

W I L D B L U E B E R R I E S

Nature's ANTIOXIDANT SUPERFRUIT™

HEALTH RESEARCH OVERVIEW



Potent antioxidants are highly concentrated in the deep-blue pigments of Wild Blueberries. Scientists around the world are studying the ways in which this Antioxidant SuperFruit may help combat disease and promote healthy aging. Ongoing studies are focused on:

TOTAL ANTIOXIDANT CAPACITY

According to USDA studies, Wild Blueberries have the highest antioxidant capacity per serving, compared with more than 20 other fruits. Using the Oxygen Radical Absorbance Capacity (ORAC) testing procedure, researcher Ronald Prior, Ph.D., found that a one-cup serving of Wild Blueberries had more total antioxidant capacity (TAC) than a serving of cranberries, strawberries, plums, raspberries and even cultivated blueberries.

Journal of Agricultural and Food Chemistry, 2004, 52: 4026-4037

CELLULAR ANTIOXIDANT ACTIVITY

Wild Blueberries also outperformed selected fruits in an advanced procedure known as the cellular antioxidant activity (CAA) assay, an innovative means of measuring antioxidant activity inside cells. A Cornell University research team led by Dr. Rui Hai Liu conducted the study.

Journal of Agricultural and Food Chemistry, 2007; 55 (22), 8896-8907

HEALTHY-AGING

James Joseph, Ph.D., and his team at the USDA Human Nutrition Research Center on Aging in Boston report that a diet of blueberries may improve motor skills and reverse the short-term memory loss that comes with aging and age-related diseases such as Alzheimer's. USDA animal trials showed improved navigational skills after a two-month diet of blueberry extract. Although other fruits

and vegetables were studied, only blueberries were effective in improving motor skills.

Nutritional Neuroscience, 6:153-162, 2003; Journal of Neuroscience, September 15, 1999, 19(18); 8114-8121

ANTI-INFLAMMATORY BENEFITS

More recently, Dr. Joseph has been studying the anti-inflammatory potential of the polyphenols in blueberries, since chronic inflammation at the cellular level is at the heart of many degenerative age-related diseases. When rats with neuronal lesions were fed a blueberry-supplemented diet, not only did they perform better in cognitive tests, the concentration of several substances in the brain that can trigger an inflammatory response was significantly reduced. The polyphenols in blueberries appear to inhibit the production of these inflammatory mediators.

Nutritional Neuroscience, 2008, (In Press)

CANCER PREVENTION

Studies conducted by Mary Ann Lila, Ph.D., Department of Natural Resources and Environmental Sciences, University of Illinois, Urbana-Champaign, indicate that compounds in Wild Blueberries may be effective inhibitors of both the initiation and promotion stages of cancer.

Journal of Agricultural and Food Chemistry, 52:6442, 2004; *Journal of Food Science*, Vol. 65, No. 2, 2000

URINARY TRACT HEALTH

At the Rutgers University Blueberry Cranberry Research Center, Amy Howell, Ph.D., showed that blueberries, like cranberries, contain compounds that prevent the bacteria responsible for urinary tract infections from attaching to the bladder wall.

Journal of Agricultural and Food Chemistry, 52:6442, 2004; *New England Journal of Medicine*, Volume 339, Number 15, 1998

PROTECTION AGAINST STROKE

Animal trials conducted by Marva Sweeney-Nixon, Ph.D., and her team at the University of Prince Edward Island, Canada, indicate that consumption of Wild Blueberries confers protection to the brain against damage from ischemic stroke.

Nutritional Neuroscience, 2002 Dec.; 5(6): 427-31

HEART HEALTH

New research shows that blueberries may support cardiovascular health. A research team at Agriculture and Agri-Food Canada led by Wilhelmina Kalt, Ph.D., found that blueberry supplementation reduced plasma cholesterol levels. Additional research by Dorothy Klimis-Zacas, Ph.D., and her team at the University of Maine, Orono, concludes that a diet of Wild Blueberries may reduce risk from cardiovascular disease (CVD). Animal studies suggest that Wild Blueberries have the potential to decrease the vulnerability of

heart blood vessels to oxidative stress and inflammation in animal models.

British Journal of Nutrition, 2007, Dec.; 1-9; *Journal of Nutritional Biochemistry*, 2006 Feb; 17(2): 109-16

FIGHTING OXIDATIVE STRESS

USDA scientists recently concluded that eating Wild Blueberries and other antioxidant-rich foods at every meal helps prevent oxidative stress. This study moves beyond the measurement of antioxidants in foods to actual examination of the performance of specific fruits against oxidative stress in the body. Oxidative stress is linked to chronic diseases and aging.

Journal of the American College of Nutrition, 2007 Vol. 26, No. 2, 170-181



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