

Bilberry

Latin Name: *Vaccinium myrtillus*

Also known as: Blueberry (not the American variety of blueberry), European Blueberry, Myrtle Blueberry, Huckleberry, Whortleberry, Dyeberry, Blaeberry

Scientific Classification

In Europe, the bilberry is commonly called blueberry.

It is related to the American blueberry, huckleberry and cranberry, all different species of the *Vaccinium* genus. There are nearly 450 species of the genus *Vaccinium*.

Family: Ericaceae – heath family
Genus: *Vaccinium* – blueberry
Species: *V. myrtillus* – bilberry

Influence on the Body	(PRINCIPLE ACTIONS are listed in CAPITAL LETTERS)
<i>Blood and Circulatory System</i>	blood thinner • BLOOD VESSELS • scurvy (Vitamin C deficiency that can causes weakness and bleeding) • COLD HANDS and FEET • Raynaud's disease (pain and numbness in the outer extremities when cold) • atherosclerosis • edema • VARICOSE VEINS
<i>Blood Sugar</i>	DIABETES
<i>Body System</i>	anti-oxidant
<i>Digestive Tract</i>	nutritive • DIARRHEA • DYSENTERY • HEMORRHOIDS
<i>Eyes</i>	eye problems • light sensitivity • NIGHT BLINDNESS • astringent (tightens and tones tissues)
<i>Infections and Immune System</i>	immune system • INFECTIONS • typhoid epidemics • antiseptic (prevents infection)
<i>Inflammation</i>	mouth and throat inflammation
<i>Reproductive System</i>	<i>Female:</i> • anti-galactagogue (limits milk production)
<i>Skin, Tissues & Hair</i>	Ulcerative skin
<i>Urinary Tract</i>	kidney problems • URINARY PROBLEMS • BLADDER STONES • diuretic • water retention

Other Uses

BLUE DYE manufacture

Key Properties:

- BLOOD CIRCULATION – improves blood circulation throughout the body, including the tiny end capillaries
- EYE HEALTH – strengthens and supports eye health, particularly light and dark sensitivity
- astrigent – increases the tone and firmness of tissues
- diuretic – increases urine flow

Primarily affecting: EYES • BLOOD • KIDNEYS

History

The name bilberry is derived from 'blae' meaning livid or bluish from a northern Scottish old-country word and bollebar, Danish for dark berry.

Ancient Greek physicians used bilberries and Dioscorides (ca. 40-90 AD) spoke highly of them. The common use of bilberry fruits as an herbal medicine emerged in the Middle Ages. Saint Hildegard of Bingen (first woman to write an herbal, 1098-1179) recommended the plant for inducing menstruation flow.

Later, in the 1500s, German herbalists such as Hieronymus Bock, recommended the berries for treatment of bladder stones, liver disorders, and in syrups for coughs and lung ailments. Use of bilberry fruits became widespread among herbalists and physicians over the following centuries. German physicians made berry preparations for various intestinal conditions, as well as typhoid fever, infections of the mouth, skin and urinary tract, and for gout and rheumatism.

By the early 1900s, the dried berry tea was used as an astringent for diarrhea and dysentery, a diuretic, and a cooling nutritive tonic. It helped to prevent scurvy (a Vitamin C deficiency), stop bleeding and as an astringent-disinfectant mouthwash for inflammations of the mouth. Bilberries were at one time used against scurvy in Norway and other northern countries.

When stewed with a little sugar and lemon peel in an open tart, bilberries make a very enjoyable dish. Immense

quantities were exported annually from Holland, Germany and Scandinavia to be purchased largely by pastry cooks and restaurant owners.

At the time of World War II, it was noted that the British Royal Air Force pilots who were consistently using bilberry jam on their bread, seemed to be far more successful at hitting their night mission targets. This initiated several studies to determine how bilberries affect the eyes.

