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# Bael: Uses and Benefits

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Bael tree is considered a sacred tree. Its leaves are offered in prayers. It is known as Adhararutha in Sanskrit, Iyalbudi in Tamil, Sriphalamu in Telugu, Billi in Gujarati, Bengal quince or stone apple in English and Bel in Hindi and Bengali. Its scientific name is *Aegle marmelos*,and might prove to be one of the most important medicinal plants in India, Ceylon and Burma.

"No drug has been longer and better known nor more appreciated by the inhabitants of India than the Bael fruit," said Chopra accurately in his book, *Indigenous drugs of India* (1982). Bael has been used in the Ayurveda as a part of various formulations since ancient times to help with boils, dysentery, earaches, discharge from ears and fever/cold.

Nutritional Value of Bael:

**Bael is rich in the following nutrients:**

| Nutrients | Percentage content (%) |
|---|---|
| Proteins | 1.8 |
| Fats | 0.3 |
| Minerals | 1.7 |
| Fibre | 2.9 |
| Carbohydrates | 31.8 |
| Calcium | 0.085 |
| Phosphorous | 0.050 |
| Potassium | 0.60 |
| Vitamin C | 0.008 |

Other than these nutrients, it also contains various essential amino acids, vitamins B1 and B2 and phytochemicals. It is observed that Bael contains the highest amount of alkaloids, flavonoids and tannins compared to other medicinal plants.

## Properties of Bael

Bael has various properties, and it might plays a role to help with many diseases. It might possess the potential properties such as:

- It may act as an antidiarrhoeal agent
- It may be an antimicrobial (effectively kills various microorganisms)
- It may have radioprotective potential (protects the body from harmful effects of radiation)
- It might have anticancer potential
- It may act as an antipyretic (fever-reducing) agent
- It may have anti-ulcer properties
- It may be an antigenotoxic (prevents damage to DNA)
- It may be a diuretic (increases urine output)
- It may act as an anti- inflammatory agent

**Potential uses of Bael for diabetes:** According to animal studies, oral intake or injection of Bael fruit extract might help to lower blood glucose and haemoglobin-bound glucose levels. It might also help increase the level of insulin in the blood and might help the conversion of glucose in the liver. Certain compounds (coumarins) present in the bael fruit extract might help in the secretion of insulin from the liver, thus might be helpful in lowering blood sugar levels. Furthermore, as per a clinical trial, lowering of blood cholesterol and slight lowering of blood glucose might be possible in some patients with diabetes to whom Bael leaf extract was administered. However, more research is required. Kindly consult a doctor for seriosu conditions such as diabetes which must be diagnosed and treated by a doctor.

**Potential uses of Bael for stomach ulcers:** Bael might have stomach protective effects. Stomach ulcers are mainly formed due to the accumulation of free radicals in the stomach cells (oxidative stress).Bael might exhibit antiulcer properties through its potential antioxidant activity and might eliminate the oxidative stress in the stomach lining and ulcer formation. Additionally, the unripe Bael fruit might help with the damage to the stomach lining induced by absolute ethanol (alcohol) in the stomach. However, more research is required. Kindly consult a doctor, please do not self-medicate.

**Potential uses of Bael for inflammation:** Bael extracts might help in the reduction of swelling, pain and fever. The alcoholic extract of Bael leaves might potentially inhibit the activation of a receptor (histamine receptor), which is responsible for inflammation and most of the symptoms of allergy and asthma.However, more research is required. Moreover, you should consult a doctor before using bael for health.

**Potential uses of Bael for cancer:** In one of the studies, the administration of Bael has shown the potential to interfere with the growth of a tumour. The exact mechanism has not yet been established, but the alcoholic extract of Bael might have the potential to help against the growth of cancer cells. A bioactive compound present in the leaf extract of Bael might show a potential to interfere with the growth of breast cancer cells .However, more research is required. Moreover, cancer is a serious condition and must be diagnosed and treated by a doctor.

**Potential uses of Bael for infections:** Bael might be effective for various infections caused by bacteria, indicating that it might act as a potent antibacterial agent. Studies have shown that the 50% ethanolic extract of Bael might have an effect on the Ranikhet disease virus. It might also act on the early activities of the virus in the body and may stop it, which is in contrast to the activity of modern drugs being used to treat viral diseases.

Furthermore, Bael leaf oil may show a protective effect against fungal infections. This activity may be due to its interference in the mechanism that leads to the growth of fungus in the body. Various studies have shown that it might have effectiveness against common fungal infections owever, more research is required to ascertain such claims.

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