

Making Indian Tradition Sweets Healthier

By Ms Dolly Soni, Marketing & Projects
Manager, PFNDAI and Ms Prerana Patil, Food
Technologist, PFNDAI



ABOUT INDIAN SWEETS



- Indian sweets contains a mix collection of desserts and confectionery.
- The most important ingredient of any sweet is 'Sugar' and we got this name from Sanskrit word 'Sharkara'. Even the word candy is derived from Sanskrit word 'khand' (Jaggery).
- In India there are several different languages and sweets are called by different names. But there is a one common name for Indian sweet which is 'Mithai'.
- Indian sweets are made up of different ingredients and also in different ways (Process)
- When are sweets consumed?



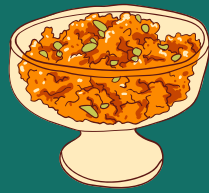
TYPES OF SWEETS AND HOW TO MAKE THEM HEALTHIER

Gulab Jamun

- Well Known Indian dessert made of milk solids (Khoya).
- It contains fried dough balls soaked in sweet syrup.
- Originated
- Varieties
- Being a milk based product it is a good source of calcium, Vitamin A and proteins.
- Evaporated milk is a rich source of calcium and fulfills 66 percent of the daily requirement (Nouh F. et al., 2017).
- As per USDA it contains 300 mg of calcium, 16 gm of protein, 16 grams of fat, 6 gm dietary fibers and 100 IU of vitamin A.



Halwa



- The word 'halwa' comes from the Arabic word 'Hulw', which means sweet
- It is made of flour, sugar, water, nuts and with oil/ghee
- Halwa originated in Arabic lands and came to India via Persia. Confectioners are known as 'Halwais' till today and will always continue to be called so
- Types of halwa
- Carrot halwa is one of the most common type halwa. Carrot is a root vegetable with vitamins, and minerals. It is good for eyes.



Modak

- It is a steamed dumpling stuffed with jaggery, freshly grated coconut, dry fruits and sweet light spices
- The outer soft shell is made from rice flour or wheat flour
- 3 common types
- Originated
- Varieties
- Benefits
- ghee used in the filling helps against constipation and supports a healthy heart when consumed in limitation
- Coconut is a rich source of healthy fats, proteins, fibres and essential minerals like iron, manganese, copper and magnesium.



Kulfi

- Kulfi is a thick and creamy frozen dairy dessert
- Originated in the Indian subcontinent during the Mughal era in the 16th century.
- How is it made?
- Difference between Kulfi & Ice cream. Kulfi is denser and creamier than ice cream, kulfi is not whipped, resulting in a solid, dense dessert.
- Varieties (Traditional & Newer)



Barfi

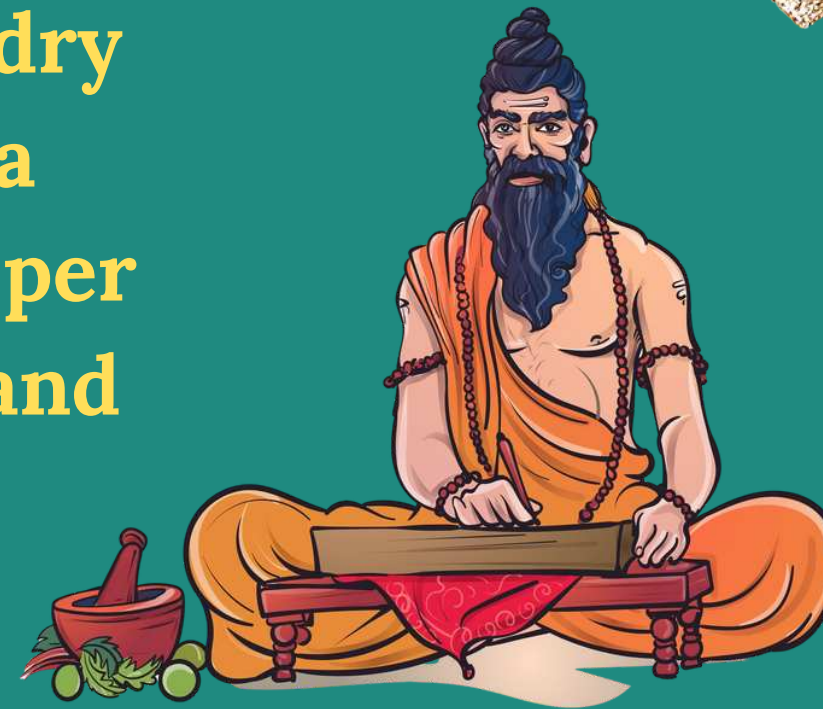


- It is a kind of fudge made by using milk, sugar & ghee.
- It belongs to a wider group of Indian sweets united under the name mithai
- Name is derived from Persia, the name burfi denotes snow and ice, referring to the visual characteristics of this dessert in its simple, original form
- How is it made?
- Originated
- Varieties
- When is it consumed?