Attributes

Key Components: (including, but not limited to)

Vitamin C • Chromium

Tannins (with astringent qualities) • Anthocyanosides (derivatives of anthocyan – pigments responsible for the red, blue or violet colors in flowers and fruits)

Bilberry contains high levels of anthocyanosides which are linked to health benefits for the heart, cardiovascular system, eyes and against cancer. (1)(2) Anthocyanosides strengthen blood vessel walls, reduce inflammation and stabilize tissues containing collagen (tendons, ligaments, cartilage, etc).

Eyes

In the mid-1900s, research was earnestly conducted on the health benefits of using bilberry for eye disorders. Bilberry was found to reduce eye irritation, fatigue, nearsightedness and night blindness. These studies also noted bilberry's ability to extend the range and sharpness of vision, aid in the adaptation to darkness (by accelerating regeneration of the retina) and help limit the development of conditions such as glaucoma and cataracts.

Regular use of bilberry helps keep eyes clear, reduces the effect of aging on eyes, and improves night vision. Studies published in the late 1960s by Italian researchers showed that after taking a bilberry extract, both healthy individuals and patients with visual disorders had significant improvement in night vision, ability to more rapidly adapt to darkness, and faster restoration of vision following an exposure to bright, flashing lights.

Additional studies on air-traffic controllers, airplane pilots and truck drivers showed that an extract of bilberry fruits helped to improve night vision and enhance adjustment to darkness.

In two clinical trials, Italian researchers found that 76 percent of patients with myopia (short or near sightedness) had a marked improvement in retinal sensibility. In these trials,

*Blood Vessel and
Anti-Oxidant Effects*

patients were given 150 mg per day of a bilberry fruit extract for 15 days, along with Vitamin A.

Some diabetics develop diabetic retinopathy, a condition in which there is non-inflammatory degeneration of the retina. At least 3 double-blind placebo-controlled studies conducted between 1982 and 1987 by Italian researchers showed improvements and a significant reduction or disappearance of hemorrhages in the retina. Patients in the study were given 320 to 480 mg per day of a high anthocyanoside-containing extract for 1-12 months.

A double-blind placebo-controlled study on 40 healthy subjects found that a single dose of bilberry extract improved visual response for 2 hours.

Bilberry anthocyanosides serve to strengthen fragile capillaries and blood vessel walls, has anti-oxidant effects (protecting them from free radical damage), and stimulate the formation of new capillaries and healthy connective tissue.

More than 700 patients with various conditions related to poor micro-circulation in cases of atherosclerosis, a tendency to bruise, hemorrhoids and varicose veins participated in clinical studies that have shown bilberry extracts help reduce damage from free radicals and promote healthy circulation to the extremities. These studies involve extracts of the fruits standardized to contain 25-36 percent anthocyanosides.

Bilberry increases peripheral and connective tissue circulation, improves conditions such as Raynaud's disease (pain and spasms in the fingers and toes, when cold) and reduces edema. It also soothes inflammatory conditions such as arthritis.

European physicians have used bilberry's blood vessel-stabilizing properties as a treatment before surgery to reduce bleeding complications and bruising.

Modern laboratory studies on bilberry fruit extracts have confirmed a slight relaxation effect on vascular smooth muscles and documented its possible role in reducing factors associated with chronic inflammatory diseases.

The use of bilberry extract resulted in a significant decrease in subjective symptoms such as a feeling of heaviness, pain

