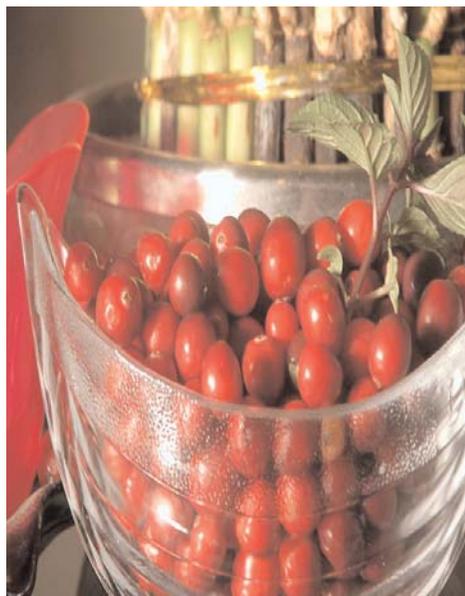


# CRANBERRIES AND YOUR HEALTH

Cranberries are glossy, scarlet red, very tart berries. They are cousins to the blueberry. Although several species of cranberries grow wild in Europe and Asia, the cranberry most cultivated is an American variety. In the



Caribbean however we rarely encounter the fresh fruit and our interaction with cranberries is usually limited to the juice, drink or the dried fruit. Luckily, even in the processed form, we may still be able to enjoy the wide variety of benefits from consuming this amazing fruit.

Cranberries are low in saturated fat and sodium and is a good source of Vitamin C. Cranberries also have certain constituents that can provide some health benefits over and above those associated with its nutrient composition.

More recently, there is evidence that they can provide limited protection against certain diseases and conditions. There have been numerous claims in the media about the health benefits of cranberry. *We present here the few strong and many weak pieces of*

*evidence of its association with health conditions.*

## Protection Against Urinary Tract Infection

Some of the strongest scientific evidence related to the health benefits of cranberries is linked to the ability of its constituents to reduce the risk of urinary tract infections. In most of these studies, subjects drank about 16 ounces (2 cups) of cranberry juice daily. Preliminary research suggests that Cranberry's protective effects against bladder infections may be dose responsive, with 8-ounces of cranberry juice being twice as effective as 4-ounces. Cranberries reduce the risk of bladder infections by acidifying the urine. In addition, they contain an antibacterial agent called hippuric acid, and

also contain other compounds for example a specific type of tannin, found only in cranberries and blueberries, which interferes with projections on the bacterium, *E. coli*, preventing it from sticking to the walls, of the bladder and causing infection. Since the bacteria cannot latch onto the urinary tract wall they are washed away in the urine. *E. coli* is the bacteria responsible for 80-90% of urinary tract infections, so that the protection afforded by cranberries is quite significant. However, once the bacteria have established a hold, the effect is limited. No evidence has shown that cranberry juice is able to cure an established bladder infection, which can lead to a more serious kidney infection.

More recent studies have discovered that the cranberry's proanthocyanidins are structurally different from the proanthocyanidins found in the other plant foods tested. This may explain why cranberry has this unique bacterial anti-adhesion activity which helps to maintain urinary tract health. Proanthocyanidins are the compounds believed to have the beneficial health effect.

*The evidence for the effectiveness of Cranberries in preventing or managing the following conditions is less convincing and unclear and based on preliminary research.*

### Promoting Gastrointestinal and Oral Health

Cranberries ability to block the attachment of bacteria has been demonstrated not only

against *E. coli*, but also against the *H. pylori* bacteria which can cause stomach cancer and ulcers. One study in 2002 indicated that a constituent in cranberry juice prevents the bacterium from adhering to gastric epithelial cells (the cells that form the lining of the stomach).

Also published in 2002 was a study noting that compounds isolated from cranberry juice actually dissolved the aggregates formed by many oral bacteria and was effective in decreasing the salivary level of *Streptococcus mutans*, the major cause of tooth decay.

### Prevention of Kidney Stone Formation

The evidence of the benefits of Cranberries in this area is very unclear and based on preliminary research. Cranberries contain quinic acid, an acidic compound that is unusual in that it is not broken down in the body but is excreted unchanged in the urine. The presence of quinic acid causes the urine to become just slightly acidic – a level, sufficient to prevent calcium and phosphate ions from joining to form insoluble stones. In patients who have had recurrent kidney stones, cranberry juice has been shown to reduce the amount of ionized calcium in their urine by more than 50%. Other studies have shown that drinking cranberry juice significantly and uniquely alter three key urinary risk factors for the better: oxalate and phosphate excretion

decreased; citrate excretion increased; and the relative super saturation of calcium oxalate was significantly lower.

### Cholesterol Levels

There is some evidence that cranberries may lower levels of low-density lipoprotein (bad cholesterol). The mechanism by which cranberry juice may change cholesterol levels has not been clearly established, the researchers have theorized that the effect is due to the fruit's high levels of polyphenols, a type of potent antioxidant. Some small studies have also demonstrated that people who drink cranberry juice have higher levels of HDL (good) cholesterol.

### Antioxidant Protection

Some studies have shown that when compared to 19 other common fruits, cranberries were found to contain the highest level of antioxidant phenols. Other studies have shown that cranberries have among the highest levels of phenols of commonly consumed fruits. One recent study looked at 20 different fruit juices and found that cranberry juice had the most phenols and the highest radical scavenging capacity of all of them. The most recent study to compare levels of phenolic compounds in common fruits also confirmed that cranberries had the highest phenolic content of the fruits considered. Cranberries were followed in descending order by apple, red

grape, strawberry, pineapple, banana, peach, lemon, orange, pear and grapefruit.

### Cancer Prevention

There is some preliminary evidence from laboratory research that there is scope for further investigation on Cranberries' role in cancer prevention in humans.

### Aiding in Recovery from Stroke

In animal studies concentrated cranberry extract reduced the death of brain cells exposed to stroke-like conditions.

Researchers in this area believe that this result suggests that cranberry juice could aid the recovery of stroke patients, particularly in the earliest stages, when the most severe damage occurs. The researchers think that although cranberry juice may not prevent a stroke from occurring initially, it may reduce the severity of the stroke and thus the resulting symptoms. This research is of course in its initial stages so that it is too early to say conclusively that there would be a

beneficial effect if stroke victims consume cranberry juice, or even how much they would need to consume to experience the benefits.

### A Note of Caution

The Cranberry is indeed an amazing fruit, but it is not without its problems.

- Cranberries are among a small number of foods that contain measurable amounts of oxalates. Oxalates are naturally-occurring substances found in plants, animals, and human beings. When oxalates become too concentrated in body fluids, they can crystallize and cause health problems such as oxalate kidney stones. For this reason, individuals with already existing and untreated kidney or gallbladder problems may want to avoid eating cranberries.
- Oxalates are also known to interfere with absorption of calcium in the body. Therefore individuals trying to increase their calcium stores such as in osteoporosis or if taking Calcium supplements may

choose to avoid eating cranberries or consuming cranberry products.

- In addition persons using Warfarin (a drug used to prevent blood clots from forming or growing larger) which is often prescribed for patients with certain types of irregular heartbeat and after a heart attack or heart valve replacement surgery, should avoid consuming cranberries, either the fruit or the juice.

Taken as part of a mixed diet, Cranberries can be a very valuable contributor to a healthy diet. ♦



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