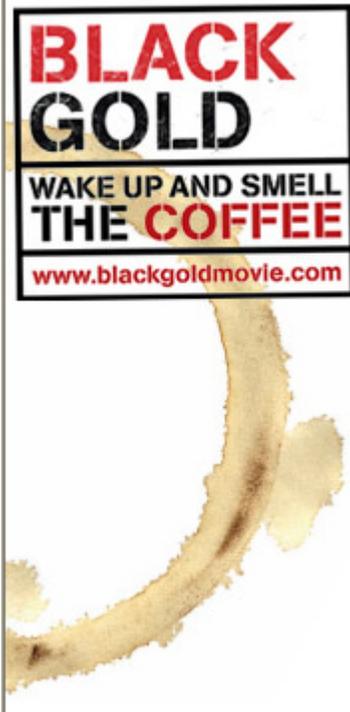
**JAMA 1996 Feb 14;275(6):458-62**

**OBJECTIVE**--To assess the relationship between coffee consumption and risk of coronary heart disease (CHD) among women. **DESIGN**--Prospective cohort study with coffee consumption measured in 1980, 1984, and 1986, and follow-up through 1990. **SETTING**--Female registered nurses in the United States. **PARTICIPANTS**--A total of 85,747 US women 34 to 59 years of age in 1980 and without history of CHD, stroke, or cancer. **MAIN OUTCOME MEASURE**--Ten-year incidence of CHD (defined as nonfatal myocardial infarction or fatal CHD). **RESULTS**--During 10 years of follow-up we documented 712 cases of CHD. After adjustment for age, smoking, and other CHD risk factors, we found no evidence for any positive association between coffee consumption and risk of subsequent CHD. For women drinking six or more cups of caffeine-containing coffee per day in 1980, the relative risk was 0.95 (95% confidence interval, 0.73 to 1.26) compared with women who did not consume this beverage. Similarly, there was no association when the first 4 years of follow-up were excluded, when nonfatal and fatal CHD end points were examined separately, or when we updated coffee consumption in 1984 or 1986 and examined only CHD during the next 2-year interval. Further, there was no association with caffeine intake from all sources combined or with decaffeinated coffee consumption. **CONCLUSIONS**--These data indicate that coffee as consumed by US women is not an important cause of CHD.

### **BLACK GOLD (MOVIE)**

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

Multinational coffee companies now rule our shopping malls and supermarkets and dominate the industry worth over \$80 billion, making coffee the most valuable trading commodity in the world after oil.



But while we continue to pay for our lattes and cappuccinos, the price paid to coffee farmers remains so low that many have been forced to abandon their coffee fields.

**Nowhere is this paradox more evident than in Ethiopia, the birthplace of coffee.** Tadesse Meskela is one man on a mission to save his 74,000 struggling coffee farmers from bankruptcy. As his farmers strive to harvest some of the highest quality coffee beans on the international market, Tadesse travels the world in an attempt to find buyers willing to pay a fair price.

Against the backdrop of Tadesse's journey to London and Seattle, the enormous power of the multinational players that dominate the world's coffee trade becomes apparent. New York commodity traders, the international coffee exchanges, and the double dealings of trade ministers at the World Trade Organisation reveal the many challenges Tadesse faces in his quest for a long term solution for his farmers.

Reviews: <http://www.blackgoldmovie.com/reviews.php>

## PRO-COFFEE STUDIES

Sources: see below

### Coffee May Reduce Risk of Liver Cancer

Wed Feb 16, 2005 02:03 PM ET

Source: <http://www.reuters.com/newsArticle.jhtml?type=healthNews&storyID=7651385>

NEW YORK (Reuters Health) - Habitual coffee drinking seems to be associated with a lower risk of developing liver cancer, according to a study conducted in Japan and reported in the Journal of the National Cancer Institute.

A second study in the same journal suggests that caffeinated coffee consumption is not tied to colorectal cancer, although decaffeinated coffee may decrease the risk of rectal cancer.

Dr. Manami Inoue and colleagues at the National Cancer Center in Tokyo surveyed approximately 90,000 individuals in 1990 or between 1993 and 1994. The subjects were followed through the end of 2001, during which time 334 were diagnosed with liver cancer.

The risk of liver cancer among those who almost never drank coffee was twice as high as for those who drank coffee on a daily basis.

The investigators observed no association between green tea intake and the risk of liver cancer, suggesting that antioxidants unique to coffee may be responsible for its protective effects.

