



HEALTH BENEFITS OF COFFEE

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At a recent conference I learned some interesting scientific data concerning the health effects of coffee. In addition to the obvious fact that people enjoy its taste and the social interaction surrounding its use, there is now some significant evidence that it may have distinct benefits. This is not to say that all of coffee's effects are healthy. It certainly is a cardiac stimulant and if one is prone to arrhythmias, it may exacerbate them; it can also increase reflux as well as tremor and agitation.

On the other hand, everyone is aware of the increase in diabetes that is afflicting our society, and now it seems that coffee may have a role in preventing Type II Diabetes. A recent article in the *Rev Med Liege* of September 2007, Volume 62(9):554-9 synthesizes the results of recent prospective studies which assess the relative risk of developing Type II Diabetes according to coffee consumption. Most studies confirm a protective effect against Type II Diabetes, with some dose-response related to the degree of daily coffee consumption. The observed effect is rather impressive, with a relative risk among coffee drinkers of 0.40 to 0.70. The effect is present no matter the type of population studied, and it appears to be at least as great with decaffeinated coffee. These results suggest that the protective effect could not be attributed (at least exclusively) to caffeine, but rather that it could be due to other components, most probably chlorogenic acid or various anti-oxidants. The exact mechanism and its potential relevance to public health remain to be clarified.

The Nurses' Health Study II was a prospective cohort study of 88,259 U.S. women aged 26-46 years, with no history of diabetes at baseline. The study found that, after adjustment for confounders, the relative risk of Type II Diabetes in coffee drinkers compared to non-drinkers was 0.87 for up to 1 cup per day, 0.58 for 2 or 3 cups per day, and 0.53 for 4 or more cups per day (P for trend <0.0001). Associations were fairly similar for caffeinated and decaffeinated as well as for brewed (filtered) and instant coffee. When tea consumption of even 4 or more cups per day

was compared with no tea consumption, there was no significant effect on the risk of Type II Diabetes (P value only equaled 0.81).

A prospective study reported in *Arthritis Rheum* 2007, June;56(6):2049-55 looked at a large cohort of 45,869 men with no history of gout at baseline. Long-term coffee consumption was associated with a lower risk of incident gout: the relative risks according to coffee consumption of 0, <1, 1-3, 4-5 and 6 or more cups per day were respectively 1.00, 0.97, 0.92, 0.60 (95% confidence interval 0.41-0.87), and 0.41 (95% CI 0.19-0.88), (P for trend = 0.009). Decaffeinated coffee seemed to work almost as well.

Coffee use also seems to have a positive effect on chronic liver disease. In a study reported in the *British Journal of Cancer* 2007, August 6;97(3):426-8, the multivariate-adjusted odds ratio (95% CI) for mortality from hepatocellular carcinoma was 0.49 overall for daily coffee drinkers versus non-coffee drinkers. When analyzed separately in HCV-positive and HCV-negative individuals, it was 0.31, and 0.75 respectively.

Another article in *Gastroenterology* Vol. 129, Issue 6, December 2005, pages 1928-1936 also showed that coffee and tea protected against liver injury. Those who drank more than 2 cups per day had less than the half the chronic liver disease of those who drank less than a cup per day. Protection seemed limited to those at higher risk due to heavier alcohol intake, obesity, diabetes mellitus, or a high iron saturation. The *American Journal of Epidemiology*, Vol. 136, Issue 10, Page 1248-1257 reported that coffee drinkers (not tea drinkers) who consumed more than 4 cups per day had 1/5th the risk of developing alcoholic cirrhosis as non-coffee drinkers. (Cigarettes increased the risk of alcoholic cirrhosis).

Benefits reported in several other interesting studies include a lower prevalence of non-melanoma skin cancer in Caucasian women, and a lower risk of Parkinson's disease.

Once again, this is not to say that coffee is without negative effects. One article suggested that it might be prudent for pregnant women to limit coffee consumption to three cups per day, or no more than 300 mg/ day of caffeine, to exclude any increased probability of spontaneous abortion or impaired fetal growth.

The American Journal of Clinical Nutrition reported in 1997 that the diterpenes cafestol and (to a much lesser

extent) kahweol in coffee raise cholesterol. This effect is only seen with unfiltered coffee (Scandinavian, Turkish, and French Press styles of preparation), not with filtered coffee, because diterpenes are extracted by hot water and are retained by filter paper. All types of coffee appear to retain its other benefits, including inhibition of carcinogens.

Excuse me now while I add some filtered coffee to my Omega-3 rich tilapia as a healthy combination.

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Coffee colored sky
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