Blueberries … little blue dynamos

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10 Proven Health Benefits of Blueberries

Blueberries are sweet, nutritious and wildly popular.

Often labelled a “superfood,” they are low in calories and incredibly good for you.

They are so tasty and convenient that many people consider them to be their favorite fruit.

Here are 10 health benefits of blueberries that are supported by research.

1. Blueberries are Low in Calories, But High in Nutrients

The blueberry is a flowering shrub that produces berries that are colored blue to purple, also known as blueberries.

It is strongly related to similar shrubs, such as those that produce cranberries and huckleberries.

Blueberries are small, around 5-16 millimeters (0.2-0.6 inches) in diameter, and have a flared crown at the end.

They are green in color at first, then change to blue-purple as they ripen.

These are the two most common types:

1. Highbush blueberries are the most commonly grown species in the US.
2. Lowbush blueberries are often referred to as “wild” blueberries. They are typically smaller and richer in some antioxidants.

This is what typical blueberries look like:

Blueberries are among the most nutrient dense berries. A 1 cup serving (148 grams) of blueberries contains (1):

- Fiber: 4 grams.
- Vitamin C: 24% of the RDA.
- Vitamin K: 36% of the RDA.

- Manganese: 25% of the RDA.
- Then it contains small amounts of various other nutrients.

They are also about 85% water, and an entire cup contains only 84 calories, with 15 grams of carbohydrates.

Calorie for calorie, this makes them an excellent source of several important nutrients.

Bottom Line: The blueberry is a very popular berry. It is low in calories, but high in fiber, vitamin C and vitamin K.

2. Blueberries are the King of Antioxidant Foods

Antioxidants are important.

They protect our bodies from damage by free radicals, unstable molecules that can damage cellular structures and contribute to aging and diseases like cancer (2, 3).

Blueberries are believed to contain the highestantioxidant capacity of ALL commonly consumed fruits and vegetables (4, 5, 6).

The main antioxidant compounds in blueberries belong to a large family of polyphenols, called flavonoids.

One group of flavonoids in particular, anthocyanins, is thought to be responsible for much of the beneficial health effects (7).

They have been shown to directly increase antioxidant levels inside the body (8, 9).

Bottom Line: Blueberries have the highest antioxidant capacity of all commonly consumed fruits and vegetables. Flavonoids appear to be the major antioxidant compounds.

3. Blueberries Reduce DNA Damage, Which May Help Protect Against Ageing and Cancer

Oxidative DNA damage is part of everyday life.

It is said to occur tens of thousands of times per day, in every single cell in the body (10).

DNA damage is part of the reason we grow older, and it also plays an important role in the development of diseases like cancer (11).

Because blueberries are high in antioxidants, they can help neutralize some of thefree radicals that cause damage to our DNA.

In one 4-week study, 168 participants were instructed to drink 1 liter (34 ounces) of a mixture of blueberry and apple juice, every day.

At the end of the study, oxidative DNA damage due to free radicals was reduced by 20% (12).

These findings have also been supported by smaller studies using either fresh or powdered blueberries (13, 14).

Bottom Line: Several studies have shown that blueberries and blueberry juice can protect against DNA damage, a leading driver of aging and cancer.

4. Blueberries Protect Cholesterol in The Blood From Becoming Damaged

Oxidative damage is not limited to our cells and DNA.

It is also problematic when our circulating LDLlipoproteins (the “bad” cholesterol) are oxidized.

In fact, oxidation of LDL is a crucial step in the heart disease process.

Fortunately for us, the antioxidants in blueberries are strongly linked to reduced levels of oxidized LDL (15).

A daily 50 gram serving of blueberries lowered LDL oxidation by 27% in obese participants, after a period of eight weeks (16).

Another study showed that 75 grams of blueberries with a main meal significantly reduced the oxidation of LDL lipoproteins (17).

Bottom Line: The antioxidants in blueberries have been shown to protect LDL lipoproteins (the “bad” cholesterol) from oxidative damage, a crucial step in the pathway towards heart disease.

5. Blueberries May Lower Blood Pressure

Blueberries appear to have significant benefits for people with high blood pressure, a major risk factor for some of the world's leading killers.

In one study, obese individuals at a high risk for heart disease noted a 4-6% reduction in blood pressure, after consuming 50 grams (1.7 ounces) of blueberries per day, for eight weeks (18).

Other studies have found similar effects, especially when looking at post-menopausal women (19, 20).

Given that high blood pressure is one of the leading drivers of heart attacks and strokes, the implications of this are potentially massive.

Bottom Line: Regular blueberry intake has been shown to lower blood pressure in numerous studies.

6. Blueberries May Help Prevent Heart Disease

Again, eating blueberries may lower blood pressure and oxidized LDL.

However, it's important to realize that these are risk factors, not actual diseases.

What we really want to know is whether blueberries help prevent *hard end points* like heart attacks, which are the world's biggest killer (21).

In a 2013 study on 93,600 nurses, eating plenty of anthocyanins (the main antioxidants in blueberries) was linked to a 32% lower risk of heart attacks (22).

This was an observational study, so it can not prove that the blueberries *caused* the reduction in risk, but it seems likely given the known beneficial effects on risk factors.

Bottom Line: There is some evidence that regular blueberry consumption can help prevent heart attacks.

