

Health benefits of wild blueberries abound

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Wild blueberries are a rich source of phytochemicals called polyphenols, which have been reported by a growing number of studies to exert a wide array of protective health benefits. A new study by researchers at the University of Maine adds to this growing body of evidence.

This new research, published today in the journal *Applied Physiology, Nutrition, and Metabolism*, shows that regular long-term wild blueberry diets may help improve or prevent pathologies associated with the metabolic syndrome, including [cardiovascular disease](#) and diabetes.

"The metabolic syndrome (MetS) is a group of [risk factors](#) characterized by obesity, hypertension, inflammation, dyslipidemia, [glucose intolerance](#) and [insulin resistance](#), and [endothelial dysfunction](#)," explains Dr. Klimis-Zacas, a Professor of clinical nutrition at the University of Maine and a co-author of the study. "MetS affects an estimated 37% of adults in the US ." Many substances found in food have the potential to prevent MetS, thus reducing the need for medication and medical intervention.

"We have previously documented the cardiovascular benefits of a polyphenol-rich wild blueberry in a rat model with impaired vascular health and high blood pressure," says Klimis-Zacas. "Our new findings show that these benefits extend to the obese Zucker rat, a widely used model resembling human MetS."

"Endothelial dysfunction is a landmark characteristic of MetS, and the obese Zucker rat, an excellent model to study the MetS, is characterized

by vascular dysfunction. The vascular wall of these animals shows an impaired response to vasorelaxation or vasoconstriction which affects blood flow and blood pressure regulation."

According to the study, wild blueberry consumption (2 cups per day, human equivalent) for 8 weeks was shown to regulate and improve the balance between relaxing and constricting factors in the vascular wall, improving blood flow and blood pressure regulation of obese Zucker rats with [metabolic syndrome](#).

"Our recent findings reported elsewhere, documented that wild blueberries reduce chronic inflammation and improve the abnormal lipid profile and gene expression associated with the MetS." Thus, this new study shows even greater potential such that "by normalizing oxidative, inflammatory response and endothelial function, regular long-term wild blueberry diets may also help improve pathologies associated with the MetS."

More information: The article "Wild blueberry consumption affects aortic vascular function in the obese Zucker rat" is published in the journal *Applied Physiology, Nutrition, and Metabolism*:
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