Cherries reduce risk for Type II Diabetics

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Altered hyperlipidemia*, hepatic steatosis**, and hepatic peroxisome proliferator-activated receptors in rats with intake of tart cherry.

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Elevated plasma lipids, glucose, insulin, and fatty liver are among components of metabolic syndrome, a phenotypic pattern that typically precedes the development of Type 2 diabetes. Animal studies show that intake of anthocyanins reduces hyperlipidemia, obesity, and atherosclerosis and that anthocyanin-rich extracts may exert these effects in association with altered activity of tissue peroxisome proliferator-activated receptors (PPARs). However, studies are lacking to test this correlation using physiologically relevant, whole food sources of anthocyanins. Tart cherries are a rich source of anthocyanins, and whole cherry fruit intake may also affect hyperlipidemia and/or affect tissue PPARs. This hypothesis was tested in the Dahl Salt-Sensitive rat having insulin resistance and hyperlipidemia. For 90 days, Dahl rats were pair-fed AIN-76a-based diets supplemented with either 1% (wt:wt) freeze-dried whole tart cherry or with 0.85% additional carbohydrate to match macronutrient and calorie provision. After 90 days, the cherry-enriched diet was associated with reduced fasting blood glucose, hyperlipidemia, hyperinsulinemia, and reduced fatty liver. The cherry diet was also associated with significantly enhanced hepatic PPAR-alpha mRNA, enhanced hepatic PPAR-alpha target acyl-coenzyme A oxidase mRNA and activity, and increased plasma antioxidant capacity**. In conclusion, physiologically relevant tart cherry consumption reduced several phenotypic risk factors that are associated with risk for metabolic syndrome and Type 2 diabetes. Tart cherries may represent a whole food research model of the health effects of anthocyanin-rich foods and may possess nutraceutical value against risk factors for metabolic syndrome and its clinical sequelae.**

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*Hyperlipidemia: The medical term for high blood cholesterol and triglycerides is lipid disorder. Such a disorder occurs when you have too many fatty substances in your blood.

**Hepatic Steatosis: also called fatty liver; it is the collection of excessive amounts of triglycerides and other fats inside liver cells.