7. Blueberries Can Help Maintain Brain Function and Improve Memory

Oxidative stress can accelerate the brain's aging process, having negative effects on brain function.

According to animal studies, the antioxidants in blueberries tend to accumulate in areas of the brain that are essential for intelligence (23, 24).

They appear to directly interact with aging neurons, leading to improvements in cell signalling.

Human studies have also shown promising results.

In one of these studies, 9 elderly participants with mild cognitive impairment consumed blueberry juice every day. After 12 weeks, they had seen improvements in several markers of brain function (25).

A six year study of 16,010 elderly participants found that blueberries and strawberries were linked to delays in cognitive aging by up to 2.5 years (26).

Bottom Line: The antioxidants in blueberries seem to have benefits for the brain, helping to improve brain function and delaying age-related decline.

8. Anthocyanins in Blueberries Can Have Anti-Diabetic Effects

Blueberries are moderate in sugar when compared to other fruits.

One cup contains 15 grams, which is equivalent to a small apple or large orange.

However, the bioactive compounds in blueberries appear to outweigh any negative impact of the sugar when it comes to blood sugar control.

Research suggests that anthocyanins in blueberries can have beneficial effects on insulin sensitivity and glucose metabolism. These anti-diabetic effects have been shown with both blueberry juice and extract (27, 28, 29).

In a study of 32 obese subjects with insulin resistance, a blueberry smoothie caused major improvements in insulin sensitivity (30).

Improved insulin sensitivity should lower the risk of metabolic syndrome and type 2 diabetes, which are currently some of the world's biggest health problems.

Bottom Line: Several studies have shown that blueberries have anti-diabetic effects, helping to improve insulin sensitivity and lower blood sugar levels.

9. Substances in Them May Help Fight Urinary Tract Infections

Urinary tract infections are a common problem in women.

It is well known that cranberry juice can help prevent these types of infections.

Blueberries are highly related to cranberries, and contain many of the same active substances as cranberry juice (31).

These substances are called anti-adhesives, and help prevent bacteria like *E. coli*from binding to the wall of the bladder.

Blueberries haven't been studied much for this purpose, but chances are that they have similar effects as cranberries (32).

Bottom Line: Like cranberries, blueberries contain substances that can prevent certain bacteria from binding to the wall of the urinary bladder. This may be useful in preventing urinary tract infections.

10. Blueberries May Help Reduce Muscle Damage After Strenuous Exercise

Strenuous exercise can lead to muscle soreness and fatigue.

This is driven, in part, by local inflammation and oxidative stress in the muscle tissue (33).

Blueberry supplementation may reduce the damage that occurs at the molecular level, minimizing soreness and reduction in muscle performance.

In a small study of 10 female athletes, blueberries accelerated muscle recovery after strenuous leg exercises (34).

Take Home Message

It is clear that blueberries are incredibly healthy and nutritious.

The fact that they are sweet, colorful, and can be enjoyed both fresh and frozen, is just a tasty bonus.

Source : https://authoritynutrition.com/10-proven-benefits-of-blueberries/

More about blueberries:

- Blueberries 101: Nutrition Facts and Health Benefits

Blueberries 101: Nutrition Facts and Health Benefits

Blueberries are a very popular, tasty fruit.

Known scientifically as *Vaccinium* ssp., they are closely related to cranberries, bilberries and huckleberries.

Blueberries are native to North America, but they are now grown commercially in the Americas and Europe (1).

They are low in calories and incredibly healthy. Eating blueberries may benefit heart and brain health, as well as help regulate blood sugar levels.

Often referred to as a superfood, blueberries are an excellent source of several vitamins, beneficial plant compounds and antioxidants (2).

Blueberries have a pleasant, sweet taste. They are often eaten fresh, but are sometimes frozen or juiced. They can be used in a variety of baked goods, jams, jellies and for flavorings.

This is what blueberries look like:

Blueberries are small, around 5–16 millimeters, or 0.2–0.6 inches, in diameter. They range from blue to purple in color.

Different kinds of blueberries exist, so their appearance may vary slightly. The two most common varieties are highbush and lowbush blueberries.

Contents

Nutrition Facts

One cup of blueberries (148 grams) contains 84 calories.

The table below contains information on the nutrients found in blueberries (3):

Blueberries — Nutrition Facts

Serving100 grams

	Amount
Calories	**57**
Water	**84 %**
Protein	**0.7 g**

Carbs	**14.5 g**
Sugar	**10 g**
Fiber	**2.4 g**
Fat	**0.3 g**
Saturated	**0.03 g**
Monounsaturated	**0.05 g**
Polyunsaturated	**0.15 g**
Omega-3	**~**
Omega-6	**~**
Trans fat	**~**

More details

Carbs

Blueberries consist of 14% carbs and 84% water. They contain only minor amounts of protein (0.7%) and fat (0.3%).

Most of the carbs come from simple sugars like glucose and fructose, but they also contain some fiber.

Blueberries have a score of 53 on the glycemic index, which is relatively low (4).

This means that blueberries should not cause major spikes in blood sugar levels and are considered to be safe for diabetics.

Fiber

Dietary fiber is an important part of a healthy diet and may have protective effects against various diseases (5).

