

# HIGH On Health?

**ANNA-MARIE CASAS**  
INVESTIGATES  
WHETHER CAFFEINE  
IS OUR HEALTH  
FRIEND OR FOE

**Brits are currently estimated to drink a whopping 2.1 billion coffees and 874 million cups of tea each year - and that's just when we're out and about. Recent research carried out by retail industry analysts NPD Group, says that one of the main factors contributing to our thirst for caffeine is the continuing expansion of high street chain coffee shops. So what do we know about controversial caffeine, derived from more than 60 plant sources and which, along with coffee and tea,**

**is found in chocolate, some soft drinks and over-the-counter medicines? And if we're consuming more and more of it, what is it doing to our health?**

In a scientific nutshell, caffeine is a central nervous system stimulant that prevents the onset of drowsiness by blocking the chemical, adenosine, which regulates our cycles of sleeping and waking. The European Food Safety Authority concludes that up to 400mg of caffeine (roughly five cups of coffee a day) appears to be safe for most healthy adults.

However, consuming more than that may lead to insomnia, nervousness, restlessness, irritability, stomach upset, fast heartbeat and muscle tremors.

Caffeine can be mildly addictive, which means that you might experience symptoms such as sleepiness, headache and twitchiness if you try to kick the habit. The American Psychiatric Association has even listed caffeine withdrawal as a mental health disorder!

If you feel you're having too much, specialist dietitian Nichola Whitehead has some advice: "Green tea contains less caffeine than black tea and coffee, so is a good alternative if you're trying to reduce your caffeine consumption. Fruit teas are caffeine-free and barley coffee is also a naturally caffeine-free alternative. You could try decaffeinated or alternate with caffeinated and decaffeinated tea or coffee.

"Make sure to get enough sleep (seven to eight hours a night) as well as adequate rest, daily activity and eat a healthy diet so that you don't rely on caffeine to stay awake. Use it only when needed, for example, before a workout to improve performance or if you've had a lack of sleep one night.

"Try to avoid having caffeine after 3pm if you think it may be affecting your sleep. Tea and coffee can also impair iron absorption, so if you're eating a food rich in iron, for example beef, have your hot drink at least 30 minutes after foods."

It seems that the pros of caffeine consumption, like with so much, lie in moderation and results of research in favour of caffeine are mounting. Chris Stemman, Executive Director of the British Coffee Association, says: "Coffee is one of the most heavily researched products in the world and the overwhelming weight of scientific information shows that moderate coffee consumption, that's 4-5 cups per day (400mg caffeine), can contribute to a healthy, balanced, diet and may confer some health benefits."



## Caffeine for life longevity

The latest study by Stanford University of Medical Science in California has shown that caffeine could prevent age-related inflammation in blood vessels, lowering the risk of heart disease. Mark Davis, professor of microbiology and immunology at Stanford University, says: "Our findings show that an underlying inflammatory process, which is associated with ageing, is not only driving cardiovascular disease but is, in turn, driven by molecular events that we may be able to target and combat."

"That something many people drink - and actually like to drink - might have a direct benefit came as a surprise to us. What we've shown is a correlation between caffeine consumption and longevity."

## Caffeine for better memory

Caffeine is well known to increase alertness and help keep minds focused, but researchers at Johns Hopkins University in the US have discovered that caffeine could improve memory at least up to 24 hours after it was consumed.

The study, which involved showing participants a series of pictures of objects over two days, found that memory performance was improved among those given caffeine compared with those who were caffeine-free. Memory was enhanced after a 200mg dose (two to three coffees), compared with 100mg, but there was no further improvement after 300mg.

## Caffeine for physical performance

Want to achieve that personal best? Then hit the gym after a caffeine boost. An optimum dose of 100-200mg has been shown to significantly improve exercise performance, focus and fat burning.

Rob Suchet, owner and head coach at HEALTH, says: "Caffeine peaks at 60-90 minutes after ingestion, so it should be taken at least one hour before training. A single shot of espresso contains about 70mg, black tea 50mg, green tea 30mg and caffeine capsules typically contain 100 to 200mg. So a double espresso



an hour or two before training should produce the desired effect."

However, he adds: "Caffeine should not be consumed after training as it adds to the adrenal load, already elevated from training. This causes catabolism, a state of muscle wastage and fat storage - the opposite to what most people are trying to achieve by training."

## Caffeine to lower type 2 diabetes

If you skip sugar, drinking five cups of coffee a day may help cut your risk of developing type 2 diabetes by half according to research. This may be in part due to coffee's high level of antioxidants.

Harley Street nutritionist Rhiannon Lambert says: "Type 2 diabetes is characterised by elevated blood sugars due to resistance to the effects of insulin. Interestingly, consuming caffeine appears to significantly reduce the risk of developing this disease, with some studies suggesting that coffee drinkers are up to 23-67 per cent less likely to become diabetic."

## Caffeine to reduce your cancer risk

According to The American Cancer Society, people who drink more than four cups of caffeinated coffee every day have a 49 per cent lower risk of developing mouth and throat cancers than those who drink it now and again. Three cups of coffee a day could reduce the risk of liver cancer by up to half, research by the Italian Istituto di Ricerche Farmacologiche Mario Negri has shown. And in a study published in the *Journal of the National Cancer Institute*,

those who drank four cups of coffee a day had a decreased risk of developing the skin cancer, malignant melanoma.

## Parkinson's and dementia

Harvard researchers in the US have discovered that drinking four or five cups of coffee a day may cut the risk of Parkinson's disease by half. Research has also shown that caffeine might have preventative powers in staving off dementia, while another study revealed that people consuming more than 175mg of caffeine a day may be 26 per cent less likely to show signs of cognitive impairment or dementia. But the jury is still out.

Claire Bale, Head of Research Communications at Parkinson's UK, says: "These findings are interesting, but we need to see more evidence from larger clinical trials before we can recommend that people with Parkinson's should drink more coffee. Although many of us take caffeine on a daily basis, we need to remember that it is a drug and can have side effects, especially if you're someone who isn't used to it."



## Our Experts



Nichola Whitehead is a registered specialist nutritionist (nicsnutrition.com)



Rhiannon Lambert is a Harley Street nutritionist and author of *Re-Nourish, the Definitive Guide to Optimum Nutrition* (rhitrition.com)



Rob Suchet is owner and head coach at HEALTH personal training (health-bath.co.uk)