

The Longwood Herbal Task Force
(<http://www.mcp.edu/herbal/default.htm>) and
The Center for Holistic Pediatric Education and Research
(<http://www.childrenshospital.org/holistic/>)

Clinician Information Summary

BILBERRY

(*Vaccinium myrtillus*)

SUMMARY

Bilberry is primarily used to prevent and treat ocular disorders, such as poor night vision, cataracts and macular degeneration. It is also used to treat vascular disorders such as easy bruising, and to treat mild, non-specific diarrhea. These uses are primarily based on its anthocyanoside flavonoids and its tannin content. There are very few studies published in English evaluating these claims. Because the fruits are commonly consumed as food, dietary supplements are presumed safe for use with other medications and during pregnancy, lactation and childhood. Based on animal studies suggesting anticoagulant and hypoglycemic effects, caution should be used by patients combining medications with these effects with concentrated bilberry products.

POPULAR USES: Ocular disorders, vascular disorders, diarrhea, oral irritation, diabetes

CHEMICAL CONSTITUENTS: Flavonoid anthocyanosides, tannin, pectins, organic acids, and others

SCIENTIFIC DATA

In vitro: Bilberry's anthocyanosides induce vascular relaxation and, in high doses, inhibit platelet aggregation. Like ginkgo, pine bark extract and grape seed extract, the anthocyanosides in bilberry are potent antioxidants, significantly inhibiting lipid peroxidation, scavenging superoxide anions and removing hydroxyl radicals.

In animals: Bilberry's anthocyanosides enhanced collagen cross-linking and vascular stability,

(continued)

even in the face of ischemia/reperfusion injuries and hypertension. In rabbits, anthocyanosides sped rhodopsin regeneration in the retina, improving adaptation to rapidly changing light levels. Diabetic dogs and rats had lower blood sugar levels when treated with anthocyanosides, and antiulcer activity was observed in animals with chronic gastric ulcers. Anthocyanoside treatment protected the liver from oxidant damage induced by carbon tetrachloride.

In humans: Case series suggest that bilberry has benefit in treating night blindness and recovery from glaring lights, and in limiting the progression of cataracts and diabetic retinopathy. Other case series report that bilberry benefits adults suffering from a variety of circulatory problems, including atherosclerosis, easy bruising, hemorrhoids and varicose veins. There are no controlled trials evaluating bilberry's benefits in treating cataracts, macular degeneration or any other serious ocular disorder. Nor are there controlled trials evaluating its benefits in treating coronary artery disease, diabetes, gastric or duodenal ulcers, bruising, hemorrhoids, diarrhea, pharyngitis, oral ulcers or varicose veins.

TOXICITY AND SIDE EFFECTS

Side effects: None reported.

Interactions with other medications: None reported, though the potential for interactions with anticoagulants and hypoglycemic agents suggests caution for patients taking these medications along with high doses of bilberry extracts.

Contraindications: Animal data suggest that caution should be used when treating patients with bleeding disorders, diabetes or hypoglycemia.

Pregnancy and lactation: No clinical studies; presumed safe based on use as food.

Pediatric use: No clinical studies; presumed safe based on use as food.

ADDITIONAL RESOURCES

- *PDR for Herbal Medicine*, 1st Ed.. Medical Economics Company, 1998, pp. 630-633
- HOME: <http://www.mcp.edu/herbal/default.htm>
- Bilberry Complete Monograph: <http://www.mcp.edu/herbal/bilberry/bilberry.pdf>
- Bilberry Patient Fact Sheet: <http://www.mcp.edu/herbal/bilberry/bilberry.ph.pdf>