One cup of blueberries contains 3.6 grams of fiber. In fact, around 16% of the carb content is in the form of fiber.

Bottom Line: Blueberries are mainly made up of carbs and water. They also contain a decent amount of fiber.

Vitamins and Minerals

Blueberries are a good source of several vitamins and minerals.

These include:

- **Vitamin K1: Blueberries are a good source of vitamin K1, which is also known as phylloquinone. Vitamin K1 is mostly involved in blood clotting, but may also benefit bone health (6).**
- **Vitamin C: Also known as ascorbic acid, vitamin C is an antioxidant that is important for skin health and immune function (7).**
- **Manganese: This essential mineral is required for normal amino acid, protein, lipid and carbohydrate metabolism (8).**

Blueberries also contain small amounts of vitamin E, vitamin B6 and copper.

Bottom Line: Blueberries are a good source of vitamin K1, vitamin C and manganese. They also contain vitamin E, vitamin B6 and copper, to a lesser extent.

Plant Compounds

Blueberries are rich in antioxidants and beneficial plant compounds. These include:

- **Anthocyanins: These antioxidants give blueberries their color and may reduce the risk of heart disease (9, 10, 11).**
- **Quercetin: High intake of this flavonol has been linked with lower blood pressure and a reduced risk of heart disease (12, 13).**
- **Myricetin: This flavonol may have a number of health benefits, and has properties that may help prevent cancer and diabetes (14, 15).**

Anthocyanins

Anthocyanins are the main antioxidant compounds found in blueberries. They belong to a large family of polyphenols called flavonoids.

Anthocyanins are believed to be responsible for many of the beneficial health effects of blueberries (16).

More than 15 different anthocyanins have been detected in blueberries, but malvidinand delphinidin are the predominant compounds (10, 17, 16).

These anthocyanins seem to be concentrated in the skin. Therefore, the outer layer of the berry is the most valuable part (18).

Bottom Line: Blueberries are rich in beneficial plant compounds and antioxidants, especially anthocyanins, which may account for many of their health benefits.

Health Benefits of Blueberries

Blueberries may have benefits for heart, brain and blood sugar health.

Heart Health

Heart disease is the leading cause of death in the world (19).

Studies have found a relationship between berries, or flavonoid-rich foods, and improved heart health (20, 11).

Some studies suggest that blueberries may have significant health benefits for people with high blood pressure, a major risk factor for heart disease (21, 22).

Blueberries may also inhibit oxidation of LDL cholesterol, a critical step in the heart disease process (23).

An observational study of 93,600 nurses found that a high intake of anthocyanins was linked to a 32% lower risk of heart attacks (24).

Bottom Line: Blueberries may decrease the risk of heart disease by lowering blood pressure and inhibiting oxidation of LDL cholesterol.

Brain Health

As the number of people over the age of 65 increases worldwide, so will age-related conditions and diseases.

Interestingly, a higher intake of flavonoid-rich foods has been associated with better brain function (25).

Consuming blueberries may help prevent oxidative stress, which plays an important role in the aging process (26).

Blueberries may also improve brain function directly. In one study, drinking blueberry juice every day for 12 weeks improved memory in 9 older adults with early memory decline (27).

Another, six-year study found that blueberries and strawberries were linked to delays in brain aging by up to 2.5 years in older adults (28).

Bottom Line: Several studies have shown that blueberries may play a role in brain health, delaying age-related decline and helping improve brain function.

Blood Sugar Control

The prevalence of type 2 diabetes is increasing rapidly worldwide (29).

People with diabetes are sensitive to rapid changes in blood sugar, and need to be cautious when they eat foods rich in carbohydrates.

Blueberries contain moderate amounts of sugar, at 15 grams per cup.

They do not have adverse effects on blood sugar levels, which may be due to their high content of bioactive compounds.

Test tube studies suggest that the anthocyanins in blueberries can have beneficial effects on blood sugar control (30, 31).

Human studies have also shown promising results.

One study found that two blueberry smoothies a day for six weeks helped improve insulin sensitivity in obese people who were at a high risk of developing diabetes (32).

Blueberries may also affect blood sugar levels directly after a high-carb meal by blocking certain digestive enzymes and reducing blood sugar spikes (33).

Read this article for more on the health benefits of blueberries.

Bottom Line: Several studies indicate that blueberries may lower blood sugar levels and improve insulin sensitivity.

Adverse Effects

When eaten in moderation, blueberries do not have any known adverse effects in healthy individuals.

Allergy to blueberries does exist, but is extremely rare (34).

Bottom Line: Blueberries are well tolerated when eaten in moderation, and allergy is very rare.

Summary

Blueberries are a popular, delicious fruit.

They are a good source of vitamin K1, vitamin C, manganese and several other beneficial plant compounds like anthocyanins.

Consuming blueberries on a regular basis may help prevent heart disease, improve brain health and help moderate blood sugar levels.

Blueberry Tea Benefits

Last Updated: May 07, 2015 | By Jessica Lewis

A cup of blueberry tea beside a spoonful of fruit. Photo Credit manaemedia/iStock/Getty Images

Blueberry tea is made from the dried leaves of the blueberry bush. It has a faintly grassy taste and is sometimes flavored with dried blueberries to give it a sweeter, fruitier flavor and a deep purple color. Blueberry leaves are rich in antioxidants, which have a number of different health benefits, including lowering fat levels and potentially protecting against hepatitis C.

