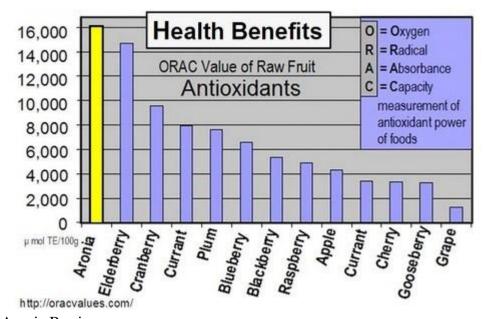
# The Anti-Cancer Properties of Aronia (Black Chokeberry)

Aronia could boost standard cancer treatment

With more and more evidence of the power of super-fruits, we have decided to look in to one super-fruit which is a subject of many discussions and debates, as well as many studies and researches.

Aronia, or black chokeberry, is native to North America, but is also known to be grown in Europe, Middle East, Russia etc. It is very well known by the astringency of the fruit, and the bitter taste and sensation of puckering your mouth. Aronia berries are high in polyphenols, such as anthocyanins, with content of of 1480 mg per 100g, which is the highest value measured in plant till this day.

<u>Anthocyanins</u> are pigments that give fruit the distinctive rich deep red and purple coloring, and are also a rich source of antioxydants, have anti-viral, and also have anti-cancer properties.



Health Benefits of

Aronia Berries

Don't forget, to battle these cancerous cells, the presence of antioxydants is very welcomed, since they lower the acidity of the cells, feed them with oxygen, and fight and destroy the cancer itself.

### The research and studies!

In a study published in the Journal of Clinical Pathology, scientists tested an extract of aronia on pancreatic cancer cell (cancer with high mortality rate), and observed what happens when these cell were treated only with chemotherapy, with aronia extract alone, and with a combination of

the both. The results have shown that the combination of both compounds was more effective at reducing the cancer growth than the drug alone, and that the aronia extract, even in highest doses is not toxic at all for any normal healthy cells, which is also a big plus, because this also slows the growth of any cancerous cells. Also, after 48 hours of treatment, they have found signs of apoptosis (induced cell death) in the pancreatic cancer cells.



Wild berry extract may strengthen effectiveness of pancreatic cancer

In a 2010 study published in Pharmacological Research made by researchers at Ohio state University, scientists have found that rats fed with special diet containing 5% berries prevented esophageal cancer in rats exposed to carcinogenic compound, and concluded that aronia, as well as all other types of berries were quite effective at inhibiting tumor forming and growth.

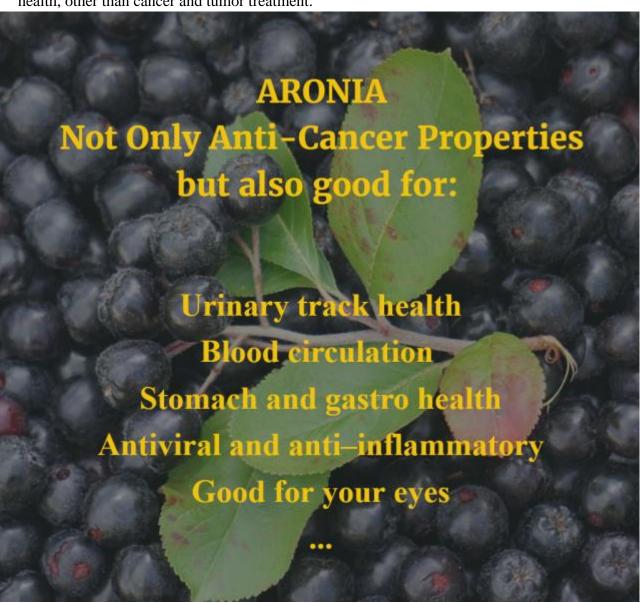
Also, a laboratory study found in Phytotherapy Research (2010), suggests that anthocyanins extracts successfully inhibit the growth of breast cancer.

