

Blueberries' Healthfulness Could be Enhanced by Milk Protein

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PERSPECTIVE

Blueberry pie with a scoop of ice cream is a refreshing summer dessert. This combination may help people absorb more of the superfruit's nutrients, such as anthocyanins, in addition to being delicious. Researchers discovered that κ -casein, a protein found in cow's milk, helped rats absorb more blueberry anthocyanins and metabolites, increasing their availability of these beneficial nutrients. Anthocyanins have been demonstrated in tests to have antioxidant qualities, lower blood pressure, and diminish the risk of cancer. Despite the abundance of essential a nutrient in blueberries, only a small portion of them is absorbed during digestion.

Previous studies have shown that diets containing components including citrus pectin, capsin, capsicate, and certain proteins increase anthocyanin uptake. In simulated digestion trials, researchers discovered that κ -casein and λ -casein proteins from cow's milk protected blueberry anthocyanins. Cow's milk is high

in protein, calcium, and vitamins B-12 and iodine, among other minerals. It also contains magnesium, which is necessary for bone development and muscle function, as well as whey and casein, which have been linked to blood pressure reduction. This group intended to see if κ -casein could aid in the in vivo absorption of blueberry anthocyanins. Purified blueberry anthocyanin extracts were provided to rats, with κ -casein added to one set of rats' solution.

Anthocyanin and metabolite concentrations were higher in the κ -casein group than in the control rats over the next 24 hours. The amino acids in κ -casein allowed it to engage with and encapsulate the anthocyanin molecules, enhancing their stability in the intestines and allowing for better transit into the bloodstream, according to the researchers. The researchers clarify that while the κ -casein protein utilized in these trials was produced and purified from milk; the results may not be the same for whole milk because fats and carbohydrates may affect absorption. The next stage, they suggest, will be to do comparable testing on humans.

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Received: June 15, 2021; **Accepted:** June 21, 2021; **Published:** June 27, 2021

Citation: Murdianti BS (2021) Blueberries' Healthfulness could be Enhanced by Milk Protein. Mod Chem Appl. 09:310.

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