Supplies Antioxidants

Blueberry leaves are rich in polyphenols, a type of natural antioxidant. Regardless of whether the leaves are from commercial or wild blueberry bushes, the antioxidant capacity of blueberry tea was shown to be extremely high in a study published in a 2009 issue of the "Journal of Medicinal Food." Scientists conducting the study ensured that the leaves were steeped in hot water in a preparation that was similar to a home-brew of blueberry tea. A study in a 2013 issue of the "Journal of Medicinal Food" concluded that the antioxidant content in blueberry tea was

sufficiently high that it showed great potential in helping treat the physiological symptoms of neurodegenerative disease, such as reduced brain function and mental impairment.

Reduces the Risk of Diabetes

Blueberry tea ingredients, both the leaves and the berries, contain anthocyanins, which are antioxidants found in dark-colored fruits, such as blueberries. Anthocyanins are water-soluble, so their health benefits will be present in blueberry tea. A 2012 issue of the "American Journal of Clinical Nutriton" included a study showing that increased anthocyanin intake, as a supplement and in the form of anthocyanin-rich foods such as blueberries, led to a lower risk of type-2 diabetes in both men and women.

Contains Gallic Acid

Blueberry tea naturally contains gallic acid, a natural antioxidant. According to an article in a 2013 issue of "Molecules," gallic acid has anti-inflammatory and anti-allergy properties. Like anthocyanins, gallic acid is water-soluble, so it is present in blueberry tea. Researchers found that gallic reduced the amount of inflammation associated with allergic reactions, leading them to conclude that gallic acid may be useful as a natural anti-inflammatory agent for allergies, especially when used along with dexamethasone, an anti-inflammatory drug. Gallic acid, when taken with dexamethasone, was significantly more effective as an anti-inflammatory than when it was taken alone.

Making Blueberry Tea at Home

When making teas at home, the amount of tea you use as well as the temperature of the water and the length of time it is allowed to steep will affect the nutrition content, as well as the taste, of the tea. For blueberry tea, a 2-teaspoon serving is generally used, and for optimal antioxidant benefits, steep the tea in roughly 8 ounces of water for 30 minutes. The water should be almost boiling, roughly 203 degrees Fahrenheit. If you like, you can double or triple the amount of leaves and water used to make a larger pot. Blueberry tea can be drunk hot or cold.

Antioxidants in Blueberries vs. Raisins

Blueberries contain more antioxidants than raisins.

Raisins have an advantage over blueberries if you're looking for nutrients such as vitamin B-6 and iron, but when you want to boost antioxidants, you should choose blueberries over raisins. Raisins contain a small amount of two dietary antioxidants -- vitamins C and E -- but blueberries rule the day with five times more of both vitamins. You'll also get a significant amount of antioxidant flavonoids from blueberries.

Antioxidants Explained

All of the life-sustaining work inside your body, from producing energy to synthesizing tissues and hormones, is accomplished by molecules interacting with other molecules. These reactions result in unhealthy byproducts, including molecules called free radicals. Free radicals are also produced when your body reacts to stressors, such as sunlight and air pollution, according to a

report in the July 2010 issue of "Pharmacognosy Review." As free radicals interact with cells, they cause damage called oxidative stress. This is why substances that neutralize free radicals before they harm cells are called antioxidants. Without antioxidants, damage from free radicals accumulates and may cause diseases such as cancer and atherosclerosis.

Vitamin C Stops Free Radicals

The U.S. Department of Agriculture describes vitamin C as having high power to neutralize a wide variety of free radicals. In addition to protecting all types of cells, the water-soluble vitamin also keeps free radicals from damaging proteins, fats, carbs and DNA, according to the Linus Pauling Institute. One cup of raw blueberries contains 14 milligrams of vitamin C, compared to 3 milligrams in the same portion of raisins. Women should consume 75 milligrams of vitamin C daily, while men need 90 milligrams.

Vitamin E Protects Fats

Vitamin E has one main job: to provide antioxidant protection to essential fats throughout your body. In this role, it stops free radicals before they destroy fats that fill vital jobs, such as forming cellular structure, regulating genes and producing energy. Vitamin E also protects fats in lipoproteins, which carry cholesterol through your blood. Damage to lipoproteins may increase your risk of cardiovascular disease, according to the Linus Pauling Institute. You'll get 0.8 milligrams of vitamin E from 1 cup of blueberries and barely 0.2 milligrams from raisins. Your recommended dietary allowance for vitamin E is 15 milligrams daily.

Antioxidant Flavonoids

Flavonoids represent a very large group of substances produced by plants. They don't provide nutritional benefits, but they do protect your health by regulating cellular communication and working as antioxidants. Blueberries are a rich source of flavonoids, containing more than 500 milligrams of flavonoids in a 1-cup serving, according to the USDA National Nutrient Database. By comparison, raisins only have about 1 milligram. If you have a choice, organically grown blueberries may provide more flavonoids than conventionally grown fruits, according to the

USDA's research published in the July 2008 issue of the "Journal of Agricultural and Food Chemistry."

What Are the Benefits of Dried Blueberries?