	<p>in the legs and ankles, and sensations of burning, pricking or numbness of the skin in a placebo-controlled study that followed 60 people with varicose veins for 30 days. Similar results were seen in a 30-day double-blind trial involving 47 individuals. (3)</p>
<i>Astringent</i>	The dried berries of bilberry, in the form of a syrup, may be used for their astringent qualities (ability to tighten and tone tissues) in the treatment of dysentery and diarrhea.
<i>Mucous Membranes</i>	The German Commission E has produced a positive monograph on bilberry fruits, which are allowed in that country for the treatment of acute diarrhea and mild inflammations of the mucous membranes of the mouth and throat.
<i>Women</i>	Bilberry is a beneficial herb to use during pregnancy. It can be a strong but gentle astringent and will fortify veins, support capillaries, aid kidney function, and reduce bloating (as a mild diuretic). Bilberry is an antigalactagogue (substance that limits milk secretions) when a woman finishes nursing.
<i>Industrial Use</i>	Bilberry is used as a home and industrial leather dye of brown and yellow colors. It is combined with other chemicals to produce violet, red, green and blue for wool, cotton and linen materials.
Herb Parts Used	The berries of the plant are used medicinally. Bilberry leaves, when used, are to be applied topically.
Preparations and Remedies	The small purple fruits may be eaten like blueberries, made into a syrup or extract, dried to make a tea, or dried and powdered to put in formulas, capsules, tablets or extracts
<i>Infusions</i>	<p><i>Bilberry Tea:</i> Add one teaspoon dried berries in a cup of water and take once daily. Infants and children may drink bilberry tea for diarrhea.</p>
<i>Bilberry Jam</i>	<p>Owing to its rich, sweet tasting juice, bilberries do not require a large quantity of sugar when making into jam; only half of a pound sugar to a pound of berries, if the preserve is to be eaten right away. Their small seeds make them ideal for jam.</p> <p>In a preserving pan, heat to a boil 3 pounds clean, fresh fruit, 1-1/2 pounds raw sugar and about a cup of water. Boil rapidly for 40 minutes. You may use apple juice made from</p>

	<p>windfalls and peelings, instead of the water. It improves the taste. To make apple juice, cover the apples with water, stew down, and strain the juice through thick muslin. If the jam is to be kept long, it must be bottled hot in screw-top jars.</p>
<p>Safety</p>	<p>Bilberry fruit is a food and as such, is quite safe. No health hazards or side effects are known with proper dosages.</p> <p>Digestive complaints due to high tannin content are possible.</p> <p>Bilberry does not appear to interfere with blood clotting.</p> <p>High doses of 'bilberry leaf' or 'leaf' extract are considered by many to be unsafe to ingest due to possible toxic side effects. If you chose to use preparations with bilberry leaf, do so only in designated doses as recommended on the bottle, or under the care of a health care practitioner.</p>
<p>Plant Profile</p>	<p><i>Natural Habitat:</i> Bilberry is native to northern Europe and Asia and is now common to North America. <i>V. myrtillus</i> thrives in cool, damp, acid soils in vast areas which include woods, sandy or rocky soils, and is a scrub shrub of high mountains. It grows abundantly in Northwest England and Western Mongolia, then jumps the Pacific to Western North America, ranging from British Columbia, southward to Utah, Arizona and New Mexico.</p> <p>The bilberry fruits and leaves of commerce are wild collected in European countries, in particular in Bosnia and Herzegovina, Bulgaria, Croatia, Romania, Macedonia, Serbia, Montenegro, and Kosovo, with significant amounts increasingly being wild collected under organic certification in the Russian Federation, Bulgaria, Romania, Sweden, Poland, Ukraine, and Finland.</p> <p><i>Description</i> The species <i>V. myrtillus</i>, consisting of low-growing shrubs that bear fruit. Bilberry is a small, woody shrub, rarely growing over a foot high, bearing greenish-pink, bell-shaped flowers in late spring and early summer, followed by bluish-black, round fruits (although there is one variety that bears white fruit). Both the dried and fresh fruit should have a sweet and slightly astringent, acidic taste.</p> <p>The leathery leaves (similar to the shape of myrtle leaves, hence its species name) are at first rosy, then yellowish-green, and in autumn, turn red and are very ornamental. The easiest way to distinguish the bilberry plant from</p>

American blueberries is that it produces single or paired berries on the bush while blueberries grow in clusters.

The fruit of the bilberry plant is similar in taste to blueberries, but in size, they are somewhat smaller. Bilberries are darker in color, softer and juicier than blueberries. While the bilberry's fruit pulp is red or purple (heavily staining the fingers and lips when eating the raw fruit), the blueberry's inner fruit is light green. In the wild regions of Europe, the plant flowers in May and the fruits ripen and are harvested from July through September.
