Medical Xpress

Study further illuminates heart-healthy benefits of Mediterranean diet

March 31 2014

New research further illuminates the heart-healthy benefits of the Mediterranean diet, tying the eating plan to lower levels of platelets and white blood cells, two markers of inflammation. Inflammation has an association with greater risk of heart attack and stroke. Study, results are published online today in *Blood*, the Journal of the American Society of Hematology (ASH).

The Mediterranean diet, characterized by generous servings of foods such as greens, whole grains, fish, and olive oil, has long been hailed as a heart-healthy eating plan. While the link between the diet and a reduction in inflammation has been established, the connection between the eating plan and levels of platelets and white blood cells, two specific inflammatory markers in the body, has remained unclear. Specifically, high platelet counts are associated with both vascular disease and non-vascular conditions such as cancer, and a high white blood cell count is a predictor of ischemic vascular disease.

In order to understand whether a diet rich in healthy compounds might favorably influence platelet and white blood cell levels, investigators conducted an analysis of the eating habits of nearly 15,000 healthy Italian men and women ages 35 or older as part of the large epidemiological "Moli-sani" study, named for the inhabitants of the Molise region of Central and Southern Italy.

"We undertook this study to understand the correlation between consuming a Mediterranean diet and specific health markers, including

platelet levels and white blood cell counts, which can more specifically explain the diet's benefits in reducing the long-term risk of cerebral and heart disease or other chronic conditions," said lead study author Marialaura Bonaccio, PhD, of the Department of Epidemiology and Prevention at the IRCCS Istituto Neurologico Mediterraneo NEUROMED in Italy.

All participants were evaluated at baseline and were considered to be healthy. Total platelet counts and white blood cell counts were measured and participants were grouped according to their levels (low, normal, or high), based on age- and gender-specific cut-offs. Participants with high platelet levels were younger and had a greater incidence of high cholesterol and increased levels of common inflammation marker C-reactive protein when compared to those in the normal or low platelet categories. Individuals in the high white blood cell category were mainly younger, male, and smokers, and had a higher body-mass index and higher levels of C-reactive protein and blood glucose than those in the other groups. They also showed higher prevalence of high blood pressure and high cholesterol.

Study participants' adherence to a Mediterranean diet was determined based on results of two dietary scoring systems, the Mediterranean diet score (MDS) or the Italian Mediterranean Index (IMI), which helped to accurately determine intake levels and portion sizes. Upon review of the data, investigators observed that consumption of the Mediterranean diet was directly related to lower levels of platelets and white blood cells, which in turn correlated to lower levels of inflammation. When compared with participants who did not follow the eating plan as closely, those who strictly followed a traditional Mediterranean diet were less likely to belong to study cohorts with relatively high platelet counts and were more likely to belong to cohorts with relatively low white blood cell counts.

"Because the study included healthy participants, the lower levels of platelets and white blood cells in those who were more strictly consuming a Mediterranean diet indicate that this eating plan could account for substantial changes within normal ranges of variability. This is an important finding that has implications for how these anti-inflammatory markers are tracked among the general population," added Dr. Bonaccio.

The researchers also evaluated the role of specific components of the diet to help clarify the observed correlation, including food antioxidant content and fiber intake, both of which have previously been connected to cardiovascular benefits. These components only partially accounted for the link between the diet and white blood cell count, but did not fully explain the correlation to platelet levels.

"An important finding of this study is that it indicates that the Mediterranean diet as a whole, and not just a few specific ingredients, is likely responsible for the beneficial health outcomes among the healthy population and should be encouraged as part of healthy eating habits," said Dr. Bonaccio. "Building on these important findings, we continue to study this population to determine if the dietary habits may have an influence on cardiovascular disease-related mortality."

Provided by American Society of Hematology

Citation: Study further illuminates heart-healthy benefits of Mediterranean diet (2014, March 31) retrieved 17 May 2024 from https://medicalxpress.com/news/2014-03-illuminates-heart-healthy-benefits-mediterranean-diet.html