Last Updated: Jun 30, 2015 | By Mala Srivastava

Dried blueberries are rich in vitamin K. P

Dried blueberries pack a nutritional punch. They are low in sodium and in calories, offering 127 calories per one-quarter cup, and they contain no cholesterol. In addition, these fruits contain nutrients that are vital for your health. There are many ways for you to enjoy these sweet treats. You can make a smoothie by blending dried blueberries and a banana with a low-fat milk or add blueberries to hot oatmeal.

It Keeps Your Bones Strong and Healthy

Dried blueberries are rich in vitamin K, providing about 23.8 micrograms of the vitamin per one-quarter cup. This amount equates to 20 to 26 percent of the recommended daily value for vitamin K. Vitamin K helps your blood clot properly and plays a crucial role in your bone health. Furthermore, vitamin K helps your body use calcium to build bones. Evidence suggests that vitamin K helps cut the risk of bone fractures, especially in postmenopausal women who are at risk for osteoporosis, according to the University of Maryland Medical Center.

It Combats Free Radicals

One-quarter cup of dried blueberries contains about 9.5 milligrams of vitamin C, meeting 11 to 13 percent of your daily needs. A water-soluble vitamin, vitamin C aids in bone growth and tissue repair. Your body needs vitamin C for healing wounds, as well as for repairing and maintaining your teeth and bones. Vitamin C also helps build collagen, which is a protein used to form ligaments, skin, blood vessels, tendons and cartilage. Collagen limits the damaging effects of free

radicals through its antioxidant activity. Free radicals are unstable compounds that damage your DNA and may contribute to heart disease and cancer.

It May Help Prevent Type 2 Diabetes

Dried blueberries are a good source of fiber. One-quarter cup of dried blueberries provides you with 3 grams of fiber, fulfilling 10 to 12 percent of your daily fiber needs. Fiber helps keep your digestive system running smoothly and it also regulates bowel movements. Clinical studies suggest that consuming foods rich in fiber, such as dried blueberries, may help prevent type 2 diabetes, may lower blood sugar and insulin levels and may improve cholesterol levels in people with diabetes, according to the UMMC.

It Improves Your Cardiovascular Health

Dried blueberries are a rich source of anthocyanins, which are potent phytochemicals that give these fruits their blue color. Apart from this, anthocyanins help fight free radicals. Epidemiological and clinical studies have demonstrated an association between anthocyanins and improved cardiovascular health, according to a study published in the March 2010 issue of the journal "Nutrition Reviews." Also, human intervention studies using fresh or freeze-dried blueberries have shown notable improvements in metabolic risk factors such as glucose metabolism, lipid peroxidation, total plasma antioxidant capacity and low-density lipoprotein oxidation.

Blueberry Nutrition

Plump, juicy, and sweet, with vibrant colors ranging from deep purple-blue to blue-black and highlighted by a silvery sheen called a bloom, blueberries are one of nature’s great treasures. Though miniature in size, they are also proof that, when it comes to nutrition, good things really do come in small packages. With 80 calories per cup, virtually no fat and low in sodium, blueberries offer many nutritional benefits. Here’s the skinny on blueberry nutrition:

Blueberry Nutrition

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BLUEBERRIES

A Handful of Health

Plump, juicy, and sweet, with vibrant colors ranging from deep purple-blue to blue-black and highlighted by a silvery sheen called a bloom, blueberries are one of nature's great treasures. Though miniature in size, they are also proof that, when it comes to health benefits, good things really do come in small packages.

Blueberry Production & Consumption

With blueberry production increasing to match rising levels of consumption, it's clear that more Americans are discovering just how good these Little Blue Dynamos are.[1]

North American Highbush Production

15.5 oz. | 17.8 oz. | 20.2 oz. | 34.9 oz. | 50 oz. (Projection)

Per Capita Consumption

Blueberries Are...

LOW IN FAT

A one-cup serving contains only **80 calories** and virtually no fat.

PACKED WITH VITAMIN C

One serving delivers almost **25%** of one's daily requirement of vitamin C.[2]

Vitamin C aids collagen formation and helps maintain healthy gums and capillaries and a healthy immune system.[3]

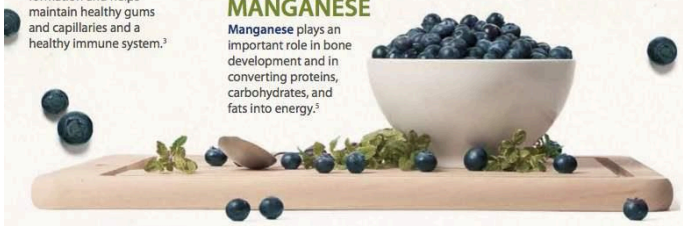
FULL OF DIETARY FIBER

A handful of blueberries helps satisfy recommended daily fiber intake.[2]

Fiber helps keep the body regular, the heart healthy, and cholesterol in check.[4]

AN EXCELLENT SOURCE OF MANGANESE

Manganese plays an important role in bone development and in converting proteins, carbohydrates, and fats into energy.[5]



Blueberry Research Areas

Researchers are currently pursuing four tracks to better understand the role that blueberries may play in promoting good health.

