World Health Organization has recommended that traditional and folk medicine systems has proved to be more effective in health problems worldwide *Garcinia cambogia*, is certain to emerge in the near future as a major player in the growing field of herbal health supplements and medicines both in daily self-care and in professionally managed health care system. The principal constituents of *G. cambogia* are, Hydroxy citric acid, Garcinol, isogarcinol and cyanidin. All the parts of *G. cambogia* and its chemical constituents are used as anti-tumor, antiinflammatory, anti obesity, antifungal, antibacterial, hypoglycaemic, anti oxidant and anti ulcerogenic activity. This article compiles all the information related to *G. cambogia*.

**Key words:** *Garcinia cambogia*, Anti obesity, Anti ulcerogenic activity, Hydroxycitric acid, Garcinol, Iso garcinol, Cyanidin.

**INTRODUCTION:**

Herbal medicine has become an integral part of standard healthcare, based on a combination of time honoured traditional usage and ongoing scientific research. Burgeoning interest in medicinal herbs has increased scientific scrutiny of their therapeutic potential and safety. There is great demand for herbal medicine in the developed as well as developing countries like India, because of their wide biological activities, higher safety of margin than the synthetic drugs and lesser costs. Some of the medicinal plants are believed to enhance the natural resistance of the body to infections. The medicinal properties of plants have been investigated in the light of recent scientific developments throughout the world due to their potent pharmacological activities and low toxicity. Herbal medicine deals with plants and plant extracts in treating diseases. These medicines are considered safer because of the natural ingredients with no side effects. *Garcinia cambogia* is a moderate-sized, evergreen tree and the flowers are unisexual, sessile and axillary. The leaves are dark green, shining, elliptic to obovate. It bears sweet-sour mixed fruits native to SE Asia and India. The fruit may resemble a small yellow or reddish pumpkins, or it may have a unique purple color. The fruit of *Garcinia cambogia* has been traditionally used in food preparation and cooking, having a distinctive taste. The bark is given as a decoction, is used to treat rheumatism and gastrointestinal disorders. In veterinary medicine, we use this decoction for treating oral diseases of livestock.

**Garcinia cambogia** fruit extract containing the principle organic acid (-)-erythro-Ls-hydroxycitric acid, is one such herbal preparation that has been used traditionally in treating ulcers, diarrhoea, dysentery, haemorrhoids, tumours and as an antimicrobial agent. *Garcinia cambogia* extract contains the principle organic acid (-)-erythro-hydroxycitric acid (HCA) significantly increased the production of glycogen in the liver. The increased production of glycogen and the concomitant stimulation of glucoreceptors in the liver, results in early satiety through signals sent to the brain via the vagus nerve. HCA induces inhibition of lipid biosynthesis and diverts the metabolism of carbohydrate towards glycogen production in the liver thereby controlling the appetite and HCl output. HCA present in the fruit rind has been speculated to possess antulcerogenic potential. A related species of the Guttiferae family, *Garcinia mangostana* Linn., containing the active principle mangostin, a xanthone present in the fruit rind has been reported to have an antulcer property. The carbohydrate: protein (C:P) ratio serves as a good indicator of gastric mucosal defence and an increase represents augmented mucosal protective activity. A near normal C:P ratio was observed in indomethacin pylorus ligated rats (group VI) pretreated with *G. cambogia*, which indicates its mucoprotective property. *Garcinia cambogia* is a small, sweet, exotic fruit native to South India and Southeast Asia. *Garcinia* has garnered a lot of attention of late as a popular natural weight loss aid. *Garcinia* is a source for a revolutionary natural diet ingredient which is currently a rage in America, Japan, Europe, and other western countries.

**Distribution:** SE Asia, West and Central Africa, India

**Plant Description:** *G. cambogia* is a flowering evergreen tree, with drooping branches. The fruit is yellow, oval in shape and resembles small pumpkins. *Garcinia* is part of the same family as mangosteens; the fruit is harvested, dried and ground into a powder. *Garcinia* has garnered a lot of attention of late as a popular natural weight loss aid. The reason is that the rind of this pumpkin like fruit is rich in a substance called hydroxycitric acid (HCA).

