

## Good news for coffee fans

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*Three studies have been published, in quick succession, which indicate that regular consumption of coffee is associated with a decreased risk of premature death and can also prevent recurrence in patients who have survived a heart attack.*

**Coffee beans** are plant products of extreme complexity, containing no less than 800 distinct phytochemical compounds noted for several biologically important activities. Amongst these, we should mention the diterpenes cafestol and kahweol which accelerate the elimination of carcinogenic substances, caffeic and chlorogenic acids which possess strong antioxidant activities, as well as a panoply of other polyphenols with positive effects that have been well-documented. Consequently, even if coffee is particularly known (and appreciated) for its caffeine content with its stimulative properties, the presence of these bioactive molecules demonstrates that this beverage can also exert beneficial effects on human health.

Two large-scale population studies which appeared this summer suggest that this is actually the case. In the first study (EPIC), researchers from the International Agency for Research on Cancer examined the link between coffee consumption and incidence of mortality in 451,743 participants (130,662 men and 321,081 women) living in Europe<sup>1</sup>. They found that the men and women who drank three or more cups of coffee each day had a risk of premature death that was decreased by 12% and 7%, respectively, compared to those who did not consume coffee.

Similar results were obtained in another large study, the Multiethnic Cohort (MEC), performed on 185,855 Americans of European, African, Hawaiian and Japanese origins<sup>2</sup>. In this study, the daily consumption of coffee was associated with a reduction of 18% in the risk of premature death.

### CARDIOVASCULAR AND HEPATIC DISEASES

The protective effects observed in these two studies are particularly striking when one examines the effects of coffee consumption on specific causes of mortality: for example, in the EPIC study, men who drank 3 cups of coffee daily had a risk of mortality linked to digestive diseases that was diminished by 60% compared to those who drank very little or no coffee. This decrease was primarily due to a very significant reduction (80%) in hepatic diseases such as cirrhosis (alcoholic and non-alcoholic). It thus seems that coffee has a beneficial effect on the liver, in agreement with a notable decrease in the blood levels of several enzymes used as markers for hepatic damage (ALP, ALT, AST and GGT) in those who regularly drank coffee.

In women, the consumption of coffee was also associated with a notable decrease in mortality due to digestive diseases (40% reduction) but the researchers also observed a significant reduction in mortality caused by circulatory diseases such as strokes (30%



reduction) and heart attacks (18% reduction). According to the analyses performed by the researchers, this protective effect could be linked to an increase in the levels of cholesterol-HDL (the good cholesterol) in coffee drinkers.

This decrease in the risk of cardiovascular diseases was also observed in the MEC study, with reductions of 25% in the risk of a heart attack and 28% in the risk of a stroke<sup>2</sup>, which strongly suggests that coffee exerts a particularly beneficial effect on cardiovascular health. It is also interesting to note that this protection was also observed in heart attack survivors, who are at high risk of recurrence: a Dutch study performed on 4,365 patients between the ages of 60 and 80, and who had suffered a heart attack during the previous ten years, found that those who consumed 2 to 4 cups of coffee per day had 31% less risk of experiencing another cardiovascular event<sup>3</sup>.

- (1) Gunter MJ et al. Coffee drinking and mortality in 10 European countries: A multinational cohort study. *Ann. Intern. Med.* 2017;167:236-247.
- (2) Park SY et al. Association of coffee consumption with total and cause-specific mortality among nonwhite populations. *Ann. Intern. Med.* 2017;167:228-235.
- (3) van Dongen LH et al. Coffee consumption after myocardial infarction and risk of cardiovascular mortality: a prospective analysis in the Alpha Omega Cohort. *Am. J. Clin. Nutr.* 2017;106:1113-1120.

### It's The Coffee, Not Caffeine

It is important to note that all of these protective effects were observed whether the coffee was regular or decaffeinated, indicating that it is the numerous phytochemical compounds present in the coffee beans which were responsible for the beneficial effects of this drink, and not the caffeine. Energy drinks, loaded with caffeine, are thus not a useful alternative to coffee because these drinks are completely bereft of any nutritional value and can even provoke diverse secondary effects when they are consumed in excessive quantities. It should also be noted that certain iced coffees sold by large chains are not recommended because these beverages can contain astronomical quantities of calories and are much more desserts than coffees.