

Nutritionals Nutraceuticals Functional Foods Dietary Supplements

NuFFooDS

perspectives on science & business

Spectrum



Volume 3 | Issue 1 | September 2015 | ₹100

www.nuffoodsspectrum.in

68 pages including cover



INDUSTRY WANTS A ROBUST REGULATION



**Supreme Court terms
FSSAI's PA advisory
as **UNLAWFUL****

21



Dr Sanjay Agrawal

Leading Pharmaceutical Consultants & Inventor

Medicinal value, health benefit of spicy food

Spices, the aromatic substances of vegetable origin, are rich in antioxidants, and many scientific studies suggest that they are also potent inhibitors of tissue damage and inflammation caused by high blood sugar level and circulating lipids. Because spices have very low calorie content and are relatively inexpensive, they are reliable sources of antioxidants and other potential bioactive compounds in diet. Due to their phenol content these are able to block the formation of compounds that contribute to damage caused by metabolic disorders.

Spices supply Vitamin B, Vitamin C, calcium, iron, carotene and other antioxidants. For instance, fresh parsley (an aromatic herb) has been linked with cancer prevention due to its antioxidant content and spicy food is much more appealing than a vitamin drug. Besides, herbs and spices do not have any kilojoules or fat. Spices, which are used as a preservative, contribute to progress of blood circulation and lower blood pressure of human. Eating spicy food causes body temperature to raise and make blood pumping of heart in fast manner. For example, hot pepper contains very much Vitamin A and Vitamin C. They work on to strengthen the walls of the blood vessels.

Capsaicin, a colourless pungent crystalline compound derived from capsicum, in hot peppers also fights inflammation and in turn lowers the risk of heart failure. Chilli has also been seen to be good for the heart, because it makes better the ability of the human body to dissolve blood clots, and it contributes to healthy heart. Chili peppers also make better digestion by enhancing the production of hydrochloric secretion in the stomach of human body. This increases flow of blood in the stomach that increase the mucous, a protective covering that protects the inside surface. Spicy foods also promote the production of feel-good chemicals in human brain known as endorphins and serotonin. These brain chemicals can fight depression and increase the mood of human.

Aromatic food substances, which enhance flavour, are classified into spices. In normal condition, spices are dried roots, barks, seeds used whole or crushed and powdered. Spices add a glorious touch to food with its flavour and fragrance. Spices add flavour, colour to food and make the food palatable. It stimulates salivation and acid secretion of digestive enzymes like amylase. It has anti-inflammatory, anti-bacterial and antioxidant properties. It reduces cholesterol levels useful in preventing heart diseases.

Blended spices are a combination of different spices in a set of proportion. For instance the garlic-onion spice blend, masalas for pav-bhaji, chhole, sambar, biryani, chicken and mutton. Spices are selected and blended together considering the result required in the end dish. There is a common myth that spices are harmful to the gastric system. But, spices make the food palatable and when consumed in moderation, they actually supply the required antioxidants and nutrients for the body.

Hot and spicy food gets a bad and sharp strike. Many years, experts in the field believed it caused stomach problems and worsened ulcer disease. The fact is that spicy food might actually shield the stomach lining if eaten in moderate manner. Hot foods such as red peppers can really help in stomach to produce less gastric acid. There may be a burning feel after eating hot and spicy food, but this is only because of getting to build the power or capacity of an organism to tolerate unfavourable environmental conditions. Either begin with a milder mix or eat smaller amounts and then increase the intensity as per the body structure and gets used to the heat. And the clove and clove oil are considered one of the hottest among spice categories.

Peppery foods are also believed to stimulate the appetite by setting off the flow of saliva and gastric juices, a nutritionally very significant effect for human in tropical



areas where the oppressive heat acts as an appetite suppressant. And, anecdotally at least, they act as an overall stimulant, producing a titillating, awakening effect and increasing the acuity of the senses. Peppers, especially the hot chili peppers, produce a burning sensation on the skin and mucous membranes, including the inside of the mouth. For the uninitiated, a relatively mild hot pepper can seem intolerably strong and truly hot peppers may even cause blistering of the lips and palate.

Spicy foods increase satiety, helping to feel full while eating less, and hot peppers may even help the body to burn more calories. Capsaicin has actually been used to selectively destroy nerve fibres that transmit information from human body gut to brain. Nutritionally, capsicum peppers, both sweet and hot, do have something significant to offer large amounts of Vitamin C. Peppers have two and a half times more Vitamin C than oranges. They are also

good sources of Vitamin A and potassium and contain some iron and protein. At the same time, they are very low in fat and calories.

