

The Importance of Purple/Blue

According to the Produce for Better Health Foundation, only three percent of Americans' fruit and vegetable intake is from the purple/blue category.ⁱ Yet, these fruits and vegetables contain an abundance of natural antioxidant power and a variety of phytonutrients not found in other colors of fruits and vegetables. An analysis of data from the National Health and Nutrition Examination Survey (NHANES 1999-2002) provides further reasons to include a glass of 100% grape juice made from Concord grapes and other purple/blue fruits and vegetables in your diet.ⁱⁱ

The analysis found that **adults who consumed purple/blue fruits and vegetables had reduced risk for three of the five factors that define the metabolic syndrome, a group of indicators that may predict risk for coronary heart disease and type 2 diabetes.**ⁱⁱⁱ The American Heart Association estimates that over 50 million Americans have metabolic syndrome.^{iv}

The five determinants of metabolic syndrome are: elevated blood pressure, low HDL or "good cholesterol," increased blood glucose (sugar), elevated blood triglycerides and increased waist size (circumference) (often associated with overweight or obesity).^v **According to the NHANES analysis, those who consumed purple/blue fruits and vegetables had significantly decreased risk of elevated blood pressure, low HDL and increased waist size (circumference) compared to those who did not consume fruits and vegetables of this color grouping.**

Additionally, **adults who consumed purple/blue fruits and vegetables were significantly less likely to be overweight (BMI>25) or obese (BMI>30)** compared to those who did not include this food group.

A survey of the NHANES data found that the most popular purple/blue fruits and vegetables consumed were: grapes, 100% grape juice, and raisins – accounting for almost 60 percent of purple/blue usage occasions. This is supported by a Produce for Better Health Foundation study, which found that grape juice was the number one way that consumers included purple/blue fruits or vegetables into their diets.ⁱ

The NHANES analysis also looked specifically at the subgroup of grape juice drinkers versus non drinkers.ⁱⁱ The NHANES grape juice analysis showed that children and adults who consumed 100% grape juice versus those who did not:

- showed **no** differences in weight, BMI, waist size (circumference) compared to non-drinkers.
- consumed more servings of fruit and had lower intakes of added sugar
- had higher intakes of vitamin C, potassium and magnesium.
- had lower diastolic blood pressure.

Additional findings indicated that adults who consumed 100% grape juice versus those who did not:

- had lower intakes of total fat, saturated fat and sodium in their diets.
- had reduced serum homocysteine levels, an additional indicator of potential cardiovascular risk.
- had higher intakes of dietary fiber and vitamin B6.

"This NHANES analysis reveals that people who consume purple/blue fruits and vegetables – including 100% grape juice – have healthier dietary patterns and overall better health," said Carla McGill, PhD, RD, a nutrition consultant. "Consuming more fruits and vegetables is important, particularly ones from the purple/blue category, since it's underrepresented in the American diet. An easy way to add more purple color to the diet is 100% grape juice made from Concord grapes. This NHANES analysis suggests if you are not consuming purple/blue fruits and vegetables, you're probably not getting enough fruit in your diet." NHANES is a government-sponsored program of studies designed to assess the health and nutritional status of adults and children in the United States. Welch Foods Inc. provided support for this NHANES analysis.

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

ⁱⁱ Fulgoni VL III, Fulgoni SA, Wightman JD, and McGill CR. Grape juice consumption is associated with increased nutrient intakes and improved cardiovascular parameters in children and adults. Presented at Experimental Biology 2007. Washington, D.C. April 28 – May 2, 2007.

ⁱⁱⁱ McGill CR, Wightman JD, Fulgoni S and Fulgoni III VL. Consumption of blue/purple fruits and vegetables is associated with increased nutrient density in children and adults and reduced risks for metabolic syndrome Presented at Experimental Biology 2007. Washington DC. April 28 - May 2, 2007.

^{iv} American Heart Association. Metabolic Syndrome. <http://www.americanheart.org/presenter.jhtml?identifier=4756> .

^v International Diabetes Foundation. The IDF consensus worldwide definition of the metabolic syndrome. http://www.idf.org/webdata/docs/Metabolic_syndrome_definition.pdf (Accessed: April 1, 2009)