

New insights into how natural antioxidants fight fat

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Scientists in Taiwan report new insights into why diets rich in fruits and vegetables reduce the risk of obesity. Credit: Courtesy of USDA-Agricultural Research Service, Peggy Greb

Scientists in Taiwan are reporting new insights into why diets rich in fruits and vegetables reduce the risk of obesity. Their study, scheduled for the Oct. 17 (current) issue of ACS' *Journal of Agricultural and Food Chemistry*, a bi-weekly publication, focuses on healthful natural antioxidant compounds called flavonoids and phenolic acids.

In the study, Gow-Chin Yen and Chin-Lin Hsu point out that large amounts of those compounds occur in fruits, vegetables, nuts and plant-based beverages such as coffee, tea, and wine.

Scientists long have known that flavonoids and phenolic acids have beneficial health effects in reducing the risk of heart attacks, cancer, obesity, and other disorders. However, there has been uncertainty about exactly how these compounds affect adipocytes, or fat cells.

The researchers studied how 15 phenolic acids and six flavonoids affected fat cells in laboratory cultures of mouse cells. Their results showed that fat cells exposed to certain antioxidants had lower levels of an enzyme that forms triglycerides and

accumulated lower levels of triglycerides — fatty materials which at high levels increase the risk of heart disease.

The findings suggest that these compounds could be effective in improving the symptoms of metabolic syndrome, a cluster of symptoms like obesity and high blood sugar that increase the risk of heart disease, the researchers said.

Source: ACS

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