

## Study sparks energy drink warning

February 3 2016, by Kate Bourne

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Drinking more than two energy drinks per day is associated with adverse heart reactions, including palpitations, a raised heart rate and chest pain.

In a paper published in *International Journal of Cardiology*, researchers surveyed patients aged 13-40 attending a [hospital emergency department](#) in South Australia with heart palpitations, and found 70 per cent had previously consumed some sort of energy drink.

Co-author on the paper, the University of Adelaide's Dr Scott Willoughby, said the study found a direct link between energy drink consumption and hospital admissions for adverse heart reactions.

"Of the patients surveyed, 36 per cent had consumed at least one energy drink in the 24 hours prior to presenting at the hospital and 70 per cent had consumed some sort of energy drink in their lifetime," Dr Willoughby said.

"Eight of these patients had consumed a large quantity (more than five drinks), with one patient having consumed 12 energy drinks with alcohol.

"Those patients who were heavy consumers of energy drinks were found to have a significantly higher frequency of heart palpitations than those who consumed less than one per day.

"And, importantly, fast heartbeat, [heart palpitations](#) and [chest pain](#) was seen in energy drink consumers who were healthy and had no risk factors for heart disease."

The patients were surveyed at Lyell McEwin Hospital in South Australia in 2014 and 2015.

Dr Ian Musgrave, from the University of Adelaide's Discipline of Pharmacology, said there had been increasing concern that the consumption of energy drinks could lead to harm, particularly when mixed with alcohol.

"Energy drinks have become enormously popular in the past decade and half are consumed extensively by people who wish to reduce fatigue, increase wakefulness, and improve concentration and performance," Dr Musgrave said.

"Different brands of energy drinks contain different ingredients, but most of them combine high levels of caffeine with large quantities of sugar as well as vitamins and herbal extracts.

"Caffeine is one of the safest stimulants we know about but it looks like caffeinated drinks are more problematic for people with pre-disposed heart conditions than they are for normal people.

"People are unlikely to slam down seven espressos one after the other but people are more likely to – especially under the influence – misuse energy drinks in that way.

"One of the problems with alcohol is that not only does it reduce your ability to make sensible decisions about energy drinks, it actually slows the breakdown of caffeine in energy drinks and therefore is likely to increase the concentration to levels which may be dangerous.

Dr Musgrave said the study highlighted the need for education about the dangers of consuming above the recommended maximum quantities of energy drinks, which were generally two a day.

He said it also showed there could be a group of people that had some genetic pre-disposition to irregular heartbeat, which was not apparent until they had been stimulated with caffeine.

"Heart palpitations are taken quite seriously because they can lead to arrhythmia and you can go into cardiac arrest," Dr Musgrave said.

"Anyone feeling unwell after consuming [energy drinks](#) should seek medical advice."

**More information:** Maureen Busuttill et al. A survey of energy drink consumption among young patients presenting to the emergency department with the symptom of palpitations, *International Journal of Cardiology* (2016). [DOI: 10.1016/j.ijcard.2015.11.118](https://doi.org/10.1016/j.ijcard.2015.11.118)

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