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Addiction, Health

Decaf coffee reduces caffeine withdrawal – even when you know it's decaf

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By Matthew Warren

If you are a regular coffee drinker, you're probably familiar with the unpleasant feelings that come after a long period without a hit of caffeine. Headaches, grogginess, irritability – these are all symptoms of caffeine withdrawal. The obvious solution is, of course, to make yourself a fresh cup of coffee, and let the cycle of caffeine addiction continue.

But what if there was a way of getting rid of those symptoms without ingesting more caffeine? A new study in the *Journal of Psychopharmacology* finds that even drinking decaf coffee can combat symptoms of withdrawal. And although this effect was strongest when participants in the study falsely believed that they were drinking regular coffee, it still occurred even when they were fully aware they were drinking decaf.

Llewellyn Mills from the University of Sydney and colleagues recruited 61 heavy coffee drinkers to take part in the research (in this case "heavy" consumption meant at least three cups per day). All participants abstained from caffeine for 24 hours, and were then brought in to the lab to complete a series of questionnaires. First, they were asked how much they would expect various drinks – including coffee, decaf and water – to reduce caffeine withdrawal symptoms. They then rated the extent to which they were currently experiencing various symptoms of caffeine withdrawal (e.g. fatigue, nausea, headache, and so on).

Participants in two groups then drank a coffee, which was freshly made in front of them. Both groups drank coffee made from decaf beans, but only one of the groups was told that it was decaf – the other was falsely told that it was caffeinated. A third group just drank water. After 45 minutes, participants again completed the questionnaire about their current experience of withdrawal symptoms.

Unsurprisingly, participants in the water group experienced similar levels of withdrawal symptoms before and after having a drink. Those who thought they had been drinking caffeinated coffee, however, reported significantly less severe withdrawal symptoms at the second time point – a classic example of a placebo effect.

But most intriguingly, participants who knew they had drunk decaf coffee still experienced a significant drop in withdrawal symptoms. This effect wasn't as [illegible]s in the group who thought they were getting caffeine, but still [illegible]ıtial (the two groups dropped by 18.1 and 9.5 points on the withdrawal symptoms scale respectively, which the authors say are meaningful effects

given the normal range of scores on the scale).

In other words, decaf coffee decreased symptoms of withdrawal even though it had no active ingredient, and this was true even when participants knew they were drinking decaf.

It could be that participants expected decaf coffee to reduce withdrawal symptoms, and so in a kind of self-fulfilling prophecy it did so (indeed, expectancies are an important part of the placebo effect). However, further analysis showed that this was not the case. Remember that at the beginning of the study, participants rated how much they expected symptoms of withdrawal to be reduced by different drinks, including decaf coffee. Among those who knew they were drinking decaf, people's expectations about the effects of decaf didn't predict how much their withdrawal symptoms decreased.

Instead, the authors suggest that the effect is the result of conditioning that comes from years of experience with coffee. Normally, all of the sensations that are part of the experience of drinking coffee – the sound of the coffee maker, the smell of the beans, the warmth of the cup – are soon followed by the physiological effects that you get from ingesting caffeine, including a reduction in withdrawal symptoms. After experiencing this association time and time again, those sensations end up reducing withdrawal symptoms themselves, even when drinking a decaf coffee.

The study suggests that placebos could potentially help to treat withdrawal symptoms when people are trying to give up other drugs. It's unethical for medical professionals to deceive patients who are recovering from addiction by giving them a placebo when they think they are getting, say, methadone. But patients might benefit from open-label placebos, where they know they are getting an inert drug, much like the group in the study who knew they were drinking decaf. For instance, the authors suggest that open-label placebos could be used while someone gradually decreases the dose of a drug, in order to reduce the withdrawal symptoms they experience.

Of course, this study only looked at caffeine withdrawal, and further work will be needed to see whether open-label placebos also reduce withdrawal symptoms in other, more serious forms of addiction. Still, the authors co[illegible]de, "our findings suggest that integrating conditioning procedures into clinical interventions for addiction may offer promising new ways of re[illegible]ng withdrawal and improving the outcomes of existing interventions."


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