BILBERRY BENEFITS

By Shari Barbanel

Native to Northern Europe, the bilberry (*Vaccinium myrtillus*) is known as the European blueberry, as it belongs to the same plant family as the American blueberry and has a similar appearance. According to the National Institutes of Health (NIH), bilberry usually grows in heaths, meadows and moist coniferous forests, and its growth is favored by moderate shade and moderately humid ground conditions. The bilberry is a small (5-9 mm in diameter) fruit, bluish black in color, with many seeds. Bilberries are rich in vitamins, minerals and antioxidants, such as manganese, vitamins C and K, phenolic acids and anthocyanins, which are flavonoid antioxidants that give the bilberry its color. In fact, bilberries are very rich in anthocyanins supplying 300-700 mg per 100 g of berries.

According to Healthline, bilberries have been used for medicinal purposes since the Middle Ages, and their juice was traditionally used to dye linen and paper. In the 18th century, German doctors prescribed the bilberry for intestinal conditions, WebMD reported. And during World War II, British pilots ate bilberry jam, thinking it would improve their night vision. More recently, in 1987, Commission E (a German panel of experts that assesses the safety and effectiveness of herbs) approved the use of bilberry extract for diarrhea, as well as inflammation of the mouth or throat.

Studies have shown that bilberries may be helpful when it comes to reducing inflammation, lowering blood sugar levels, improving heart health, among other benefits.

But bilberry may be best known for its benefits for vision and eye health. Research has shown that bilberry can help improve the effectiveness of rhodopsin, which is necessary for night vision. Many studies have also shown the positive effects of bilberry on ocular health, including improvement in retinal abnormalities, increased capillary resistance, slowing of progression of lens opacity and myopia, and improved dark adaptation. For example, in a study of 50 patients with mild senile cataract, four months of supplementation with bilberry anthocyanins plus vitamin E was reported to have a 97 percent success rate in preventing cataract progression.

Research has also found that bilberries were shown to have beneficial effects on both blood pressure and nutrition-derived inflammatory responses. In the 2014 study, which was published in *PLoS ONE*, researchers from the University of Finland focused on the health effects of bilberries on mice that were fed a high-fat diet for a period of three months. Some of the mice were fed either 5 or 10 percent of freeze-dried bilberries in the diet.

The researchers assessed the effects of the diets by looking at inflammatory cell and cytokine levels, systolic blood pressure, glucose tolerance, insulin sensitivity and weight gain.

Mice on the high-fat diet experienced significant weight gain and detrimental changes in glucose and lipid metabolism, inflammation factors and blood pressure.

The researchers discovered that the group that received bilberries diminished the pro-inflammatory effects of the high-fat diet, indicated by an altered cytokine profile and a reduced relative prevalence of inflammation supporting T-cells. Bilberries also prevented elevated blood pressure caused by the high-fat diet.

According to WebMD, bilberry fruit has most often been used by adults in doses of 160-240 mg by mouth daily for up to six months. Mount Sinai reports that bilberry extract should be standardized to contain 25 percent anthocyanidin. The extract contains the highest percentage of anthocyanosides, making it the strongest form of bilberry. VR

References:

Healthline.com
Mountsinai.org
Nih.gov
Webmd.com

TEST YOUR KNOWLEDGE OF BILBERRY

1.) Native to northern Europe, bilberry usually grows in _____.
a.) Meadows
b.) Heaths
c.) Moist coniferous forests
d.) All of the above

2.) During World War II, British pilots ate bilberry jam, thinking it would improve their night vision.
a.) True
b.) False

3.) In a study of patients with mild senile cataract, four months of supplementation with bilberry anthocyanins plus vitamin E was reported to have a _____ percent success rate in preventing cataract progression.
a.) 79
b.) 87
c.) 97
d.) None of the above

4.) In the 2014 *PLoS ONE* study, researchers discovered that the group that received bilberries diminished the pro-inflammatory effects of a _____.
a.) Low-fat diet
b.) High-fat diet
c.) Cataract progression
d.) None of the above

5.) According to WebMD, bilberry fruit has most often been used by adults in doses of _____ by mouth daily for up to six months.
a.) 160-240 g
b.) 160-240 mg
c.) 60-24 g
d.) 16-24 mg

ANSWERS: 1.) D 2.) A 3.) C 4.) B 5.) B