A study made by researchers for the department of Natural Sciences at Middlesex University shows the benefits of aronia combined with <u>curcumin</u>, two super foods able to fight cancer. The combination successfully stops the spread of malignant cells, and induces apoptosis! The study was evaluating the effects of aronia on a specific glioblastoma (line of brain cancer known as U373), and the results were astounding. As it have shown, the aronia berry was necrotic to this line of cancer, and this means it kills this specific cancer, while the <u>curcumin induced apoptosis</u>, seizing the production of new cells and spreading.

A research has also been done and the effects of aronia on colon cancer were observed. Cell proliferation has been inhibited by 30-40%, after exposing colon cancer cells to a small nontoxic dose of pre-digested aronia berries juice. The researchers have also noticed a change in a small percentage of genes, all related to cell proliferation, tumor spreading and colon carcinogenesis.

# The many more health benefits of aronia

Like most fruits rich in antioxidants, aronia consumption offer much more benefits for your health, other than cancer and tumor treatment.



Health Benefits of Aronia Berries (Chokeberries)

Down below we are going to list the most known benefits of aronia, benefits which have been proven to work, clinically and historically:

- Urinary track health it is no surprise, all berries have positive influence when it comes to our urinary tract, and because the high dose of quinic acid in aronia, some even consider that it is more effective than cranberry (quinic acid prevents urinary infections)
- Blood circulation aronia improves the blood circulation in our body, strengthens the blood vessels and reduces the risk of heart disease.
- The high level of antioxidants prevents the formation of free radicals, so it prevents diseases like diabetes and cardiovascular diseases.
- Stomach and gastro effects aronia helps treating problems with our digestive system, ulcers included.
- Antiviral and anti–inflammatory effects helps preventing colds and flu, normally with regular digestion of the fruit, boosting your immune system.
- Good for your eyes because of the high dose of carotene, aronia protects cells from damaging, and prevent formation of cataracts.

## Something for the end!

Always tend on digestion aronia fresh, or frozen, because that way you will get all the nutrition needed to help your organism.

### **Aronia Smoothie Recipe – 2 Servings**

- 1 cann coconut milk (or other milk)
- 2 cups aronia berries (fresh or frozen)
- 2 bananas (frozen, cut into chunks)
- 1 ckefir

coconut water (as needed)

Place all ingredients except coconut water in a blender and blend. Add coconut water and blend to reach desired consistency.

Many of the compounds responsible for the health benefits of aronia are in the seeds and the pulp of the fruit and getting it fresh will have a maximum effect. Processed aronia has not been tested on anything, and nobody can't guarantee which are the effects. The same applies for aronia pills and similar processed mumbo jumbo, regardless of the packaging, aronia is available fresh and frozen throughout the whole year, and consumption is easy, 10 berries per day, which is no trouble for anybody. Simply, if you want avoid the bitter and astringent taste, make a smoothie with other fruits, and add 10-15 berries of aronia, you won't feel the taste of aronia, and still, you will get all the needed ingredients from it. Or simply, add them to your favorite muffin, trust me, it works!



Scientists probe the anti-cancer properties of wild North American berry

#### **Green Aronia Smoothies Recipe – 2 Servings**

1 cup of yogurt or ckefir

1 cup aronia (chokeberry) berries (fresh or frozen)

1 cup fresh spinach or any other greens (kale, broccoli, salad ...)

1 banana

coconut water (as needed)

Place all ingredients except coconut water in a blender and blend. Add coconut water and blend to reach desired consistency.

Many researches are ongoing at the moment, and the health benefits of aronia are revealing themselves all the time. Despite that most of the studies are laboratory made, and many of the claims are testimonial from people who consume aronia and who have seen and felt the benefits on their own skin. But one cannot deny that the presence of anthocianins and polyphenols are the main reason why this small superfruit is so powerful, and can and will fight many diseases, including cancer! source: foodnhealth