

## [NewsTarget.com printable article](#)

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### **Darker fruits and vegetables found to fight colon cancer**

by David Gutierrez

(NewsTarget) Dark-colored fruits and vegetables may provide a colon-cancer-fighting effect, according to a study presented at the national meeting of the *American Chemical Society* in Boston.

Researchers used both animal and cell-culture studies to examine the effects of a group of chemicals called anthocyanins on the development of colon cancer cells. Anthocyanins are the chemicals that give the coloration to most blue, red and purple vegetables and fruits.

In the animal study, scientists induced [colon cancer](#) in rats, then fed the sick animals a daily dose of anthocyanin extracts derived from either bilberries or chokeberries. Compared with rats who were not dosed, the chokeberry-treated rats exhibited 60 percent fewer signs of colon tumors, while the bilberry-treated rats showed 70 percent fewer.

The researchers also applied fruit and vegetable extracts high in [anthocyanins](#) to laboratory cultures of human colon-cancer cells. The most effective was the pigment from purple corn, which halted [cancer](#) cell growth and killed approximately 20 percent of the malignant cells, with little effect on non-cancerous cells. Chokeberry extract demonstrated the same effect at a slightly higher concentration. Pigments derived from radishes and black carrots were less effective, but still resulted in a 50 to 80 percent slowdown in the rates of cancerous cell growth.

The relative effectiveness of the extracts was determined by the concentration needed to reduce the number of cancerous cells by 50 percent. Purple [corn](#) pigment was the most effective -- at a concentration of 14 micrograms per milliliter of cell solution -- followed closely by chokeberry and bilberry extracts. The least effective was the radish extract, which needed a concentration nine times as high as the purple corn extract to achieve the same effect.

But the researchers said that the effect exhibited by any of the extracts is still impressive.

"All [fruits and vegetables](#) that are rich in anthocyanins have compounds that can slow down the growth of colon [cancer cells](#) in experiments in laboratory dishes and possibly inside the body," said lead author Monica Giusti.

NewsTarget remains strongly opposed to using animals for nutritional research when it involves harming them by intentionally giving them cancer.

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