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New Research Shows Wild Blueberries Have Potential to Improve Heart Health
Researchers discover first evidence that Wild Blueberries may help decrease cardiovascular disease risk.

Portland, Maine - Researchers at the University of Reading (UK), the University of Dusseldorf (Germany) and the University of Northumbria (UK) have used state-of-the-art techniques to discover that Wild Blueberries can improve vascular function in healthy men.

In their study, researchers learned that Wild Blueberries may help blood vessels to function better and remain healthier, meaning that the heart does not have to work as hard to circulate blood through the body. These findings are the first to link Wild Blueberry polyphenols, natural compounds that are abundant in Wild Blueberries, to improvements in vascular function in healthy men.

“For the first time, we have shown that Wild Blueberry consumption can improve endothelial function, which has been shown to be a highly sensitive marker for the overall cardiovascular risk of an individual,” said Dr. Ana Rodriguez-Mateos, PhD, from the Division of Cardiology, Pulmunology and Vascular Medicine at the University of Dusseldorf in Germany. Dr. Rodriguez-Mateos is first author of the study and a contributor to the annual Wild Blueberry Bar Harbor Research Summit.

“Importantly, even the lowest amount of Wild Blueberries tested in the study, equivalent to 3/4 cup of Wild Blueberries, was able to improve endothelial function, which is an amount easy to incorporate into a daily diet,” noted Rodriguez-Mateos.

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Cardiovascular Disease Risk and Endothelial Function

Cardiovascular disease is a leading cause of death in the United States. These findings are significant because flow-mediated dilation (FMD), the gold-standard technique to measure endothelial function, has been shown to be a good predictor of cardiovascular disease risk. The endothelium is the inner lining of the blood vessel that comes in contact with the blood.

Consuming Wild Blueberries in achievable amounts may help to maintain a healthy circulatory system, thus decreasing the risk of developing cardiovascular diseases later in life.

Wild Blueberry Polyphenol Metabolites

Researchers also showed that certain blueberry polyphenol metabolites present in blood plasma after blueberry consumption may be responsible for improved vascular function, which lasted at least 6 hours after consumption.

They used state-of-the-art techniques to examine how Wild Blueberry polyphenols are metabolized in the body by certain enzymes. The resulting substances, which circulate in the blood, are called metabolites, and they may be responsible for the beneficial impact on blood vessels that the researchers discovered.

The researchers found a correlation between the Wild Blueberry polyphenol metabolites present in bloodstream circulation and the increases in FMD observed at 1, 2, and 6 hours post-consumption.

Wild Blueberries and a Healthy diet

“Anyone can add the same amount of Wild Blueberries eaten by the study participants to their daily diet,” said Susan Davis, MS, RD, nutrition advisor to the Wild Blueberry Association of North America. “The volunteers ate between 3/4 and 1 1/4 cups of Wild Blueberries; that’s the amount in a simple Wild Blueberry breakfast smoothie.”

Not every blueberry is a Wild Blueberry. Wild Blueberries are smaller than regular cultivated blueberries, have a more intense blueberry flavor and have double the antioxidant capacity. They are available year-round in the grocer’s frozen fruit section.

About the Study

Researchers studied the impact of various amounts of Wild Blueberries on cardiovascular function. Two randomized, controlled double blind trials were performed in healthy men between the ages of 18 to 40 years.

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In the first study, participants were fed varying amounts of Wild Blueberries, ranging from the equivalent of 240 to 560 grams of Wild Blueberries. Changes in FMD were measured at 0, 1, 2, 4 and 6 hours post-consumption.

Subjects in the study groups demonstrated improvements in FMD at 1, 2 and 6 hours after consumption of the Wild Blueberries, and those effects were correlated with plasma blueberry polyphenol metabolites. In addition, a correlation was also found with decreases in the activity of NADPH oxidase, an important enzyme for the cardiovascular system, which suggests a potential mechanism of action of those metabolites on the effects observed.

A second study was conducted to investigate the intake-dependency of blueberry polyphenols, with the equivalent of 100 grams to 560 grams of Wild Blueberries tested at 0 and 1 hours post-consumption. This study showed that the improvements in FMD followed a dose-dependency up to the 766 mg intake (240 grams of blueberry), where the effect plateaued.

Importantly, even the lowest dose tested (approximately 3/4 cup of Wild Blueberries) was able to have a positive effect on endothelial function.

Navindra Seeram, PhD, an associate professor at the University of Rhode Island's Bioactive Botanical Research Laboratory, who was not involved in the study, called the research "a well-designed human study showing that blueberry intake improves vascular function in male volunteers."

This work adds to the growing body of research showing the potential health benefits of Wild Blueberries - areas that include gut health, diabetes, breast cancer and brain health.

Publication Details

"Intake and time dependence of blueberry flavonoid-induced improvements in vascular function: a randomized, controlled, double-blind, crossover intervention study with mechanistic insights into biological activity"

Written by Ana Rodriguez-Mateos, Catarina Rendeiro, Triana Bergillos-Meca, Setareh Tabatabaee, Trevor W. George, Christian Heiss, Jeremy P.E. Spencer.

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<http://ajcn.nutrition.org/content/early/2013/09/04/ajcn.113.066639.abstract>

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Easy Wild Blueberry Smoothie

- 3/4 cup frozen Wild Blueberries
- 3/4 up vanilla or plain yogurt
- 1 Tbsp honey (optional)
- 3-4 ice cubes

Place all ingredients in a mixer and blend at high speed until smooth. Enjoy immediately.

About the Wild Blueberry Association of North America

(www.wildblueberries.com)

The Wild Blueberry Association of North America (WBANA) is a trade association of growers and processors of Wild Blueberries from Maine and Canada, dedicated to bringing the Wild Blueberry health story and unique Wild Advantages to consumers and the trade worldwide.

WBANA is dedicated to furthering research that explores the health potential of Wild Blueberries. Every year since 1997, WBANA has hosted the Health Research Summit in Bar Harbor, a worldwide gathering of scientists and researchers whose work is leading the way in learning more and more about the health benefits of Wild Blueberries.

For news, recipes, and related health information about Wild Blueberries, visit www.wildblueberries.com, www.wildblueberryhealthblog.com, and follow www.facebook.com/wildblueberries and www.twitter.com/WildBBerries4U.

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