**Plant Parts Used:** Fruit rind

**History:** In Ayurveda, it is said that the sour flavors, such as those from *Garcinia*, activate digestion. *Garcinia* has also been considered to make foods more filling and satisfying, and has been used routinely for many centuries with no known toxicity. This herb has been used historically in India to support the treatment of various health conditions.

**Habitat:** This medicinal herb is native to India and Southeast Asia, West and Central Africa. It is commonly found in moist forest area. This medicinal plant grows up to 5000 feet of altitude. humid or hot climate is favorable. This herbal plant is found in South Western Coast of India.

**Whole Plant part Description:** Its perennial tree is evergreen and medium to large in size. The height ranges from 10 to 15 meter. The stem is hard wooded. Monsoon is the time for propagation and transplanation.

**The Leaves:**
Leaves are dark green above and pale beneath. Leaves are oblong or ovate or lanceolate. The entire plant gives a conical shape.

**The Flowers:**
Hermaphroditic cream colored flowers are found in clusters. Winter is the flowering season.

**The Fruits:**
Its solitary fruit is pumpkin like. The color of the fruit is yellow or reddish or purple. Fully ripe fruit is too acidic or sour to eat fresh. The rind of the fruit has HCA, the biochemical with acclaimed with weight loss capacity. Fruit is simple and fleshy or berry. Fruit measures 3–4 cm in breadth and 4–6 cm in length. Summer is the fruition period. Unripe fruit is green from outside and white from inside. ripe fruit is purple or red from outside and white from inside. There are many seeds within the fruit.

**Fig : 1** *Garcinia cambogia* Leaves and Fruit.

**Scientific classification:** (Table No: 1)

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**Botanical Name:** *Garcinia cambogia, garcinia gummi-gutta*

**Latin Name:** *Garcinia cambogia*

** Vernacular Names:** Brindle berry, brindull berry, garcinia, malabar tamarind, hydroxycitric acid (HCA), citrin, gamboge, gotikkapuli, uppagi, garcinia kola, mangosteen oil tree.

**Synonyms:** Guta gamba, Gunninggutta, Tom Rong, Gambodia. *Garcinia Morella*.

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**Therapeutic Uses**

-HCA suppresses appetite and induces weight loss.
-As an appetite suppressant,
-As a weight loss aid.

**Pharmacological Actions:**

**Anti helmenthic activity**:  
Garcinia cambogia rind extracts posses potent anti helmenthic activity. The study was investigated in normal and obese streptozotocin induced diabetic rats and was found to produce significant reduction in glucose level, lipid profile and body weight.

**Anti Obesity activity**:  
Garcinia cambogia is potent herbal medicine for the management of Obesity. (-)Hydroxycitric acid (HCA) is a compound found in Garcinia cambogia, a type of fruit. HCA has a chemical structure similar to that of citric acid (the primary acid in citrus fruits). Preliminary research in the laboratory and in animal research, suggests that HCA may be a useful weight loss aid. Uncontrolled and/or preliminary evidence from several other human trials suggests the possibility that weight loss might occur; however, none of these studies is as methodologically strong as the negative trial previously mentioned. These less-rigorous studies used a similar calorie-restricted diet and a similar amount of HCA as the negative trial. However, the double-blind study used a high-fibre diet not used in the prior studies. It has been suggested that such a diet might limit absorption of HCA.

One case report found that eating 1 gram of the fruit containing HCA before each meal resulted loss of 1 pound in the per day. A double-blind trial that provided either 1,500 mg of HCA or a placebo per day to 135 overweight men and women, who also were on a calorie-restricted diet, found after 12 weeks that the HCA supplementation did not produce a significant change in weight loss. Uncontrolled and/or preliminary evidence from several other human trials suggests the possibility that weight loss might occur; however, none of these studies is as methodologically strong as the negative trial previously mentioned. These less-rigorous studies used a similar calorie-restricted diet and a similar amount of HCA as the negative trial. However, the double-blind study used a high-fibre diet not used in the prior studies. It has been suggested that such a diet might limit absorption of HCA.

Future studies that measure blood levels of HCA (to check whether or not the supplement was absorbed) are necessary to resolve this issue. At the present time, the effectiveness of HCA for weight loss remains unclear and unproven.

