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All Natural Trail Mix

Picking Wild Berries That Are Safe to Eat

Special Report

ALL NATURAL TRAIL MIX:
Picking Wild Berries That Are Safe to Eat

Losing yourself in the great outdoors requires a bit of planning. You need to pack rain protection gear, a wide variety of navigation tools, and of course, food. Because of limited space, you have fewer food choices than you have when you bring along the family camper. Limited backpack space means you need to consider packing trail mixes. Contemporary trail mixes go well beyond the traditional combination of raisins and peanuts. Dozens of delectable foods work well together to give you the sustenance required to tackle long hikes in the wilderness or survive cataclysmic events, such as hurricanes and earthquakes.

By storing trail mixes in airtight containers, you receive benefits from energy dense foods that provide considerable nutritional value. Trail mixes should comprise high caloric foods to convert into the energy you need to climb steep hills and navigate around large bodies of water. The question is not whether you should bring along trail mixes, but what foods to combine for tasty and energy boosting snacks.

NUTS *

Nuts possess a number of nutritional benefits:

- Fiber
- Protein
- Vitamin E
- Antioxidants
- Unsaturated Fats

Regardless of whether you choose raw or roasted, make sure to select unsalted and unsweetened nuts to maintain acceptable sugar and sodium levels. The healthiest nuts include cashews, peanuts, walnut, and almonds.

SEEDS *

Seeds provide people who suffer from nut allergies with an outstanding nutritional option. You should mix seeds with nuts to maximize nutritional value. Sprinkle a handful of flax, sesame, and pumpkin, seeds into a trail mix and enjoy the mineral benefits of iron, zinc, calcium, and potassium. Most seeds contain omega-3 fatty acids.

DRIED FRUITS *

Dried fruit eliminates the need to monitor the condition of fresh fruits. Dried fruits provide a great source for bountiful vitamin A, C, and K. Search for dried fruits that do not have much, if any sugar and preservatives added. Consumed in moderation, dried fruits act an excellent source of fiber and antioxidants. The most popular dried fruits for trail mixes include apples, blueberries, cranberries, and pineapples.

GRAINS *

Grains pack the complex carbohydrate punch that works with fiber to boost your energy level. The indispensable trail mix ingredient also helps you feel full throughout the day. Consider consuming only whole grains and avoid processed cereals that add too much sugar and sodium. Whole grain cereals such as Chex and Cheerios work well with toasted oats and whole wheat crackers.

SWEETS *

Since we've harped on the negative aspect of consuming too much sugar, it may appear to be counterintuitive to include sweets in trail mixes. Yet, rounding out your trail mix with M&Ms, mini marshmallows, and chocolate covered nuts augments the anti oxidants present in other trail mix ingredients. If you decide to add chocolate to your trail mix, go with dark chocolate route to maximize antioxidant levels.

BERRIES *

Berries release antioxidants that attach to illness-causing free radicals. A large number of berries provide the most abundant source of antioxidants, which means you can eliminate one or more of other trail mix foods. The antioxidant anthocyanin reduces the inflammation caused by long hikes over rugged terrain Anthocyanins

collaborate with quercetin to impede the development of memory loss. Copious amounts of vitamin C enhances joint flexibility and strengthens cartilages. As a juicy food that contains mostly water, berries help you address bouts of hunger.

Superfruits	Nutrient Content	Antioxidant Activity	(Health Benefits) High in:
Goji / Wolfberry	High	High	Pre-biotic Fiber (Polysaccharides, Vitamin A (from beta-carotene),Phytosterols, Carotenoids (Zeaxanthin, beta-cryptoxanthin, beta-carotene, lycopene), polyphenols (anthocyanins, ellagic acid)
Seabuckthorn	High	High	Prebiotic Fiber, Vitamins A, C & E, Dietary minerals, phytosterols, Omega 3, 7, and 6. Beta-carotene, polyphenols, Quercetin, Kaempferol, Rutin, Isohamnetin, myrecetin
Acai	High	High	Protein, prebiotic fiber, Vitamin E, Dietary Minerals, Palmitic Acid (negative feature), Proanthocyanidins
Blueberry	Moderate	Moderate	Prebiotic Fiber, Vitamin C, Dietary Minerals, Polyphenols (Anthocyanins, Proanthocyanins, resveratrol)
Cranberry	Moderate	Moderate	Prebiotic Fiber, Vitamin C, dietary minerals, Polyphenols (anthocyanins, Proanthocyanidins, ellagic acid)
Grape (red)	Moderate	Moderate	Vitamin C, dietary minerals, Polyphenols, resveratrol, and an abundance of Anthocyanins
Mangosteen	Low	Low	Too little nutrients compared with other super fruits on this page to be listed
Noni	Low	Low	Too little nutrients compared with other super fruits on this page to be listed
Pomegranate	Low	Moderate	Dietary Minerals, Vitamin C, Polyphenols

If berries possess short shelf lives, how can the delectable, nutrient-rich food source help you on the trail? The answer lies in picking fresh berries that increase your strength and avoiding the berries that make you very ill or worse, kill you.

