

## New heart risk from too much coffee?

In recent years, Dutch scientists have shown that the oils in unfiltered coffee can spike concentrations of cholesterol in the blood, offering one explanation for the oft-observed link between heavy consumption of the brew and heart disease (SN: 9/16/95, p. 182). Now, Norwegian scientists have stumbled onto a second risk from drinking too much java—regardless of how it's brewed.

Ottar Nygård of the University of Bergen and his colleagues were studying homocysteine, an amino acid that in high concentrations is known to increase the risk of heart disease (SN: 10/21/95, p. 264). Homocysteine forms during the breakdown of other amino acids but is itself ordinarily broken down by B vitamins in the diet, such as folate, so that toxic excesses don't develop. Certain lifestyle factors, however—especially cigarette smoking and diets low in fruits and vegetables—can foster a buildup of homocysteine in the blood.

Hoping to find the factors underlying this cardiovascular risk, Nygård's team correlated lifestyle data from 16,000 men and women with its measurements of homocysteine in the subjects' blood.

The big surprise, Nygård told Science News, was homocysteine's link to coffee. "We found it quite by chance."

As average coffee consumption increased in this group of 40- to 67-year-olds, so did homocysteine in the blood. Moreover, the link appeared independent of any other effect of diet, smoking, exercise, or vitamin supplementation. The additive effect of coffee and smoking may explain why epidemiological studies have frequently shown them to be a "particularly unfavorable" pairing in terms of heart attack risk, Nygård and his colleagues suggest in the January *American Journal of Clinical Nutrition*.

Only people who regularly chose decaffeinated coffee—less than 2 percent of the coffee drinkers—showed no coffee-homocysteine link. This "may point to a possible influence of caffeine," the researchers say. They found no homocysteine association with tea.

Though even moderate coffee drinking increased homocysteine concentrations, "I don't think there's any health risk with low consumption—one or two cups a day," Nygård says.

Julie R. Palmer, an epidemiologist at Boston University's School of Public Health in Brookline, Mass., says the Norwegian study "is interesting because the association between coffee and coronary heart disease that's been observed in so many studies hasn't been satisfactorily explained in terms of mechanism."

A study she published 2 years ago found that heart attack risk climbed with coffee consumption in a group of more than 1,700 women, most of them postmenopausal. Those regularly downing 10 cups per day were 2.5 times as likely to suffer a heart attack as those averaging less than one cup.

However, she believes even the new data indicate "there's nothing to worry about for fewer than five cups per day."

Meir J. Stampfer also finds the Norwegian results interesting. An epidemiologist at the Harvard School of Public Health in Boston, he and others have found homocysteine to be a potent cardiovascular risk factor, but he says the new results "shouldn't be seen as casting coffee in a bad light." Filtered coffee's risk to health was resolved by earlier experiments, he states: "There is none," at least in the quantities typically drunk.

Nygård acknowledges that "in the United States, they have had trouble finding any harmful effect of coffee," despite the strong link seen in Scandinavia. He speculates that "the difference may be explained by vitamin intake." If U.S. coffee drinkers eat enough folate and B vitamins, which Scandinavians probably do not, "their diet may offset any risks posed by coffee."

So the solution for coffee lovers may prove as simple as supplementing their diet with B vitamins. However, Nygård cautions, "we don't know that yet."

— J. Raloff