

## Watermelon May Have Viagra-Effect

Secrets of Phyto-nutrients Are Being Unraveled



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COLLEGE STATION -- A cold slice of watermelon has long been a Fourth of July holiday staple. But according to recent studies, the juicy fruit may be better suited for Valentine's Day.

That's because scientists say watermelon has ingredients that deliver Viagra-like effects to the body's blood vessels and may even increase libido.

"The more we study watermelons, the more we realize just how amazing a fruit it is in providing natural enhancers to the human body," said Dr. Bhimu Patil, director of Texas A&M's Fruit and Vegetable Improvement Center in College Station.

"We've always known that watermelon is good for you, but the list of its very important healthful benefits grows longer with each study."

Beneficial ingredients in watermelon and other fruits and vegetables are known as phyto-nutrients, naturally occurring compounds that are bioactive, or able to react with the human body to trigger healthy reactions, Patil said.

In watermelons, these include lycopene, beta carotene and the rising star among its phyto-nutrients – citrulline – whose beneficial functions are now being unraveled. Among them is the ability to relax blood vessels, much like Viagra does.

Scientists know that when watermelon is consumed, citrulline is converted to arginine through certain enzymes. Arginine is an amino acid that works wonders on the heart and circulation system and maintains a good immune system, Patil said.

"The citrulline-arginine relationship helps heart health, the immune system and may prove to be very helpful for those who suffer from obesity and type 2 diabetes," said Patil. "Arginine boosts nitric oxide, which relaxes blood vessels, the same basic effect that Viagra has, to treat erectile dysfunction and maybe even prevent it."

While there are many psychological and physiological problems that can cause impotence, extra nitric oxide could help those who need increased blood flow, which would also help treat angina, high blood pressure and other cardiovascular problems.

"Watermelon may not be as organ specific as Viagra," Patil said, "but it's a great way to relax blood vessels without any drug side-effects."

The benefits of watermelon don't end there, he said. Arginine also helps the urea cycle by removing ammonia and other toxic compounds from our bodies.

Citrulline, the precursor to arginine, is found in higher concentrations in the rind of watermelons than the flesh. As the rind is not commonly eaten, two of Patil's fellow scientists, Drs. Steve King and Hae Jeen Bang, are working to breed new varieties with higher concentrations in the flesh.

In addition to the research by Texas A&M, watermelon's phyto-nutrients are being studied by the U.S. Department of Agriculture's Agricultural Research Service in Lane, Oklahoma.

As an added bonus, these studies have also shown that deep red varieties of watermelon have displaced the tomato as the lycopene king, Patil said. Almost 92 percent of watermelon is water, but the remaining 8 percent is loaded with lycopene, an anti-oxidant that protects the human heart, prostate and skin health.

"Lycopene, which is also found in red grapefruit, was historically thought to exist only in tomatoes," he said. "But now we know that it's found in higher concentrations in red watermelon varieties."

Lycopene, however, is fat-soluble, meaning that it needs certain fats in the blood for



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better absorption by the body, Patil said.

"Previous tests have shown that lycopene is much better absorbed from tomatoes when mixed in a salad with oily vegetables like avocado or spinach," Patil said. "That would also apply to the lycopene from watermelon, but I realize mixing watermelon with spinach or avocados is a very hard sell."

No studies have been conducted to determine the timing of the consumption of oily vegetables to improve lycopene absorption, he said.

"One final bit of advice for those Fourth of July watermelons you buy," Patil said. "They store much better uncut if you leave them at room temperature. Lycopene levels can be maintained even as it sits on your kitchen floor. But once you cut it, refrigerate. And enjoy."

-30-