CARDIOVASCULAR HEALTH | BRAIN HEALTH | INSULIN RESPONSE | CANCER RESEARCH

A collaboration between the U.S. Highbush Blueberry Council and Column Five.

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1. The North American Blueberry Council (NABC), "Blueberry Statistical Record 2011." Prepared by the North American Blueberry Council (NABC). May 2012.
2. U.S. Department of Agriculture, ARS 2012. National Nutrient Database for Standard Reference, Release 25.
3. Medline Plus Medical Dictionary Online. U.S. National Library of Medicine. NIH.
4. FDA Guidance for Industry: A Food Labeling Guide (11. Appendix C: Health Claims)
5. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium and Zinc. (2001) National Academy of Sciences. Institute of Medicine. Food and Nutrition Board. Chapter 10 Manganese.

Blueberries are packed with vitamin C nutrition.

In just one serving, you can get 14 mg of Vitamin C – almost 25 percent of your daily requirement. [1] Vitamin C is necessary for growth and development of tissues and promotes wound healing. [2]

Blueberries are a good source of dietary fiber.

A handful of blueberries can help you meet your daily fiber requirement.Dietary fiber may reduce the risk of heart disease and adds bulk to your diet, which may help you feel full faster.

Blueberries are high in manganese.

Manganese helps the body process cholesterol and nutrients such as carbohydrates and protein. [5]

Get the lowdown on blueberry nutrition below, and download more information about the health benefits of blueberries from our library.

Blueberries Raw: Serving size 100 grams

The good: This food is very low in Saturated Fat, Cholesterol and Sodium. It is also a good source of Dietary Fiber, and a very good source of Vitamin C, Vitamin K and Manganese.

The bad: A large portion of the calories in this food come from sugars.

Adding other foods with complementary amino acid profiles to this food may yield a more complete protein source and improve the quality of some types of restrictive diets.

NUTRITION INFORMATION

Amounts per 100 grams

Calorie Information	
Amounts Per Selected Serving	
	%DV
Calories	
	57.0
(239 kJ)	
	3%
From Carbohydrate	
	51.7
(216 kJ)	
From Fat	
	2.8
(11.7 kJ)	
From Protein	
	2.5
(10.5 kJ)	
From Alcohol	
	0.0

Protein & Amino Acids	
Amounts Per Selected Serving	
	%DV
Protein	
	0.7
g	
	1%
Tryptophan	
	3.0
mg	
Threonine	
	20.0
mg	
Isoleucine	
	23.0
mg	
Leucine	
	44.0

(0.0 kJ)

Carbohydrates

Amounts Per Selected Serving

%DV

Total Carbohydrate

14.5

g

5%

Dietary Fiber

2.4

g

10%

Starch

0.0

g

Sugars

10.0

g

mg

Lysine

13.0

mg

Methionine

12.0

mg

Cystine

8.0

mg

Phenylalanine

26.0

mg

Tyrosine

9.0

mg

Sucrose			
	110	Valine	
mg			31.0
		mg	
Glucose			
	4880	Arginine	
mg			37.0
		mg	
Fructose			
	4970	Histidine	
mg			11.0
		mg	
Lactose			
	0.0	Alanine	
mg			31.0
		mg	
Maltose			
	0.0	Aspartic acid	
mg			57.0
		mg	
Galactose			

0.0

mg

Fats & Fatty Acids

Amounts Per Selected Serving

%DV

Total Fat

0.3

g

1%

Saturated Fat

0.0

g

0%

4:00

0.0

mg

6:00

0.0

mg

Glutamic acid

91.0

mg

Glycine

31.0

mg

Proline

28.0

mg

Serine

22.0

mg

Hydroxyproline

~

Vitamins

	Amounts Per Selected Serving	
8:00		%DV
	0.0	Vitamin A
mg		54.0
		IU
10:00		1%
	0.0	Retinol
mg		0.0
		mcg
12:00		
	0.0	Retinol Activity Equivalent
mg		3.0
		mcg
13:00		
	~	Alpha Carotene
		0.0
		mcg
14:00		
	0.0	Beta Carotene
mg		32.0
		mcg

15:00			
	~	Beta Cryptoxanthin	
			0.0
		mcg	
16:00			
	17.0	Lycopene	
mg			0.0
		mcg	
17:00			
	~	Lutein+Zeaxanthin	
			80.0
		mcg	
18:00			
	5.0	Vitamin C	
mg			9.7
		mg	
19:00			16%
	~	Vitamin D	
			~
20:00			~

	~	Vitamin E (Alpha Tocopherol)	
			0.6
		mg	
22:00			3%
	~	Beta Tocopherol	
			0.0
		mg	
24:00:00			
	~	Gamma Tocopherol	
			0.4
		mg	
Monounsaturated Fat			
	0.0	Delta Tocopherol	
g			0.0
		mg	
14:01			
	~	Vitamin K	
			19.3
		mcg	
15:01			24%
	~	Thiamin	

