



FOOD AND HEALTH: A NATIVE WAY

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Abstract

In the olden days, traditional practices like eating while sitting on the floor, eating breakfast early in the morning, washing hands before eating, cooking with earthen cookware, eating freshly prepared foods, eating with hands etc. were followed religiously until modernization and industrialization came and make a twist, more and more health problems are arising each day by day because of unhealthy lifestyle. People because of their busy schedule many time saving equipment, easy to cook Utensils, fast food are produced in mass. People unintentionally adapt these lifestyle but little did they know it could cause them many health problems. Including cancer ,hypertension, obesity, diabetes etc. An old proverb states: "Prevention is better than cure "many of health issues are related by having unhealthy conventional foods but we are also relieved to know that eating nutritious food can solve this problem. Traditional foods are known to be packed full of these nutrients and have many functions in our body. Traditional food has been passed on from generation to generation. It is a gift from Parramatta that not only provides strength to our body but soothes our soul and mind too. It has been valued since time immemorial because it defines the rich culture of one's nationality. Apart from these, it is also more sustainable and environment friendly as it reduces the carbon footprint and eventually saving more energy to store and transport. Many of the world's problems regarding food insecurity and malnutrition could be erased by adopting a traditional food system. Eating traditional crops like millet, jowar etc., helps control blood glucose levels, reduce migraine, heart attack, helps to lower cholesterol, prevent cardiovascular diseases, helps people suffering from celiac disease because of its gluten free property, etc. Traditional millet is eaten as roti, bread, porridge, snacks etc. As people became more educated, people started to realize the superior quality and its significance of eating local food in this modernized era and that is why local foods are in heavy demand presently.

INTRODUCTION

Traditional food has its long history since the civilization of human beings. It is the food that has been accepted by the society and has been eaten from generation to generation. It is known to have many body healing chemicals, antioxidant dietary fibre and probiotics. Many variety of food are available from pulses to cereals to fruits to vegetables to spices to condiments. India is diversify country rich in culture, flora including medicinal herbs, fauna, cuisine, festivals, languages etc. Different foods are consume among different communities within the country. The recipe, ingredients used, cooking methods ,preservative method all differ from states to states. Indian food can be classified as satvika food which include cooked vegetables, milk, fresh fruits and honey. Then tamasika food which include meat, liquor, garlic , spicy and sour food. Followed by rajsika foods which include the energy giving

foods. Grains like rice, wheat, flour, sorghum, millet, pulses was eaten as a staple food in India. Barley was one of the staple cereal in the beginning and then wheat, lentils, millets and sugarcane came. Millet is considered as an important crops because of it's holistic benefits to our body. Many diseases can be prevented by eating millets. It is an excellent source of vitamin B, magnesium, and antioxidant etc. Fruits are also considered as spiritual food like banana, it's plant part such as bale dandu palya, vazhai poo poriyal and banana stem juice are use for diabetic treatment, papaya, saag, dahi variety of vegetables, exotic fruits, spices, oil, ghee etc are consumed all over India. And again in order to keep the food safe from pests and contaminants many storage structure are employed such as bukhari, khaach, peru, peti etc. Thus vegetables, wheat, grains, seeds etc. were able to remain fresh and safe for a long period of time. The Indian cuisine are mainly influence by the availability of different foods in the state which further depends on soil type, climate, socio economic condition and geographical location. Also religion plays an important role of the dietary behavior of an individual. Example include Muslim are prohibited of eating pork, Hindus with beef etc. In India, many traditional cuisine, recipes, cooking practices, preservative method, cookware are used to prepare a hearty meal. But among all the preservative method Fermenting food was one of the most used preservation method during ancient time. It can be date back to . Fermentation is done on many fruits, pulses, cereals, vegetables, meat, fish and many alcoholic, beverages. This alcohol are also used to offer gods and rituals were done. Some example include kefir, kombucha soybeans, along, idli, dosa, Ambala etc. These are known to have antimicrobial, fibrinolysis, immunohistochemically, hypocholestronic and antioxidant properties. other preservation method include curing of meat, salting, sugaring, pickling, drying etc, all helps to preserve the nutrients for long period of time and improve its shelf life. Foods were cooked in a best possible way to enhance the nutrients of the food. Earthenware were known to increase proteins, vitamin, minerals of the food. Other traditional cookware include cast iron, brass cookware, bamboo cookware: they are non reactive and have no negative effects to our body, stoneware etc. India is truly blessed with flora and fauna. Many of which are used for medical purpose and can be used for relieving many diseases. Their traditional knowledge of prevention of diseases, traditional remedies do not have any side affects. Some example include milk mixed with turmeric are known to cure fever, salt sugar water to relieve direct flatulence, chewing certain plants to relieve headache etc. These are closely linked to Ayurveda. There are enormous amount of medical plants, tubers or vegetables that acts as a Theurpatic agent. The herbs or plants or even the seeds has anti microbial properties, anti cancerous properties, anti proliferation properties etc and helps to cure many diseases. As time passes by less and less importance are given to these traditional food. People are opting for instant food, conventional food basically food that are hazardous to health. "You are what you eat" meaning the essence of who you are is determine by the food you consumed. Thus food should be chosen wisely to improve your gut, heart, liver kidney and brain. Consuming traditional foods is a good option for this. Apart from health benefits, it plays an important role in eradicating world's problems relating to food, helps in sustainable food consumption etc These treasures should be given importance as it plays an important role in preserving the rich culture.