**Anti obesity and Haematological Effects**:  
The anti-obesity and erythropoietic effects of crude ethanolic extracts of Garcinia cambogia (bitter kola) seeds on Wistar rats (Rattus norvegicus) were investigated. The rats were divided into three dosage groups: A (0 mg/kg of body weight), B (200 mg/kg) and C (400 mg/kg). Weight changes, plasma lipoprotein levels and the lipid profile of the liver, gastrointestinal system and adipose tissue were monitored as indices for anti-obesity, while the RBC (red blood cell) count (assessed by using a haemocytometer) was monitored as a measure of erythropoiesis. The extract was administered by gavage for 5 weeks. The results for each test group was compared statistically with those for the control (P<0.05). Analysis of the results showed a significant increase in RBC counts in both test groups and a decrease in weights of experimental animals. There was a dose-dependent decrease in the plasma level of very-low-density lipoprotein and a dose-dependent increase in the level of chylomicrons. There was a slight, but significant, decrease in the level of high-density lipoprotein and a significant increase in the level of LDL (low-density lipoprotein). There was significant dose-dependent decrease in the TAG (triglyceride) pool of adipose tissue and the liver of the test groups, but a significant increase in the TAG pool of the gastrointestinal system. The increase in the TAG pool of the gastrointestinal system is possibly compensatory. The results therefore confirm that ethanolic extracts of G cambogia seeds have both haematologically enhancing and anti-obesity effects. The decrease in the high-density-lipoprotein level and an increase in the LDL level may play an important role in cardiovascular disease.

**Anti Ulcerogenic activity**:  
Garcinia cambogia extract is found to increase the mucosal defensive mechanisms in stomach and thereby it is helpful as a protective agent against Gastric ulcers. The rats that were pretreated with this herbal supplement was found with decreased acidity and increasedmucosa lprotectivefactors. The G. cambogia extract was given in the dose of 1 gm/kg of body weight/day for 5 to 10 to 15 days to rats. This study tested the herbal

**Pharmacokinetics and Pharmacodynamics**:  
Garcinia Cambogia fills the glycogen stores in the liver and other tissues, thereby reducing appetite while increasing energy levels. Garcinia Cambogia lowers the production of triglycerides and cholesterol and may also increase thermogenesis, the burning of calories. Unlike chemical stimulants commonly used in weight loss products, Garcinia Cambogia does not act on the central nervous system. This means that Garcinia Cambogia will not cause insomnia, nervousness, changes in blood pressure or heart rate and its effectiveness will not diminish with time.
extract effect with Indomethacin (20 mg/kg/day) induced ulcerogenic effect. This supple- ment reduced both the volume and acidity of gastric juice. Beside this effect on acid, the supplement showed promotion of defensive factors on gastric mucosa. *Garcinia cambogia* extract which contains the principle organic acid (-)-erythro-hydroxycitric acid (HCA) significantly increased the production of glycogen in the liver. The increased production of glycogen and the concomitant stimulation of glucoreceptors in the liver, results in early satiety through signals sent to the brain via the vagus nerve. HCA induces inhibition of lipid biosynthesis and diverts the metabolism of carbohydrate towards glycogen production in the liver thereby controlling the appetite and HCl output. In the present study, HCA present in the fruit rind has been speculated to possess antiulcerogenic potential. A related species of the Guttiferae family, *Garcinia mangostana* Linn. containing the active principle mangostin, a xanthon present in the fruit rind has been reported to have an antiallergy property. The carbohydrate: protein (C:P) ratio serves as a good indicator of gastric mucosal defence and an increase represents augmented mucosal protective activity.

**Potential Side Effects of *Garcinia Cambogia***: There are no known side effects for using this herb, however, it is not recommended for diabetics or people suffering any dementia syndrome, including Alzheimer’s and in pregnant and lactating women. *Garcinia cambogia* does have contraindications with certain medications, and it is important to discuss this with your health care professional.

**CONCLUSION:** *Garcinia Cambogia* is a fruit named Malabar tamarind that is used in India, Pakistan and Sri Lanka, both as a food and a medicine. Citrin is a commercial fruit extract from the rind contains significant amounts of Vitamin C and has been used as a heart tonic. Research suggests that this natural extract may also inhibit the conversion of excess calories to certain medications, and it is important to discuss this with your health care professional.

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**REFERENCES:**