			0.0
			mg
16:1 undifferentiated			2%
	2.0	Riboflavin	
mg			0.0
			mg
16:1 c			2%
	~	Niacin	
			0.4
			mg
16:1 t			2%
	~	Vitamin B6	
			0.1
			mg
17:01			3%
	~	Folate	
			6.0
			mcg
18:1 undifferentiated			1%
	47.0	Food Folate	
mg			6.0

		mcg	
18:1 c			
	~	Folic Acid	
			0.0
		mcg	
18:1 t			
	~	Dietary Folate Equivalents	
			6.0
		mcg	
20:01			
	0.0	Vitamin B12	
mg			0.0
		mcg	
22:1 undifferentiated			0%
	0.0	Pantothenic Acid	
mg			0.1
		mg	
22:1 c			1%
	~	Choline	
			6.0
		mg	

22:1 t			
	~	Betaine	0.2 mg
24:1 c	~		

Minerals

Amounts Per Selected Serving			%DV
Polyunsaturated Fat	0.1 g	Calcium	6.0 mg
16:2 undifferentiated	~	Iron	0.3 mg
18:2 undifferentiated	88.0 mg	Magnesium	6.0 mg
18:2 n-6 c,c		Phosphorus	

	~		12.0
			mg
			1%
18:2 c,t		Potassium	
	~		77.0
			mg
			2%
18:2 t,c		Sodium	
	~		1.0
			mg
			0%
18:2 t,t		Zinc	
	~		0.2
			mg
			1%
18:2 i		Copper	
	~		0.1
			mg
			3%
18:2 t not further defined		Manganese	
	~		0.3

		mg	
			17%
18:03		Selenium	
	58.0		0.1
mg		mcg	
			0%
18:3 n-3, c,c,c		Fluoride	
	~		~
18:3 n-6, c,c,c			
	~	**Sterols**	
		Amounts Per Selected Serving	
			%DV
18:4 undifferentiated		Cholesterol	
	0.0		0.0
mg		mg	
			0%
20:2 n-6 c,c		Phytosterols	
	~		~

	Campesterol	
20:3 undifferentiated		~
	~	
	Stigmasterol	
20:3 n-3		~
	~	
	Beta-sitosterol	
20:3 n-6		~
	~	

	Other	
20:4 undifferentiated		
	Amounts Per Selected Serving	
	0.0	
		%DV
mg		
	Alcohol	
		0.0
20:4 n-3		
	g	
	~	
	Water	
		84.2

20:4 n-6		g	
	~		
		Ash	
			0.2
20:5 n-3		g	
	0.0		
mg		Caffeine	
			0.0
22:02		mg	
	~		
		Theobromine	
			0.0
22:5 n-3		mg	
	0.0		
mg			
22:6 n-3			
	0.0		
mg			

Total trans fatty acids

	~
Total trans-monoenoic fatty acids	
	~
Total trans-polyenoic fatty acids	
	~
Total Omega-3 fatty acids	
	58.0 mg
Total Omega-6 fatty acids	
	88.0 mg

Learn more about these fatty acids and their equivalent names

Footnotes for Blueberries, raw

Source: Nutrient data for this listing was provided by USDA (United States Department of Agriculture) SR-21. Each "~" indicates a missing or incomplete value.

Percent Daily Values (%DV) are for adults or children aged 4 or older, and are based on a 2,000 calorie reference diet. Your daily values may be higher or lower based on your individual needs.

Nutrition Data's Opinion, Completeness Score™, Fullness Factor™, Rating, Estimated Glycemic Load (eGL), and Better Choices Substitutions™ are editorial opinions of NutritionData.com, given without warranty, and are not intended to replace the advice of a nutritionist or health-care professional. Nutrition Data's opinions and ratings are based on weighted averages of the nutrient densities of those nutrients for which the FDA has established Daily Values, and do not consider other nutrients that may be important to your health or take into account your individual needs. Consequently, Nutrition Data's higher-rated foods may not necessarily be healthier for you than lower-rated ones. All foods, regardless of their rating, have the potential to play an important role in your diet.

The Amino Acid Score has not been corrected for digestibility, which could reduce its value.

Read More
http://nutritiondata.self.com/facts/fruits-and-fruit-juices/1851/2#ixzz4G08pRIZL

Blueberries … little blue dynamos

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All information in this brochure/article is for educational purposes and it does not provide medical advice, treatment or diagnosis.

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For various uses of Blueberries such as: tea, jams, smoothies, ice cream, gateaux, cakes, culinary recipes, raki, wine, vodka, cosmetics, etc., etc.
Do not hesitate to email me at : angelo@kiparissonas.com - I will be happy to share my passion for this wonderful gift of nature.

References

- **Adams LS, Phung S, Yee N et al. Blueberry Phytochemicals Inhibit Growth and Metastatic Potential of MDA-MB-231 Breast Cancer Cells**

Through Modulation of the Phosphatidylinositol 3-Kinase Pathway. Cancer Res. 2010 May 1; 70(9): 3594-3605. Published online 2010 April 13. doi: 10.1158/0008-5472.CAN-09-3565. 2010.

