

Drink Less Coffee? Have a Heart!

By ACSH Staff — March 13, 2006

A recent study appeared in the *Journal of the American Medical Association*, the results of which [implicated coffee drinking in the causation of heart attacks](#) [1].

The authors analyzed over 4,000 people in Costa Rica over a period of ten years, half of whom had survived a first heart attack. They further studied these subjects to determine if they were genetically inclined to be rapid degraders of caffeine or had a gene causing slow metabolism of caffeine (the primary source of caffeine intake in Costa Rica, as it is worldwide, is from coffee).

The authors discovered that, among the over 50% who had the slow-metabolism gene, heart attacks were increased in a dose-dependent manner according to how much coffee was consumed daily, with the "over four cups daily" group having a 64% increased risk of a first heart attack. Among those slow-caffeine-metabolizers under age fifty-nine, the increased risk was even starker: their risk more than doubled.

What's the lesson we should take away from this seemingly rigorous study -- cut down or stop drinking coffee? No way, you may say (I too am devoted to coffee, but not addicted...although I do get a bit shaky if -- never mind!). One serious issue that allows me to quibble with the dire warnings some have issued based on this study, is the fact that this is a retrospective study. In other words, it was based on a diet-recall questionnaire, rather than data from a prospective, controlled trial. It is a well-known epidemiological dictum that such a study is not as powerful a conveyor of scientific evidence as the "gold standard" of a randomized, prospective study. In that kind of study, subjects would be randomly divided into coffee-drinkers and non-drinkers and followed for a number of years into the future, with occurrences of the condition in question (first heart attack, in this case) later being tabulated.

Also, there have been several other studies that attempted to evaluate possible links between coffee intake and heart disease, and the results have been variable. Caffeine can increase blood pressure but only for a short time. There is no other biologically plausible reason why coffee should cause heart or other vascular effects.

The current alarm reminds me, a little, of a previous scare about coffee. Back in 1981, a Harvard scientist did a similar retrospective-type analysis of patients with cancer of the pancreas and published his findings in the *New England Journal of Medicine* -- a journal whose respect among scientists and physicians matches that of the *Journal of the American Medical Association* (see more on the topic in [the ACSH publication *Facts Versus Fears*](#) [2]). He found that there was a two- to threefold increase in pancreatic cancer among those who drank two or more cups of coffee daily. This finding was never validated despite multiple other studies trying to do so. Coffee aficionados heaved a sigh of relief...and I believe we'll now see a similar pattern of alarm followed by relief, when follow-up studies fail to confirm a coffee/heart attack link. Scientific evaluation will

eventually lead to the truth.

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