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## CAULIFLOWER A VEGETABLE OR MEDICINE – A REVIEW

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### ABSTRACT

Fresh vegetables and fruits are an important part of a healthy diet as they are a significant source of vitamins and minerals, cauliflower is one among them. However, this vegetable can also be a source of noxious toxic substances—pesticides. Vegetables are traded worldwide and among them the list of pesticides that might have been applied in their agricultural production is usually not known [1–3]. Cauliflower (*Brassica oleraceae* var. *botrytis*) is one of the *cruciferous* vegetable, like cabbage, Brussel's sprouts and broccoli. It came to India in 1822. The initial introductions were "Cornish" types from England than by the European types. The Indian cauliflower or the tropical types are a result of intercrossing among these types. The name cauliflower consists of two Latin words called 'caulis' which means cabbage and 'floris' which means flower. In Ayurveda there are various references regarding cauliflower and mentioned its importance, Hence an attempt was made to collect all such references for knowing its nutritional values by Traditional perspectives and day by day changing its nutritional and medicinal values.

**Keywords:** *Gobhi, Pesticides, nutritional values*

### INTRODUCTION TO HISTORY OF CAULIFLOWER

#### 12<sup>TH</sup> TO 13<sup>TH</sup> CENTURY:

The first reliable reference to *cauliflower* is found in the writings of the Arab Muslim

scientists Ibn al-'Awwam and Ibn al-Baitar, in the 12th and 13th centuries.[4]

#### 16<sup>TH</sup> CENTURY (BHAVAPRAKASH):

B. P. described it under shakavarga used as arbudahara drug.[5]

**Groups:** There are four major groups of cauliflower[6]

**Italian:** This variety is Diverse in appearance, and biennial and annual in type, this group includes white, Romanesco, various green, purple, brown and yellow cultivars. This type is the ancestral form from which the others were derived.

**Northwest European biennial:** it is used in Europe for winter and early spring harvest, this was developed in France in the 19th century, and includes the old cultivars Roscoff and Angers.

**Northern European annuals:** it was used in Europe and North America for summer and fall harvest, it was developed in Germany in the 18th century, and includes the old cultivars Erfurt and Snowball.

**Asian:** A tropical cauliflower used in China and India, it was developed in India during the 19th century from the now-abandoned Cornish type, and includes old varieties Early Patna and Early Banaras.[7]

**Varieties :** There are hundreds of historic and current commercial varieties used around the world. A comprehensive list of about 80 North American varieties is maintained at North Carolina State University.[8]

**Colors :**

**1.White :** The White cauliflower is the most common color of cauliflower found worldwide and commonly in India .Its cultivation is common in India from where it got export outside.

**2.Orange :** The Orange cauliflower (*B. oleracea* L. var. *botrytis*) contains 25% more vitamin Athan white varieties.[9] This trait came from a natural mutant found in a cauliflower field in Canada.[10] Cultivars include 'Cheddar' and 'Orange Bouquet'.-

**3.Green :** The Green cauliflower, of the *B. oleracea* botrytis group, is sometimes called broccoflower. It is available both with the normal curd shape and a variant spiky curd called Romanesce broccoli. Both types have been commercially available in the U.S. and Europe since the early 1990s. Green-curved varieties include 'Alverda', 'Green Goddess' and 'Vorda'. Romanesco varieties include 'Minaret' and 'Veronica' so, called by these names.

**4.Purple :** purple color of cauliflower is caused by the presence of the antioxidant group anthocyanins, which can also be found in red cabbage and red wine.[11]these Varieties are 'Graffiti' and 'Purple Cape'. In Great Britain and southern Italy, a broccoli with tiny flower buds is sold as a vegetable called "purple cauliflower". It is not the

same as normally selling cauliflower with a purple curd.[12]

### **Nutrition profile**

Cauliflower is low in fat, low in carbohydrates but high in dietary fiber, folate, water, and vitamin C, possessing a high nutritional density[13]. Cauliflower contains several phytochemicals, common in the cabbage family, that may be beneficial to human health. Sulforaphane, a compound released when cauliflower is chopped or chewed, may protect against cancer. Other glucosinolates Carotenoids Indole-3-carbinol, a chemical that enhances DNA repair[14,15] and acts as an estrogen antagonist[16] slowing the growth of cancer cells. Boiling reduces the levels of these compounds, with losses of 20–30% after five minutes, 40–50% after ten minutes, and 75% after thirty minutes[17] However, other preparation methods, such as steaming, microwaving, and stir frying, have no significant effect on the compounds[18]. A high intake of cauliflower has been associated with reduced risk of aggressive prostate cancer[19]

### **Cooking**

Commonly *Aloo gobi*, an Indian dish prepared with cauliflower and potato. Cauliflower is most commonly used in preparation of *Gobi manchurian* which is

delicious and favorite food for youngsters. In parties also it is very commonly used. Cauliflower can be roasted, boiled, fried, steamed or eaten raw. Steaming or zapping preserves anticancer compounds better than boiling. Before cooking, the outer leaves and thick stalks are removed, leaving only the florets. The leaves are also edible, but are most often discarded. The florets should be broken into similar-sized pieces so that they are cooked evenly. After eight minutes of steaming, or five minutes of boiling, the florets should be soft, but not mushy (depending on size). Stirring while cooking can break the florets into smaller and uneven pieces. Low carbohydrate dieters can use cauliflower as a reasonable substitute for potatoes or rice; while they can produce a similar texture, or mouth feel, they lack the starch of the originals[20]

### **DISCUSSION AND CONCLUSION**

Cauliflower being as special vegetable and used as nutritional vegetable in India as well as various other countries. Overall it is best arbudahara vegetable which can be given along with arbudhara medicines, may be because it is having antioxidant property. Medicinal property of this is not affected by microwave rays too.

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