

NATIONAL INSTITUTES OF HEALTH

NIH News Release

National Institute on Alcohol Abuse and Alcoholism

National Heart, Lung, and Blood Institute

FREQUENCY OF LIGHT-TO-MODERATE DRINKING REDUCES HEART DISEASE RISK IN MEN

A 12-year study of 38,077 male health professionals found that men who drank alcohol three or more days per week had a reduced risk of heart attack compared with men who drank less frequently. Men who drank less than one drink a day had similar risk reduction to those who drank three.

Many epidemiologic studies have reported that moderate drinking -- for men two drinks a day -- is associated with a reduced risk of heart disease. This study looked at the relationship between quantity and frequency and found that it was the frequency of drinking -- not the amount, the type of alcohol, or whether or not it was consumed with a meal -- that was the key factor in lowered heart disease risk. Compared with men who drank less than once a week, men who consumed alcohol three or four days a week had approximately 2/3 (68 percent) the risk of heart attack, and men who consumed alcohol five to seven days per week had slightly less (63 percent) the risk. Study data suggested no additional cardiac benefit to drinking more than 2 drinks a day. Also, the study authors point out that the small number of study participants who drank roughly three and a half or more drinks (50 or more grams of alcohol) per day limited their ability to study the harmful effects of heavy drinking. However, heavy drinking has well documented adverse health effects.

The study, published in this week's "New England Journal of Medicine", was based on an analysis of data from the Health Professionals Follow-up Study, which has followed a population of male dentists, veterinarians, optometrists, osteopathic physicians, and podiatrists, ages 40 to 75, for 12 years. Kenneth J. Mukamal, M.D., M.P.H., at Beth Israel Deaconess Medical Center, was lead author for the project, which included scientists from the University of Sydney, Sydney, Australia; the Harvard School of Public Health, Boston; Brigham and Women's Hospital, Harvard Medical School, Boston; and the Massachusetts General Hospital, Boston. The National Institute on Alcohol Abuse and Alcoholism (NIAAA), the National Heart, Lung, and Blood Institute (NHLBI), and the National Cancer Institute, all components of the federal government's National Institutes of Health, supported the study.

NIAAA director Ting-Kai Li, M.D., said, "This rigorously conducted observational study adds to the epidemiologic evidence of a strong association between light-to-moderate alcohol consumption and reduced risk of heart disease. Only by research on the mechanisms of alcohol's effects on the cardiovascular system, and perhaps the liver, and the genetic background of how individuals respond to alcohol, will we provide a scientifically informed means for assessing the risks and benefits of alcohol use on a person-to-person basis."

NHLBI director Claude Lenfant, M.D., said, "There are well-proven ways to prevent cardiovascular disease and reduce its risks, including lowering cholesterol levels and blood pressure, maintaining a healthy weight, being physically active, and stopping smoking. These preventive measures do not have the risks associated with alcohol consumption. Therefore, we do not advise the public to begin drinking alcohol to prevent heart disease. However, those who

already drink alcohol should be aware that current evidence suggests that moderate drinking may reduce the risk of heart disease in some individuals."

At entry into this study, all participants had to be free of heart disease. Participants in the study completed questionnaires on diet every four years. Investigators confirmed the validity of the questionnaire responses by comparing them with seven-day dietary records in 127 participants. The investigators controlled for numerous health and dietary factors, including smoking, exercise, diet, and family history of premature heart attack. Also, because alcohol use changes over time, and the effects of alcohol may be short-term, the study tracked the effect of recent versus baseline alcohol consumption, and found that the level of risk was more strongly related to recent, rather than past, consumption.

By the end of the 12-year follow-up, the investigators had documented 1,418 heart attacks. Men who consumed alcohol three or more times a week had a reduced risk of fatal or nonfatal heart attack, even when the amount consumed was only 10 grams of alcohol a day or less. A standard drink - a 12-ounce bottle of beer, a 5-ounce glass of wine, or 1.5 ounces of 80-proof distilled spirits - has between 11 and 14 grams of alcohol. Dr. Mukamal, the study's lead author, said, "We found little difference among different alcoholic beverage types in our study. This further emphasizes the role of frequent intake, rather than any specific beverage type, in the link between moderate drinking and heart attack risk."

In an accompanying editorial, Ira J. Goldberg, M.D., of the Columbia University College of Physicians and Surgeons, New York, points out that some studies show a reduction in cardiovascular disease, but not overall mortality, in patients who drink alcoholic beverages (this study did not report on overall mortality). He notes that alcohol has toxic effects that are well established and that additional research is needed to inform physicians on how to advise their patients.

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The paper, "Roles of Drinking Pattern and Type of Alcohol Consumed in Coronary Heart Disease in Men," appears in the January 9, 2003 issue of "The New England Journal of Medicine" 348(2): 109-118. An accompanying editorial appears on pages 163-164.

The "Dietary Guidelines for Americans", issued jointly by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services, defines moderate drinking for men as no more than 2 drinks per day. The "Guidelines" can be viewed on-line at the website <<http://www.nutrition.gov>>.

The National Institutes of Health (NIH) is the Federal Government's primary agency for biomedical and behavioral research. NIH is a component of the U.S. Department of Health and Human Services.

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