

# HERBCLIP

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FILE: **Bilberry (*Vaccinium myrtillus*)**

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RE: **Benefits of Bilberry Extract**

Murray, Michael. Bilberry (*Vaccinium myrtillus*). *American Journal of Natural Medicine*, January/February 1997, Vol. 4, No. 1, pp. 18-22.

Bilberry, a European relative of the American blueberry, has proven effectiveness in treating or preventing diabetic retinopathy, macular degeneration, cataracts, glaucoma, and varicose veins. It also effectively regulates blood sugar levels in diabetic subjects. Bilberry extracts are widely used in Europe for all the above applications, as well as peptic ulcers and dysmenorrhea.

Traditionally, fresh bilberries were used to treat scurvy and urinary complaints, dried bilberries were used to treat diarrhea and dysentery, and a decoction of the leaves has been used for diabetes. During World War II, British Royal Air Force pilots noticed their night vision improved after consuming bilberries. Subsequent studies have shown that bilberry improves nighttime visual acuity, quickens adjustment to darkness, and speeds restoration of visual acuity after exposure to glare.

Bilberry's pharmacologically active constituents are flavonoid compounds known as anthocyanosides. Anthocyanoside concentrations in fresh bilberry fruit are 0.1% to .25%; concentrated bilberry extracts contain about 38% anthocyanosides, or 25% anthocyanidin plus the sugars that make up the anthocyanoside molecule. Only very small amounts of anthocyanidin free of sugars exist in nature. The standard dosage of pharmaceutical preparations widely used in Europe is 80 to 160 mg standardized to 25% anthocyanidin, taken three times daily. Bilberry is devoid of toxic effects, according to extensive toxicological investigation.

According to the author, anthocyanosides in bilberry strengthen the body's collagen connective tissue and promote collagen synthesis. Anthocyanosides also possess potent antioxidant and free radical scavenging powers, and they suppress the release and synthesis of endogenous compounds, such as histamine, that promote inflammation.

Anthocyanosides' "vitamin P" activity (decreasing capillary permeability and fragility) is roughly twice the intensity and duration of the bioflavonoid rutin.

Their collagen- and capillary-normalizing effects treat various brain circulation disturbances (similar to *Ginkgo biloba*) and also decrease the permeability of the blood brain barrier; increased blood brain permeability “has been linked to autoimmune diseases of the central nervous system, schizophrenia, “cerebral allergies, and a variety of other psychiatric disorders,” notes the author. Anthocyanosides’ “vitamin P” activity effectively treats various conditions of venous insufficiency such as varicose veins.

Bilberry anthocyanosides have been shown to suppress platelet aggregation (excessive platelet aggregation is linked to blood clots and atherosclerosis), and to combat hyperglycemia, with lower toxicity than insulin. Their ability to relax smooth muscle may be clinically applicable to dysmenorrhea. In laboratory rats, bilberry anthocyanosides “exerted significant preventive and curative anti-ulcer activity,” without affecting gastric secretion, in part apparently by increasing gastric mucus.

“Perhaps the most significant clinical applications for bilberry extracts are in the field of ophthalmology,” says the author. The health of the eye depends on a rich supply of nutrients and oxygen, and, “Relatively speaking, the amount of blood flow through the eye is the greatest in the body.” Bilberry appears to support vision by improving the delivery of oxygen and blood, “as well as exert[ing] other important pharmacological effects,” including acting as an antioxidant. Many eye diseases including cataracts and macular degeneration, originate in free-radical, or “oxidative” damage. In one human study, bilberry extract plus vitamin E stopped progression of cataract formation in 97% of 50 patients with senile cortical cataracts. Bilberry’s strengthening effect on collagen may help treat glaucoma, diabetic retinopathy, and other eye conditions based on excessive capillary permeability.

The purple bilberry anthocyanosides “have an affinity for the pigmented epithelium or visual portion of the retina,” which controls the adaptation of vision from dark to light and back; this affinity may help explain the extract’s benefits to night vision. —*Betsy Levy*

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