SAFE BERRIES *

Not only should you learn about safe berries to enhance the nutritional value of your trail mix, you also need to know which berries to eat in case you find yourself lost deep within the wilderness. Deriving sustenance from safe wild berries for a week may ruin your hike, but you really have problems if you ingest poisonous berries.

BLACKBERRIES *

As one of the most common berries, blackberries grow on plants that flourish in multiple settings, from ditches that run parallel to backcountry roads to near roaring streams and open fields. Contrary to the name, blackberries present more of a purple color than a black color. The berries posses bumps that run along the cone shaped fruit. Blackberry stems arch up to nine meters and the plant typically produces large compound leave that contain five or seven leaflets. The plant does not produce flowers, just quick to ripe berries that sustain you in the wild. With over 200 species, blackberries thrive virtually everywhere in the United States, with the exception of the desert southwest.

RASPBERRIES *

Raspberries grow in cooler climates in places such as the Pacific Northwest and Upper Michigan Peninsula. The development of adaptable raspberries allows gardeners in other climate zones to reap large raspberry harvests. However, adaptability only exists in a fenced garden, not out in the wild. The berry possesses the same type of bumps found on blackberries, but the red color makes raspberries easy to distinguish. Raspberries can also appear gold, blue, or purple. Small and round, raspberries project tiny hairs on the surface that also act as a distinguishing feature of the fruit. The plant

propagates by using underground basil shoots, which allows the plant to spread rapidly.

BLUEBERRIES*

Blueberries thrive in 38 of the 50 states, from South Florida to the Oregon coast. The easy to identify berry resonates an unmistakable light blue hue. Blueberries grow in open, sunny areas near both standing and running water sources. As one of the most popular food sources for wild birds and animals, you may have to make considerable noise to dissuade the competition from eating your breakfast. Blueberries grow on shrubs in clusters. Size varies from small pea to medium sized marble. A white waxy sheen covers blueberries to protect the fruit from spoilage caused by rot and disease. Blueberries flourish between May and October due to prolonged sun exposure.

WILD CHERRIES*

Wild black cherries grow predominantly in the eastern section of the United States. You must remove the pit found in black cherries to avoid incurring cyanide poisoning. The leaves, twigs, and bark of the wild cherry tree also possess toxicity. Too much ingestion of the pulp produces prunasin, which in large doses can cause death. Therefore, your best bet is to forage for wild red cherries that turn bright red at maturation. You can taste test wild red cherries to avoid eating from a tree that produces sour cherry juice. Tart wild cherries complement the sweet flavors imparted by blueberries and strawberries

STRAWBERRIES*

Wild strawberries thrive in climates that have at least 75-day growing seasons. The growing season criteria means you can find strawberries in almost every state. You can find wild strawberries in woodlands, since the plant does not require much sunlight to produce nutritious berries. Wild strawberries appear similar to their grocery store counterparts, but the wild plants bear smaller fruit. The fruit attaches to sturdy plants that sustain the growing process even through the worst Mother Nature has to offer.

OTHER TYPES OF EDIBLE WILD PLANTS

You may find berries in short supply, especially if you hike in arid parts of the country. However, don't despair, as there are numerous edible plants that don't bear fruit. The five most prevalent edible plants are burdocks, cattails, dandelions, fireweed, and plantain.

Burdock

With thistle like flower heads, the medium to large sized burdock thrives in temperate regions of the United States. You can eat the leaves and peel the stalks for consuming the plant raw or boiled. The leaves tend to leave a bitter aftertaste, which prompts some hikers to sprinkle the chopped leaves on other types of foraged foods. Boiling the plant two times removes most of the bitter aftertaste.

