



Grapes Guard Against Atherosclerosis in Animals

Grapes may help protect against the development of atherosclerosis, a thickening and hardening of the arteries that is a leading cause of morbidity and mortality worldwide, according to a recent study conducted at the Lipid Research Laboratory at Israel's Rambam Medical Center.* This finding may help account for epidemiological studies that have suggested a protective effect of red wine against heart attack.

In their study, the Israeli scientists used mice bred to develop atherosclerosis. Thirty mice were assigned to consume water alone, a placebo, or a polyphenol-rich, freeze-dried extract of fresh California grapes in drinking water for 10 weeks.

Consumption of grape powder reduced the atherosclerotic lesion area by 41% compared to the control and placebo groups. The anti-atherosclerotic effect was at least partly due to a significant 8% reduction in serum oxidative stress and an increase in serum antioxidant capacity of as much as 22%. Furthermore, the grape powder protected both plasma LDL (low-density lipoprotein) and macrophages from oxidative stress.

"Grapes contain an abundance of powerful antioxidants that appear to inhibit an array of critical factors that can cause atherosclerosis," noted principal investigator Bianca Fuhrman. Phytochemicals called polyphenols may be responsible for the potent antioxidant effects of grapes.

—Elizabeth Wagner, ND

Reference

* Fuhrman B, Volkova N, Coleman R, Aviram M. Grape powder polyphenols attenuate atherosclerosis development in apolipoprotein E deficient (E0) mice and reduce macrophage atherogenicity. *J Nutr.* 2005 Apr;135(4):722-8.

Dietary Antioxidants May Mitigate Stroke Damage

Intake of antioxidant-rich foods reduces brain damage from ischemic stroke and improves post-stroke movement recovery in test animals, according to scientists at the National Institute on Drug Abuse in Baltimore, MD.¹

Previous studies have demonstrated that an antioxidant-rich diet protects aging animals from neurodegenerative changes. The Maryland study investigated a potential protective role of antioxidant-rich foods against ischemia, or lack of oxygen, as occurs with stroke.

For four weeks, adult rats were fed either a control diet or one supplemented with blueberry, spinach, or spirulina. Strokes were then surgically simulated in the rats. Those that received the blueberry-, spinach-, or spirulina-enriched diets had a significantly reduced volume of infarction in the cerebral cortex and an increase in post-stroke locomotor activity. Rats supplemented with blueberry or spinach had half as much brain damage as the control group, while the spirulina group had stroke lesions that were 75% smaller than those in the untreated group.¹

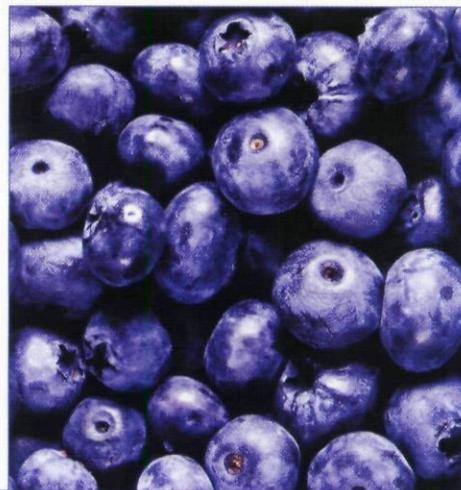
Fruits and vegetables are rich sources of antioxidants, and abundant intake of these plant-based foods has been reported to help improve health and reduce the incidence of disease.² Blueberries,

spinach, and spirulina are rich in phytochemicals—including carotenoids, flavonoids, and anthocyanins—and have demonstrated particularly powerful antioxidant and free radical-scavenging activity.^{2,3} The Maryland study suggests a role for antioxidant-rich foods in protecting the brain against the effects of stroke.¹

—Christie C. Yerby, ND

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