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A review on Pharmacological uses of Berry

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Review Article

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ABSTRACT

The botanical definition of a berry is a fleshy fruit produced from a single flower and containing one ovary. The berry is the most common type of fleshy fruit in which the entire ovary wall ripens into an edible pericarp. They may have one or more carpels. The seeds are usually embedded in the fleshy interior of the ovary, but there are some non-fleshy exceptions, such as peppers, that have air rather than pulp around their seeds.

INTRODUCTION

The botanical definition of a berry is a fleshy fruit produced from a single flower and containing one ovary. The berry is the most common type of fleshy fruit in which the entire ovary wall ripens into an edible pericarp. They may have one or more carpels. The seeds are usually embedded in the fleshy interior of the ovary, but there are some non-fleshy exceptions, such as peppers, that have air rather than pulp around their seeds [1-10].

LIST OF DIFFERENT KINDS OF BERRIES

True Berries

True berries are fruits that meet the true, botanical classification of the word "berry".
Ex: Grapes, Elderberry, Currant, Barberry.



Elderberry

Drupes

A drupe is a fleshy fruit with a small stone - commonly referred to as "stone fruits." They do not meet the botanical classification of berry; however, they are commonly thought of as berries [10-19]:

Ex: Goji berries, Acai, Hackberry, Sugarberry, Persimmon.



Sugarberry

Epigynous Fruits

A number of this type of fruit are called a berry while not meeting the botanical definition.

Ex: Ligonberry, Cranberry, Bearberry, Crowberry, Blueberry.



Cranberry

Compound Fruits

The berries in this classification contain multiple fruit seeds:

Ex: Raspberry, Strawberry, Blackberry, Mulberry, Cloudberry.



Blackberry

Poisonous Berries

Some berries that are poisonous. Below is a list of berries that range from mildly poisonous (causing gastric upset) to extremely poisonous (they can kill you) [20-30].

Ex: Holly berries, Elderberry, Pokeberry, Red nightshade, Green nightshade.



Holly berries

PHARMACOLOGICAL USES OF EDIBLE BERRY

Thyroid Function: Hypothyroid patients should eat foods that are rich in protein, vitamins and minerals but low in carbohydrates. the best fruits for this type of diet are berries, such as raspberries, blueberries, blackberries and strawberries [31-39].

Colorectal or Anorectal problems: Raspberries, blackberries and strawberries contains rich in fibre so by consuming this patients can reduce this problem. **Food for good skin:** All types of berries contain ellagic acid which is known to protect the skin from sun damage. It also helps in the repair of skin [40-48].

Cancer: Blackberries can also diminish the risk of esophageal cancer. blackberries are good for smokers and teenagers.

- The vitamin C in blackberries helps in strengthening the immune system and may also be instrumental in reducing the risk of cardiovascular disease, macular degeneration and some forms of cancer [49-55].

Heart: Blueberries are readily available product with the highest antioxidant capacity among fruits and vegetables. The animal subjects on which the study was performed that were given the blueberry-rich diet demonstrated less heart damage and a lower risk of heart attacks [56-60].

Memory: According to study by the University of Cincinnati Academic Health Center, blueberries contain antioxidants such as anthocyanins that can help fight free radicals, reduce inflammation and improve communication among neurons in the brain. It showed that individuals beginning to suffer from age-related memory loss and brain degeneration who consumed blueberry juice daily proven improved learning and memory function, as well as improvement in symptoms of depression [61-65].

PROMOTES WOMENS HEALTH: These are good for single women, pregnant women as well as lactating mothers. Raspberry leaves can be used as herbal teas for women, which regulate menstrual cycles and decrease excessively heavy

menstrual flow. In case of pregnant women, raspberry tea successfully relieves nausea, and prevents hemorrhage, reduce pain and help in childbirth [66-70].

HAIRCARE: Gooseberry/Amla are the main ingredient in hair tonics. It enriches hair growth and hair pigmentation. Amla acts as a natural hair conditioner. It strengthens roots of hair, maintains color and luster [71-75].

EYECARE: Gooseberry is very effective in treating your eye problems and improving eyesight. The juice of this herb mixed with honey is very much useful in the treatment of conjunctivitis and glaucoma, and helps to preserve eyesight [76-80].

DIABETES: Gooseberry contains chromium. It has a therapeutic value in diabetics. Gooseberry stimulates the isolated group of cells which secrete the hormone insulin and reduces blood sugar in diabetic patient.

INFECTION: Due to the antibacterial and astringent properties of Gooseberry protects against infection. It improves body resistance. It's rich content of vitamin C, helps in flushing out all toxic products from the body.

KIDNEY STONES: There are four types of kidney stones. The most common type of stone is the calcium oxalate stone. These stones can be prevented by daily consumption of mulberry juice.

Blackberries

They are a good source of folate, a B vitamin that helps maintain healthy hair and may reduce the risk of cardiovascular disease and mood disorders. Additionally, blackberries are full of potent antioxidants that can help with arthritis, age-related memory loss, cataracts, and other eyesight problems [81-85].

Blueberries

A great fruit to eat if you're trying to lose weight. They also contain potent antioxidants that can help with arthritis, age-related memory loss, and cataracts and other eyesight problems.

Cranberries

Both fresh and dried cranberries are a good source of anthocyanins, anti-inflammatory antioxidants that can help with arthritis and age-related memory loss.

Raspberries&Strawberries

A great fruit to eat if you're trying to lose weight, lower cholesterol, or manage type 2 diabetes. They are also full of potent antioxidants, including vitamin C and anthocyanins, which can help with arthritis, age-related memory loss, cataracts and other eyesight problems, and maintaining healthy skin and hair [86-90].

Berries: emerging impact on cardiovascular health

Berries are emerging as a dietary source of multiple compounds and nutrients, including anthocyanins, flavonols, vitamins, and fiber, that reduce CVD risk.

Eating berries benefits the brain

New article on the value of eating berry fruits appears in ACS' Journal of Agricultural and Food Chemistry. Barbara Shukitt-Hale, Ph.D., and Marshall G. Miller point out that longer lifespans are raising concerns about the human toll and health care costs of treating Alzheimer's disease and other forms of mental decline [91-95].

Their review concluded that berry fruits help the brain stay healthy in several ways. Berry fruits contain high levels of antioxidants, compounds that protect cells from damage by harmful free radicals. They also report that berry fruits change the way neurons in the brain communicate. These changes in signaling can prevent inflammation in the brain that contribute to neuronal damage and improve both motor control and cognition [96-100]. They suggest that further research will show whether these benefits are a result of individual compounds shared between berry fruits or whether the unique combinations of chemicals in each berry fruit simply have similar effects.

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