Cattail

Recognized as an excellent plant for concealing hunters, cattails also provide nourishment for hungry backpackers. You typically find the plant on the edges of freshwater wetlands, such as marshes and ponds formed by heavy rainfall. Many Native American tribes made cattails a diet staple. You can boil or eat the rootstalk raw. However, the rootstalk grows underground, so you may want to avoid it if you find the plant growing in industrialized areas. The mainly white stem at the bottom of the plant represents the most delicious part of the cattail. Boil the leaves the same way that you boil spinach. At the top of the cattail, the flower spike has a corn like taste to it.

Dandelion

The pesky plant that invades your lawn makes for good eating out in the wild. You can eat an entire dandelion, including the root, leaves, and flower. Consume the leaves when the plant is young, as older plants leave a bitter aftertaste. Boiling the roots eliminates most of the bitter flavor imparted when you eat the roots raw. The easy access to this plant makes it a popular choice for self-relying outdoor enthusiasts.

Fireweed

Don't discount colorful plants as sources for sustenance on the trail. Fireweed may present an alluring appearance, with its deep purple color and signature leaf veins. Yet, the edible plant has satisfied hunger pangs for centuries. Native Americans incorporated fireweed into their diets, and early western American settlers discovered the nutritional benefits of vitamin A and C by eating the plant. Fireweed tastes best during the early growth stage, as mature plant leave a bitter aftertaste.

Plantain

Don't confuse the plantain plant with the banana like tasting plantain that grows in mostly tropical regions of the world. Humans have consumed the plantain plant for thousands of years for both sustenance and medicinal purposes. Plantain plants grow in humid environments, such as those found within bogs and marshes. You can also find the rugged plant in alpine regions. The leaves sprout to reach four inches wide and six inches long. Plantain plants provide copious amounts of calcium, as well as vitamins A and C.

Poisonous Berries

As important as it is to recognize nutritious berries that give you strength to endure long treks through the wilderness, it is even more important for you to recognize the poisonous berries that punish you for flipping the berry coin. Heads I'm safe, tails, I die is no way to determine whether any berries that you come across can help mitigate hunger. Remember that you have no cell phone communication in the backcountry. You need to recognize poisonous berries and stay away from berries that kill you.

Chokecherry

This perennial spawns a large mass of white flowers that grow into long clusters during early to mid spring. Small ripe berries that range in color from black to purple emerge after the flowers bloom. Dark green and glossy leaves form the final piece of the recognition puzzle.

Chokeberries cause livestock poisoning during acute droughts that result in the overgrazing of land. Hydrocyanic acid comprises the dominate poison found in chokeberries, which means eating large amounts within short intervals cause acute distress.

Chokeberries flourish in damp environments and in very fertile soil. You can find the white flowered, berry producing plant in lush thickets growing on hillsides that mostly face the sun during the height of the day. Canyon slopes also provide ample nutrients for chokeberries to grow. Some chokeberry plants develop as small shrubs that live among willows, alders, and poplars growing near mountain streams. The shrubs typically grow to a height of four feet in Arizona, southern Utah and Nevada, and southeastern California.

Symptoms of chokecherry poisoning include anxiety, muscular twitching, and rapid breathing. Convulsions signal the poison has advanced to a stage that causes pulmonary and tracheal congestion.

Nightshade

Also referred to as “Deadly Nightshade,” this plant grows from a meaty root into a small shrub measuring about five feet tall. The berries appear green at first, before ripening to a glossy black. You need to know about both color stages to recognize Nightshade. The plant possesses long, oval shaped leaves that make it easy to identify. Although native cultures have used Nightshade for centuries for medicinal purposes, most botanists now recognize the plant as poisonous. The berries are hard to see, as they grow only to a size of one centimeter in diameter.

Considered one of the deadliest plants in the northern hemisphere, Nightshade contains the highly toxic poison tropane alkaloid. The berries present a great threat because the alluring sweet taste and beautiful appearance tempt you to put a few in your mouth. Consuming only two of the small berries can quickly kill an adult. Nightshade poison symptoms include balance loss, severe headache, blurred vision, and towards the end, hallucinations. The poison kills by shutting down the nervous system to cause involuntary rapid heart rates and erratic breathing.

Moonseed

Shaped like a small crescent moon, moonseeds possess green leaves that grow between 5 and 20 centimeters in diameter. The berries only reach 1.5 centimeters in diameter. Black in color, moonseeds have an appearance that mimics the fox grape. Mistaking delicious fox grapes for moonseeds can lead to serious consequences.