In the second article, Dr. Karin B. Michels at Brigham and Women's Hospital in Boston and colleagues analyzed data from 88,000 women in the Nurses' Health Study, which began in 1976, and from 46,000 men in the Health Professionals' Follow-up Study, which began in 1986. During follow-up through 1998, there were 1433 cases of colorectal cancer.

Total coffee or tea consumption was not associated with the development of colorectal cancer in either group.

However, among subjects who reported never drinking decaffeinated coffee, the occurrence of rectal cancer was 58% higher than among those who drank two or more cups per day.

While results were consistent for both cohorts, Dr. Michels' group says the relationship of decaffeinated coffee to a lower risk of rectal cancer should be looked at again in additional studies.

SOURCE: Journal of the National Cancer Institute, February 16, 2005.

## CONFRONT THE COFFEE CONTROVERSY

Source: [http://www.naturalnews.com/034058\\_coffee\\_health\\_effects.html](http://www.naturalnews.com/034058_coffee_health_effects.html)

Just a couple of decades ago, quitting coffee was a prerequisite for establishing a healthy diet and adopting a healthier lifestyle. But gradually, several new research studies into coffee drinking have provided health benefits from drinking coffee. So now we have both positive and negative health effects from drinking coffee.

### Coffee benefits

It's not just the caffeine, but a synergistic combination of caffeine and an unnamed natural compound stimulate higher blood levels of GCSF (granulocyte colony stimulating factor), which protect the brain from dementia and degenerative diseases such as Alzheimer's and Parkinson's disease.

This conclusion was published in *The Journal of Alzheimer's Disease*, May/June 2011 from research by a team at the University of South Florida.

**Coffee drinkers also showed lower rates of diabetes and strokes.** An American Heart Association's journal, *Stroke*, published findings from a long term Swedish study involving 35,000 women. Dr. Susanna Larsson led this study from The Division of Nutritional Epidemiology at the Karolinska

Institute's National Institute of Environmental Medicine.

The heaviest coffee consumption is commonly found in regions that are often overcast, drizzly, and dreary. The Pacific Northwest in America is a good example. Apparently coffee offers some protection against depression also.

The protections against the diseases of concern noted in the studies were very substantial. Since coffee beans are loaded with antioxidants, coffee should be consumed without dairy, sugar, or artificial sweeteners. Sweetening with Stevia would be okay. Avoid flavored coffees.

Of course, forget the standard pastries and cigarettes normally associated with drinking coffee. That could be what causes bad health more among coffee drinkers than just coffee.

Organic black coffee with natural whole grain toast or pastries is a good way to have your java fix without adding items that minimize or neutralize coffee's antioxidants.

## **Coffee drawbacks**

Addiction, inability to fall asleep if consumed at night, and caffeine jitters are the most obvious downsides. Using decaffeinated coffee, which leaves just enough caffeine to combine with the mystery compound and antioxidants, has shown similar, albeit lesser, health benefits as regular coffee. Just make sure it's decaffeinated with water or steam, not chemicals.

Since caffeine is a diuretic, any kidney or bladder problems can be exacerbated. If not, beware of not replenishing eliminated liquid with purified water. Perhaps the worst ill effect of excess coffee drinking involves the adrenal glands.

When we drink coffee, the adrenal glands are stimulated to produce adrenaline. This is part of the flight or fight syndrome. It is what causes irritability, especially since it also inhibits soothing serotonin.

If coffee is consumed excessively too often and too long, one can experience Adrenal Fatigue, a malady that seems to be recognized by holistic medicine only. Adrenal Fatigue lowers cortisol production, making it very difficult to cope with stress. Read more here:

[http://www.naturalnews.com/024985\\_c...](http://www.naturalnews.com/024985_c...)

## **Clarifying coffee type confusions**

There are generally two basic types of beans sold widely, Arabica and Robusta. You'll find Arabica beans in discriminating coffee shops and health food stores. Arabica beans offer richer flavor than Robusta beans, which are usually used in less expensive coffees. Organic coffee beans are easy to find nowadays.

Types of roast vary from light to dark. Contrary to popular belief, *dark roasted beans contain slightly less caffeine than lighter roasts*. And espresso, commonly spelled incorrectly as expresso, does not depend on the level of roasting. Purists argue that only lever operated steam pressure machines make real espresso. And any roast can be used.

You can enjoy your java without guilt if the positive exceeds the negative.

**Sources for this article include:**

<http://www.liveinthenow.com/article...>  
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<http://longevity.about.com/od/lifel...>  
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**About the author:**

Paul Fassa is dedicated to warning others about the current corruption of food and medicine and guiding others toward a direction for better health with no restrictions on health freedom. You can visit his blog at <http://healthmaven.blogspot.com>