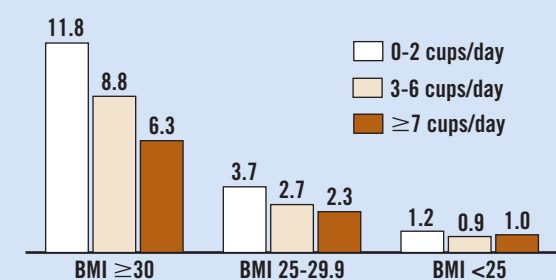


Relative Risk of Type 2 Diabetes According to Coffee Consumption and Body Mass Index



Note: Data from a prospective follow-up study of 21,385 subjects.

Source: International Journal of Obesity

ELSEVIER GLOBAL MEDICAL NEWS

Coffee May Lower Type 2 Risk

BY MELINDA TANZOLA
Contributing Writer

Coffee consumption appears to significantly reduce the risk of developing type 2 diabetes over a 13-year period, according to a prospective follow-up Finnish study.

Drinking at least seven cups of coffee per day reduced the risk of type 2 diabetes by 39%, com-

pared with drinking up to two cups per day, after adjusting for confounding factors in this study of 21,385 Finnish individuals (48% men) aged 35-74 without coronary heart disease or stroke (Int. J. Obes. 2006;30:1742-9).

The risk reduction with high coffee consumption was higher for women (48%) than for men (36%). Drinking three to six cups per day reduced the risk by 29%

in women and 23% in men. The incremental risk reductions for each daily cup of coffee consumed were 9% for women and 3% for men.

Overall, 964 cases of type 2 diabetes were identified in the study. High levels of physical activity reduced the risk by 50% in men and 45% in women, compared with low levels of physical activity, after adjusting for confounding factors. Moderate activity provided risk reductions of 38% and 20%, respectively.

Body mass index (BMI) was significantly associated with type 2 diabetes, while alcohol appeared to have a protective effect. The risk reductions with consuming more than 100 g of alcohol per week were 26% and 77% for men and women, respectively, while the risk reductions from drinking 1-100 g per week were 9% and 26%, respectively.

The authors noted that coffee drinking reduced the risk of type 2 diabetes across all levels of BMI, physical activity, and alcohol consumption.

Coffee consumption was inversely correlated with blood pressure, education, and consumption of tea, alcohol, and fruits and vegetables. Among obese individuals, drinking at least seven cups of coffee per day decreased the relative risk of type 2 diabetes by almost half (see box).

Coffee consumption correlated with bread consumption and current smoking and was inversely correlated with blood pressure, education, low levels of physical activity, and consumption of tea, alcohol, and fruits and vegetables.

Lead author Dr. Gang Hu and colleagues of the National Public Health Institute in Helsinki suggested multiple potential mechanisms for the protective effects of coffee, including the thermogenic effects of caffeine, the presence of magnesium in coffee, and various effects of coffee in the gastric tract.

The authors noted several limitations to their study, including the fact that glucose tolerance tests were not performed with either baseline or follow-up surveys; "therefore, we could have missed some cases of asymptomatic and diet-treated diabetes, although the clinical diagnosis of diabetes from the hospital discharge register may in part avoid this potential underdiagnosis," they wrote. "Another source of misclassification may be that we used self-report for data on coffee intake. Misclassification is inevitable and usually results in a biased estimate of the association of exposure and risk of type 2 diabetes."

The authors also noted that they did not assess the effect of caffeine on diabetes risk because they did not have information available about the subjects' consumption of cola and chocolate. Finally, "we cannot completely exclude... some unmeasured factors, including coffee additives ([such as] sugar and milk), and several dietary factors," they wrote. ■



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