Found in humid wooded environments, moonseeds also grow in thickets that line banks of rivers and streams. The rank taste of the berries is the only salvation for avoiding the highly toxic poison. You can avoid severe symptoms by only tasting the berry and moving onto another plant. More than just a taste results in violent convulsions and that leads to eventual death.

White Baneberry

Native to the eastern half of the United States, white baneberry grows to about two feet tall. The plant requires partial to full shade, regular moisture, and rich loamy soil. Because of the unique growth requirements, hikers find white baneberry in dense wooded areas, such as along the Appalachian Trail and within the mountainous regions of Vermont and New Hampshire.

White baneberry develops white flowers during spring thaws and soon thereafter, produces one-centimeter diameter berries. The round and white berries sport a black dot in the middle that makes spotting the berry easy, even as the plant grows within lush thickets. Given the nickname "Doll's Eyes," white baneberry dangles berries full of cardiogenic toxins that create deadly blood supply disruptions. Ingestion of just a few of the small berries leads to cardiac arrest.

Elderberry

Widespread growth in the United States makes elderberries an especially dangerous plant. The flowering plant grows into between 5 and 30 species, but only one species does not produce poisonous berries. Between five and nine leaflets that grow no longer than 30 centimeters encircle clusters of cream-colored flowers. Within the flower clusters sit small black, red, or bluish black berries.

Cyanide generating glycosides produce the toxin that often leads to death. As glycosides increase, the body's metabolism processes the poison throughout the body. Symptoms of consuming Elderberry berries include extreme vomiting

and acute diarrhea. The toxins eventually invade the nervous system, shutting down body control functions such as arm and leg movement.

GENERAL TIPS FOR AVOIDING HARMFUL PLANTS

You don't have to be a botanist with a photographic memory to identify dangerous plants that bear foreboding berries. Sure, it helps to learn the attributes that make poisonous plants stick out from other lush vegetation. However, by following a few easy to spot signs, you can avoid the suffering that comes with eating poisonous plants.

Here or a few signs to consider:

- Discolored plant sap
- Berries bear spines or thorns
- Bitter taste
- Dill or parsnip looking foliage
- Berries found inside of pods
- Three-leaved growth pattern
- Leaves and woody part of plant delivers an almond scent

Most toxic plants display more than one of the warning signs to give you a better idea on which plants to avoid. When in doubt, you're better off safe than sorry by searching for a familiar berry bearing plant that provides the sustenance you need on the trail.

FORAGING TIPS

Now that you have a strong foundation for gathering healthy berries, let's look at a few foraging tips that make finding nutritious berries a cinch.

- Don't assume a wild berry consumed by a bird is fit for human consumption
- Carry a wild berry guide to confirm the identification of a plant
- Avoid foraging areas sprayed with pesticides
- Never forage near heavy industrial areas and along roads
- Summer and fall represent the best seasons to find ripe berries
- Ensure the legality of foraging
- Sign up for a state park sponsored foraging class
- Local colleges and universities may organize foraging trips to help you learn how to identify berries and other edible plants

Above all, never eat a berry unless you are 100 percent sure it's safe.

HOW TO HARVEST WILD BERRIES

How do you harvest wild berries? The underlying premise of harvesting wild berries is to remain sensitive to the plant and ecosystem that surrounds the plant. A good rule of thumb is to harvest about 25% of the wild berries that you find along the trail. Leaving plenty of berries on the vine ensures other hikers, as well as birds and animals, have an abundant resource for sustenance.

Ripe wild berries posses the best flavor and provide the greatest nutritional benefits. You quickly discern the ripeness of a berry by looking for bright colors that indicate peak maturation. Many berries separate from the plant to indicate peak ripeness. Strong berry fragrance also indicates berries that have achieved optimal maturation. Some wild berries require a delicate picking touch to avoid bruising or mashing the berries.

CONCLUSION*

A balanced all-natural trail mix provides several benefits for hungry hikers and backpackers. The right blend of ingredients ensures you receive multiple nutritional values, as well as enjoy an instant surge in energy level. Trail mixes also allow you to pack more gear by increasing the amount of space available in your backpack.

Wild berries represent the most important ingredient of an all-natural trail mix. Savvy outdoor enthusiasts prefer to pick wild berries along the trail to prevent spoilage. If you decide to pick wild berries for your trail mix or to prevent malnourishment, then you must know which berries to eat and which berries to avoid.

Not knowing the difference can cause immense physical distress or worse, the end of the trail line.