



Newsmakers Story

Cranberries have unique anti-adhesion benefits- study

New study shows that cranberry juice cocktail has a unique “anti-adhesion” mechanism that helps protect the body from harmful bacteria.

31/08/05 New data published in the current issue of *Phytochemistry* shows that cranberry juice cocktail has a unique “anti-adhesion” mechanism that helps protect the body from harmful bacteria, as compared to grape and apple juice, green tea or dark chocolate. The study, led by a Rutgers University researcher, is the first to find that the cranberry's anti-adhesion benefits come from the unique structure of its natural compounds called proanthocyanidins, or PACs. The study examined the anti-adhesion activity of two types of PACs - A-type and B-type. Cranberry's PACs contain a unique A-type structure, while the other foods tested contain only the more-common B-type PACs. Of all the foods tested, only cranberry juice cocktail showed anti-adhesion activity following consumption of a single serving.

Researchers tested equivalent amounts of seven foods known to contain PACs, including grape juice, apple juice, green tea and chocolate. They discovered that the A-type PACs in cranberry exhibited anti-adhesion activity while the B-type PACs in the other foods showed minimal to no activity. This is the first study to compare the anti-adhesion activity of foods rich in B-type PACs with cranberry's A-type PACs.

“The results of this study show that not all PAC-rich foods are alike. It is the A-type structure of cranberry PACs that may be important in protecting against harmful bacteria in the urinary tract,” said Amy Howell, lead author of the report and a research scientist at Rutgers University.

Howell's new study reinforces earlier research that found the anti-adhesion benefits of a glass of cranberry juice cocktail starts within two hours of consumption and can last for up to ten hours. This suggests that consuming one serving of cranberry juice cocktail in the morning and one in the evening helps keep bacteria at bay all day, providing the greatest protection against UTIs. Other juices, such as grape or apple juice have not been shown to offer the same protection.

Furthermore, according to Howell, there are a variety of ways to get the cranberry's anti-adhesion benefits. One eight-ounce glass of cranberry juice cocktail contains just as many PACs as: 1/4 cup of fresh or frozen cranberries, 1/3 cup of sweetened dried cranberries, or 1/3 cup of cranberry sauce.

Studies show that cranberry's anti-adhesion properties can prevent harmful bacteria from sticking to the urinary tract, helping to prevent urinary tract infections (UTIs). UTI's are among the most common bacterial infections. The *E. coli* bacteria that cause UTIs are now becoming increasingly resistant to commonly-prescribed antibiotics. Laboratory research has shown that cranberry's anti-

stick properties were effective against 80% of the antibiotic-resistant bacteria that cause UTIs, and that these anti-stick benefits are a result of the PACs found in the fruit. Other data has suggested that the PACs found in cranberry may also prevent the adhesion of bacteria in the stomach and the mouth, with implications for the prevention stomach ulcers and gum disease.

Drinking cranberry juice cocktail may reduce the need for antibiotics by reducing the risk of the initial infection. Fewer infections may mean less antibiotic use(1). This is great news for women, nearly half of whom will experience at least one UTI in their lifetime.

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