



The Power of Purple/Blue Fruits & Vegetables

Research shows most children, adolescents, and adults are not getting enough fruit in their diets.¹ Furthermore, the Produce for Better Health Foundation found that only 3% of Americans' fruit and vegetable intake is from the purple/blue category²—yet these fruits and vegetables contain natural antioxidant power³ and plant nutrients not found in many other colors of fruits and vegetables.⁴

According to an analysis of data from the National Health and Nutrition Examination Survey (NHANES 1999-2002), consuming purple/blue foods, such as Concord grapes and 100% juice made with Concord grapes, may help children and adults get more of the nutrients they need each day and have overall healthier diets.⁵ In adults, consumption of purple/blue produce was associated with a reduced risk of metabolic syndrome.⁵

Role of Purple/Blue Fruits & Vegetables in Good Health

Among the specific findings were that children and adults who consumed purple/blue fruits and vegetables versus those who did not had:⁵

- Significantly higher intakes of fiber and potassium—two nutrients of concern according to the 2010 Dietary Guidelines for Americans⁶—and also of vitamin C.
- Significantly lower levels of C-reactive protein (c-RP), a marker of inflammation.
- Significantly lower intakes of added sugars.

Also, despite having greater intake of total energy, adults who ate purple/blue produce also had significantly lower waist circumference measurements and body mass index (BMI)—indicators of heart health risk^{7,8}—and lower weight and systolic blood pressure. No significant differences in weight or BMI were seen between the groups of children.

The analysis also found that the most popular purple/blue fruits and vegetables consumed were: grapes, 100% grape juice, and raisins—accounting for almost 60% of purple/blue eating occasions.

100% Juicy Goodness

Similar results were seen when analyzing data of 100% grape juice drinkers vs. non-drinkers. That analysis found that children and adults who consumed 100% grape juice versus those who did not:

- Consumed more servings of fruit, and children had lower intakes of added sugar.
- Had higher intakes of vitamin C and potassium.
- Showed no differences in total energy (calories), weight, BMI or waist size (circumference).

These findings pertaining to body weight support the majority of studies reporting no association between drinking moderate amounts of 100% juice and overweight in healthy populations.⁹⁻¹²



According to the American Academy of Pediatrics and the *2010 Dietary Guidelines for Americans*, moderate consumption of 100% fruit juice can be part of a healthy diet.^{6,13} 100% fruit juice made with purple/blue fruit, such as Welch's 100% Grape Juice made with Concord grapes, can be a great complement to whole fruit. One 4-oz. glass counts as one serving (½ cup) of fruit, and Welch's 100% Grape Juice has no added sugar, color or flavor.

References:

¹ Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. June 15, 2010. Last Modified: July 13, 2010. (Accessed: Sept. 29, 2010).

² Produce For Better Health Foundation. State of the Plate Study on America's Consumption of Fruits and Vegetables. Wilmington, Delaware. 2003.

³ Wu X, Beecher GR, Holden JM, Haytowitz DB, Gebhardt SE and Prior RL. Lipophilic and hydrophilic antioxidant capacities of common foods in the United States. *J Agric Food Chem.* 2004. 52(12):4026-4037.

⁴ U.S. Department of Agriculture – Agriculture Research Service. USDA Database for the Flavonoid Content of Selected Foods Release 2.1. 2007. www.ars.usda.gov/Services/docs.htm?docid=6231. Last updated: Aug. 14, 2009. (Accessed: Sept. 9, 2010).

⁵ McGill CR, Wightman JD, Fulgoni S and Fulgoni III VL. Consumption of Purple/Blue Produce is Associated with Increased Nutrient Intake and Reduced Risk for Metabolic Syndrome: Results From the National Health and Nutrition Examination Survey 1999-2002. *Am J Lifestyle Med.* May/June 2011. 5(3):279-290.

⁶ Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2010.* 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.

⁷ Flint AJ, Rexrode KM, Hu FB, Glynn RJ, Caspard H, Manson JE, Willet WC and Rimm EB. Body mass index, waist circumference, and risk of coronary heart disease: A prospective study among men and women. *Obes Res Clin Pract* 2010; 4(3):e171-e181.

⁸ National Heart Lung and Blood Institute, National Institutes of Health. Classification of Overweight and Obesity by BMI, Waist Circumference, and Associated Disease Risks. www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/bmi_dis.htm. (Accessed: May 3, 2011).

⁹ Skinner JD, Carruth BR. A longitudinal study of children's juice intake and growth: the juice controversy revisited. *J Am Diet Assoc* 2001;101:432-437.

¹⁰ Nicklas TA, O'Neil CE. Association between 100% juice consumption and nutrient intake and weight of children aged 2 to 11 years. *Arch Pediatr Adolesc Med* 2008;162:557-565.

¹¹ O'Connor TM, Yang SJ, Nicklas TA. Beverage intake among preschool children and its effect on weight status. *Pediatrics* 2006;118:e1010-e1018.

¹² Field AE, Gillman MW, Rosner B, Rockett HR, Colditz GA. Association between fruit and vegetable intake and change in body mass index among a large sample of children and adolescents in the United States. *Int J Obes Relat Metab Disord* 2003;27:821-826.

¹³ American Academy of Pediatrics (AAP). Committee on Nutrition. The use and misuse of fruit juice in pediatrics. *Pediatrics.* 2001;107:1210-1213.