- **Ahmet I, Spangler E, Shukitt-Hale B et al. Blueberry-Enriched Diet Protects Rat Heart from Ischemic Damage. PLoS ONE. 2009; 4(6): e5954. Published online 2009 June 18. doi: 10.1371/journal.pone.0005954. 2009.**
- **Basu A, Du M, Leyva MJ et al. Blueberries Decrease Cardiovascular Risk Factors in Obese Men and Women with Metabolic Syndrome. The Journal of Nutrition. Bethesda: Sep 2010. Vol. 140, Iss. 9; p. 1582-1587. 2010.**
- **Basu A, Rhone M and Lyons TJ. Berries: emerging impact on cardiovascular health. Nutr Rev. 2010 Mar;68(3):168-77. Review. 2010.**
- **DeFuria J, Bennett G, Strissel KJ et al. Dietary . Dietary Blueberry Attenuates Whole-Body Insulin Resistance in High Fat-Fed Mice by Reducing Adipocyte Death and Its Inflammatory Sequelae. J Nutr. 2009 August; 139(8): 1510-1516. doi: 10.3945/jn.109.105155. 2009.**
- **Grace MH, Ribnicky DM, Kuhn P et al. Hypoglycemic activity of a novel Anthocyanin-rich formulation from Lowbush Blueberry, Vaccinium angustifolium. Phytomedicine. 2009 May; 16(5): 406-415. 2009.**
- **Hurst RD, Wells RW, Hurst SM et al. Blueberry fruit polyphenolics suppress oxidative stress-induced skeletal muscle cell damage in vitro. Mol Nutr Food Res. 2010 Mar;54(3):353-63. 2010.**
- **Jenkins DJA, Ssrichaikul K, Kendall CWC et al. The relation of low glycaemic index fruit consumption to glycaemic control and risk factors for coronary heart disease in type 2 diabetes. Diabetologia. 2011 February; 54(2): 271-279. 2011.**
- **Krikorian R, Shidler MD, Nash TA et al. Blueberry Supplementation Improves Memory in Older Adults. J Agric Food Chem. 2010 April 14; 58(7): 3996-4000. 2010.**
- **Lohachoompol V, Srzednicki G, and Craske J. The Change of Total Anthocyanins in Blueberries and Their Antioxidant Effect After Drying and Freezing. J Biomed Biotechnol. 2004 December 1; 2004(5): 248-252. 2004.**

- **Mannal P, McDonald D and McFadden D. Pterostilbene and tamoxifen show an additive effect against breast cancer in vitro. Am J Surg. 2010 Nov;200(5):577-80. 2010.**
- **Mizuno CS and Rimando AM. Blueberries and Metabolic Syndrome. Silpakorn University Science and Technology Journal Year: 2009 Vol: 3 Issue: 2 Pages/record No.: 7-17. 2009.**
- **Paul S, DeCastro AJ, Lee HJ et al. Dietary intake of pterostilbene, a constituent of blueberries, inhibits the beta-catenin/p65 downstream signaling pathway and colon carcinogenesis in rats. Carcinogenesis. 2010 Jul;31(7):1272-8. Epub 2010 Jan 8. 2010.**
- **Paul S, Rimando AM, Lee HJ et al. Anti-inflammatory action of pterostilbene is mediated through the p38 MAPK pathway in colon cancer cells. Cancer Prev Res (Phila). 2009 July; 2(7): 650-657. Published online 2009 June 23. doi: 10.1158/1940-6207.CAPR-08-0224. 2009.**
- **Sablani SS, Andrews PK, Davies NM et al. Effect of thermal treatments on phytochemicals in conventionally and organically grown berries. J Sci Food Agric. 2010 Apr 15;90(5):769-78. 2010.**
- **Scibisz I and Mitek M. The changes of antioxidant properties in highbush blueberries (Vaccinium corymbosum L.) during freezing and long-term frozen storage. Acta Scientiarum Polonorum : Technologia Alimentaria Year: 2007 Vol: 6 Issue: 4 Pages/record No.: 75-81. 2007.**
- **Simmen FA, Frank JA, Wu X et al. Lack of efficacy of blueberry in nutritional prevention of azoxymethane-initiated cancers of rat small intestine and colon. BMC Gastroenterol. 2009; 9: 67. Published online 2009 September 16. doi: 10.1186/1471-230X-9-67. 2009.**
- **Still AJ, Cash KC, Johnson WD et al. Bioactives in Blueberries Improve Insulin Sensitivity in Obese, Insulin-Resistant Men and Women. The Journal of Nutrition. Bethesda: Oct 2010. Vol. 140, Iss. 10; p. 1764-1768. 2010.**
- **Stoner GD, Want LS, Seguin C et al. Multiple Berry Types Prevent N-nitrosomethylbenzylamine-Induced Esophageal Cancer in Rats. Pharm Res. 2010 June; 27(6): 1138-1145. 2010.**
- **Vuong T, Matar C, Ramassamy C et al. Biotransformed blueberry juice protects neurons from hydrogen peroxide-induced oxidative stress**

and mitogen-activated protein kinase pathway alterations. Br J Nutr. 2010 Sep;104(5):656-63. Epub 2010 May 12. 2010.

- **Wang SY, Chen CT, Sciarappa W et al. Fruit quality, antioxidant capacity, and flavonoid content of organically and conventionally grown blueberries. J Agric Food Chem. 2008 Jul 23;56(14):5788-94. Epub 2008 Jul 1. 2008.**
- **Wu X, Kang J, Xie C et al. Dietary Blueberries Attenuate Atherosclerosis in Apolipoprotein E-Deficient Mice by Upregulating Antioxidant Enzyme Expression. J. Nutr. September 1, 2010 vol. 140 no. 9 1628-1632. 2010.**