Modified Mediterranean Diet Reduces Fatty Liver Disease

A diet that includes aquatic plants and green tea and less red meat could lower the occurrence of NAFLD.

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Adhering to a modified Mediterranean diet rich in plant-based polyphenols may help reduce liver fat accumulation and the development of non-alcoholic fatty liver disease (NAFLD), according to findings reported in the journal Gut.

Some 25% of the global population has NAFLD, a greater than 5% increase in liver fat. NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. As a result of inflammation, NAFLD can lead to the buildup of scar tissue (fibrosis), cirrhosis and even liver cancer. With no effective approved medical therapies, disease management is dependent on lifestyle changes, such as weight loss and exercise.

Iris Shai, PhD, of Ben-Gurion University of the Negev in Israel, and colleagues explored the effect of a modified Mediterranean diet on liver fat.

As part of the 18-month DIRECT-PLUS randomized clinical trial (NCT03020186), the team split up 294 participants with abdominal obesity or abnormal blood lipid levels into three groups that were assigned to one of three diets: standard healthy dietary guidelines (HDG), a Mediterranean diet (MED) or a modified green-Mediterranean diet (green-MED), all along with physical activity.

For the green-Mediterranean diet, participants ramped up their intake of Mankai (a polyphenol-containing aquatic plant), green tea and walnuts and reduced their consumption of red and processed meats.

The researchers assessed any changes in liver fat over an 18-month period with the help of proton magnetic resonance spectroscopy, a noninvasive technique.

Around 88% of the study population was male, and the average age was 51 years. The median liver fat value at baseline was 6.6%, and some 62% of the study population had NAFLD.

Over the study period, 90% of the participants completed the trial.

The team found that NAFLD prevalence fell to 55% in the HDG group, 48% in the MED group and 32% in the green-MED group. Even though the weight loss for the two groups following a Mediterranean diet was similar, the green-MED group had twice as much liver fat loss. Liver fat declined by 39% in the green-MED group, compared with 20% in the MED group and 12% in the HDG group.

Further, individuals in the groups that consumed a Mediterranean diet had higher levels of polyphenols in their blood compared with the HDG group.

Greater liver fat loss was independently associated with increased Mankai and walnut intake, decreased red or processed meat consumption, improved levels of serum folate, adipokines (hormones produced by fat tissue) and lipid biomarkers and favorable changes in gut microbiome composition, according to the study authors.

“The new suggested strategy of green-Mediterranean diet, amplified with green plant-based proteins/polyphenols as Mankai, green tea, and walnuts, and restricted in red/processed meat can double [intrahepatic fat] loss [compared with] other healthy nutritional strategies and reduce NAFLD in half,” they wrote.

Click here to read the study in Gut.

Click here to learn more about NAFLD and NASH.

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