Ladoo 🍯

- It is a small ball shaped sweet made up of flour, nuts, sugar, jaggery, ghee, etc
- Ladoos are originated in India. In every occasion, while sharing a good news, in celebration ladoos play a star role.
- Were used for medical treatment.
- Varieties of ladoo are- coconut, besan, motichoor, dry fruits, ragi, methi, etc from different states of India
- Gond ladoo/ Dink ladoo is one nutritious sweet . As per Ayurveda gond is very good for boosting strength and health, lubricating joints and boosting immunity.



Main components of Indian Sweets-

Sugar-

Sugar(sucrose) is the main component of any traditional sweet as it attributes to the sweetness, flavour and functional properties of sweets

- Sweetness
- Flavour enhancement
- caloric contribution
- Texture
- tenderizer
- preservation
- browning/caramalization
- viscosity
- freeze point depression

Ghee-

- Ghee has been a part of our traditional foods from ages.
- Research shows that, ghee is a good source of fat soluble vitamins (A,D,E,K).
- It shows anti inflammatory effects, helps in combating obesity (Due to Conjugated linoleic acid), contains monounsaturated omega 3 which supports a healthy heart.
- But over consumption can elevate the health risks.



Indian sweets are more than just empty calories.

- cereal (rice/rice flour/ wheat flour/semolina/ broken wheat etc.)
- Pulse (Bengal gram flour/ Bengal gram dal/green gram/black gram etc.)
- Milk and milk product (mawa/ chena/ curd etc.)
- Seeds and nuts (sesame seed/melon seed/peanut/ cashew nut/pistachio etc.)
- Dry fruits (dates/raisin/apricot etc.)
- Spices (cardamom/nutmeg/cinnamon/ saffron etc.)
- Ghee/ cold-pressed oil (the traditional one)
- Sugar/jaggery

- **Pulse grains are an excellent source of protein, carbohydrates, dietary fibre, vitamins, minerals and phytochemicals. Besan laddoo, mysore pak, sonpapadi are some examples of pulse based products.**
- **Fiber helps to slow down the absorption of sugar preventing sharp rise in blood sugar level**
- **Apart from dietary fibers, protein is another main component.**
- **Milk based sweets contain high amount of protein. Higher amount of protein can help in cutting down the amount of sugar.**

- **Some studies show that proteins can help in stabilizing the blood sugar level but further research is required.**
- **Including dietary fibers and proteins can prevent sharp rise in blood sugar level, resulting in reduced glycemic index.**
- **Western sweets lack dietary fibers compared to Indian sweets**
- **Many Indian sweets are high in protein and dietary fiber but not all. Such products can be made healthier by incorporating ingredients like pulses, dietary fibers and proteins.**

Strategies for making indian traditional sweets healthier

Sugar reduction-

- Sugar can be reduced to 40 to 60 %
- But reduction in sugar will cause reduction in sweetness and will affect the functional properties.
- Sweetness can be recovered by using high intensity sweeteners, polyols or dietary fibres like fructooligosaccharides.
- Honey, jaggary can be used instead of sugar