Cinnamon may help to boost human body metabolism, and it also has impressive benefits for blood sugar regulation, making it an ideal seasoning for people with diabetes or pre-diabetes. Cinnamon has been found to significantly reduce blood sugar levels, bad cholesterol, and cholesterol levels in people with type 2 diabetes, as well as increase glucose metabolism approximately 20 times, which would significantly improve the capacity of the body to regulate blood sugar.

Black pepper contains a substance called piperine, which not only gives it its pungent flavour, but also blocks the formation of new fat cells. When combined with capsaicin and other substances, black pepper was also found

to burn as many calories as taking a 20 minute walking exercise. As an aside, black pepper also increases the bio-availability of just about all other foods, herbs and other compounds, which is making a healthy choice for virtually any meal.

Medicinal value of aniseed (somfu/owa) is that it is an infusion of fennel used to counteract flatulence. It is mildly carminative and used in treating colic pain. Asafoetida is used as an antimicrobial agent. It is also used in treating chronic bronchitis and whooping cough. It is used in counteracting intestinal flatulence. It increases the levels of detoxification enzymes in the body.

Cloves contain eugenol which has anti-mutagenic effect. It is used for tooth pain. Coriander seed is used in flatulence, vomiting and intestinal disorders. Coriander seeds contain thalides which increase the levels of anticancer protective enzymes. Cumin seeds is used as stimulant and carminative agent.

Cumin seeds contain bioactive substances called pthalides which increase the levels of anticancer protective enzyme in the body. Fenugreek seeds help in maintaining the blood glucose levels in non-insulin dependent diabetes. The fibre present in the seed may be responsible for this. It is also used with butter milk in the treatment of dysentery.

Garlic is used to treat various digestive disorders. Extracts of garlic can lower tissue cholesterol levels and prevent heart diseases. It is also an anti-fungal agent and helps reduce the fat content in blood and so blood is getting thin, and thus reduces blood pressure. Ginger is reported to reduce inflammation and pain in joints. It also has potential prophylactic use in treating migraine headaches. It may also be effective in alleviating nausea.

Mustard seeds are rich in sulphur containing compounds namely the dithiol thiones, which protect against the toxic effects of aflatoxin. The dithiothione is also used as an antischistosomal drug. Consumption of cruciferous vegetables is associated with negative cancer risks. Nutmeg has antimicrobial property. The volatile components of these spices are believed to be responsible for this property.

Consumption of raw or cooked onion is believed to aid in maintenance of normal glucose levels. Onion has antibacterial properties. The sulphur containing compounds

Spicy foods increase satiety, helping to feel full while eating less, and hot peppers may even help the body to burn more calories. Capsaicin has actually been used to selectively destroy nerve fibres that transmit information from human body gut to brain

from these plants strongly act against both gram positive and gram negative bacteria. The extracts of onion are known to inhibit growth of many pathogenic fungi belonging to aspergillus and candida. Onion can lower blood cholesterol and lipid levels and useful in preventing heart diseases. Pepper is used along with hot milk for throat

infections. Saffron is very useful as sedative drug and also used for eye infections.

Protective factors in turmeric help in detoxifying harmful drugs or chemicals that are converted to toxic metabolites. Turmeric also helps in increasing the mucin (a lubricant that protects body surfaces) content of gastric juice and reduces irritation in stomach. It is very useful to relieve sore throat, cough and cold.

Turmeric isolated from turmeric showed potent antioxidant and anticarcinogenic properties. The active principle of turmeric, curcumin, is known for its inhibitory action on bacteria and arrests the growth of fungi.

In India, and also across the globe, scientists are exploring the potential of spices to boost metabolism, promote satiety, help weight management and increase the overall quality of a diet. Black pepper is an antioxidant such that it prevents and curtails oxidative stress, and it also reduces the damage caused by a diet full of saturated fats which is found to be the main cause of oxidative stress.

Global studies show that capsaicin slows the growth of cancer cells in human body, sometimes even killing cancer cells without causing disturbance to the other surrounded areas of the cancer cells. India and Mexico where diets are rich in spicy food cancer rate is much lower than nations where diets are not rich in spicy food.

Health benefits from spices, herb and their oil are immense. India is rich in spices since several years it is a known fact across the globe. Apart from adding flavour, colour and taste, consumption of spices provide infinite health benefits. Studies have showed that many health benefits are obtained from these spices.

Spices when used in moderate level, it will aid in making optimal use of the resources provided by nature. Spices although have many medicinal benefits need to be used in a proper way, otherwise they can be injurious to human health. **NS**