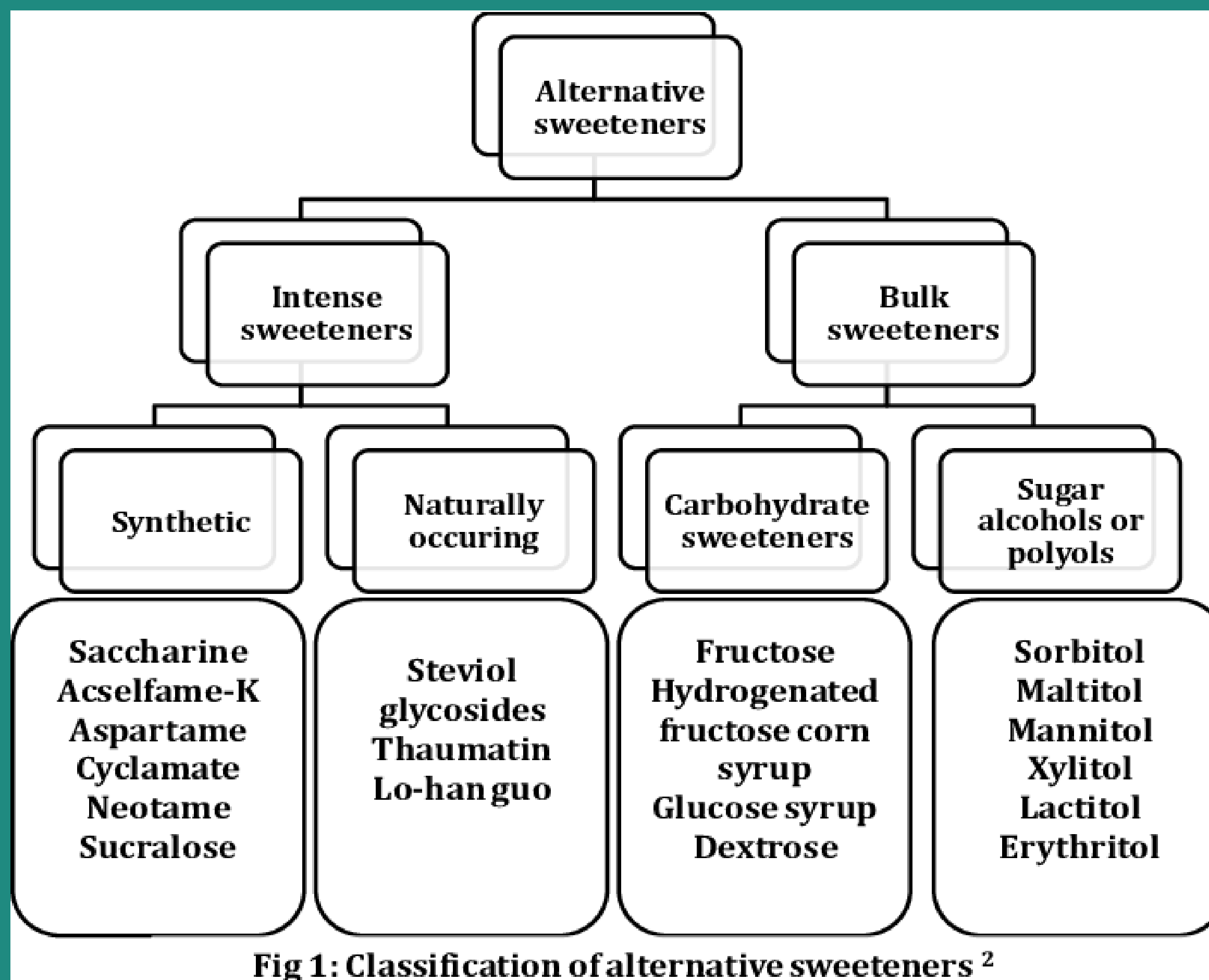


Fig 1: Classification of alternative sweeteners ²

(Jain, T., & Grover, K. (2015). Sweeteners in Human Nutrition. International Journal of Health Sciences and Research, 5, 439-451.

Honey-

- Honey is sweeter than sugar
- It has a glycemic index of 61 which is less than that of sugar.
- It has two main bioactive compounds Flavonoids and polyphenols.
- Used as treatment of various disease conditions such as diabetes mellitus, respiratory, gastrointestinal, cardiovascular, and nervous systems, even it is useful in cancer treatment because many types of antioxidant (Samarghandian, S et al., 2017).



Honey Composition-

	Blossom honey		Honeydew honey	
	average	min-max	average	min-max
Water content	17.2	15-20	16.3	15-20
Fructose	38.2	30-45	31.8	28-40
Glucose	31.3	24-40	26.1	19-32
Sucrose	0.7	0.1-4.8	0.5	0.1-4.7
Other disaccharides	5.0	28	4.0	16
Melezitose	<0.1		4.0	0.3-22.0
Erlose	0.8	0.56	1.0	0.16
Other oligosaccharides	3.6	0.5-1	13.1	0.1-6
<i>Total sugars</i>	79.7		80.5	
Minerals	0.2	0.1-0.5	0.9	0.6-2
Amino acids, proteins	0.3	0.2-0.4	0.6	0.4-0.7
Acids	0.5	0.2-0.8	1.1	0.8-1.5

Bogdanov, Stefan. (2016). Honey Composition. Bee Product Science.

Jaggery-

- India is the largest producer and consumer of jaggery. If compare with the total jaggery production of the globe, more than 70% Jaggery produced in India (Hirpara P. et al., 2020)
- Jaggery is also sweeter than sugar
- Jaggery improves digestion, helps in cleansing the liver, relieves constipation, boosts energy, purifies the blood, anti-toxic and anti-carcinogenic properties, relives tension, treatment of bronchial or lung infections and pre-menstrual syndrome (Hirpara P. et al., 2020)



Jaggery Composition-

The jaggery contains approximately

- 60–85% sucrose
- 5–15% glucose and fructose
- 0.4% of protein
- 0.1 g of fat
- 0.6 to 1.0 g of minerals (8 mg of calcium, 4 mg of phosphorus, and 11.4 mg of iron)
- It is also found to contain traces of vitamins and amino acids
- 100 g of jaggery gives 383 kcal of energy.

- Seeds like flaxseeds, chia seeds, pumpkin seeds can be added
- Adding fruits and dry fruits can be a good alternative for making sweets
- Fruits are an excellent source of essential vitamins, minerals and fibers. Some fruits also contain antioxidants
- Fruits have their own sweetness due to the intrinsic sugars present in them. This sweetness can be utilized in place of sugar.
- Adding dried fruits like raisins, figs or dates/date paste.



- Some spices are added traditionally to indian sweets like cardmom, saffron, cinnamon, nutmeg
- Other spices like haldi (Turmeric) can be used for adding colour to the dish
- Also some botanicals like tulsi leaves can be added for making sweets even more healthier.
- In West bengal, rasgulla was prepared using tulsi leaf extract (Mitra, Abhijit. (2019). Medicinal sweets. RESEARCH JOURNAL OF CHEMISTRY AND ENVIRONMENT.)



Control sample (Normal Rasgulla)



Rasgulla prepared from Tulsi extract

THANK
YOU!