Traditional Cookware

Traditional cookware include all those equipment that were used to cook various kind of food since ancient times. These cookware are made from different materials, it could be either made from clay, stones, iron, brass, wood, bamboo. These are turn to make aesthetically beautiful utensils namely Earthen pot, cast iron Tawas, soapstone vessels, brass cookware, bamboo's utensils, black stone pot etc. The material used and metals contribute to the overall availability of nutrients of the food and can be used as a remedy to heal certain diseases including cold, cough, fever etc.

The cast iron Tawas are mainly used for deep frying, roasting. The food when cooked in an iron utensils enhance the total bioavailability of iron according to the level of acidity, moisture content and cooking time of food. Thus it is recommended for those who are deficit in iron or people who are suffering from anemia, cognitive impairment. Other function : it helps in assisting oxygen circulation, increase the immune system and weariness.



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Fig 1. Cast Iron Skillet



Fig 2. Cast Iron Kadhai

Another cookware and utensils are made from brass. This metal is made up of 70% copper and 30% zinc. During the whole process of cooking only 7% of nutrients is lost. Many health problems including worm infestation, cough, skin diseases, and other respiratory diseases can be prevented by cooking and eating with brass utensils. It is also helpful in strengthening the bone, increase the immune system and blood hemoglobin levels. When water is stored in copper jar the quality of the water improves and has many function including weight loss, wound healing, digestion, prevention of hypertension, risk of cancer, skin diseases, helps regulate thyroid gland function. However it could be harmful when subjected with acidic food and salt as its reaction is very high on high temperature.



Fig 3. Andhra Brass Pot



Fig 4. Antique Indian Patinated Bronze Tawa

Earthenware are made from clay by mixing clay, earthen elements, powders and water. It is known to preserve all the micronutrients present on the food. Since there is usage of metals, there is no dissipation of harmful metals on the food(Singh.J and Goel. B et.,al 2021;khan.D and Banerjee.S et al.,2020). In addition to this the proteins, vitamin, minerals, calcium, phosphorus, sulphur, magnesium increase, iron and zinc. It enhance all the food parameters in terms of acceptability (saxena.s and saini. S, samtiya. M and aggarwal. S, Dhewa. T, sehgal. S et al., 2021). Clay pots allows moisture and heat to circulate through the food and helps to preserve the micronutrients present on the food. Earthen pot are alkaline in nature

thus maintaining the pH level by interacting with the acidity of the food. It also adds flavour and increase the natural sweetness of the food.

Earthen pots/cookware



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Fig 5. Clay Holding Pot



Fig 6. Clay earthenware crockery

Stoneware are a good option as well as it does not leach any hazardous metals even when treated at high temperature (Baumal. Ch. And Zaina. S. Pariha. V et al., 2020). It is generally made up of metamorphic rocks. It has thermal properties, shock resistance, heat absorption and storage abilities (Saxena.s and saini. S, samtiya. M and aggarwal. S, Dhewa. T, sehgal. S et al., 2021). Longpi Hamlei/Hampai is a stoneware or earthenware made from clay, stones and cane found in small village Longpi of Manipur. The colour is generally dark grey to black. It is made by mixing paste made from grand black serpentine stone and brown clay available only in Longpi. This pot has a unique characteristics where the food sizzles for a long period of time even after taken off the flame and ensure that food remains warm until eaten. It also supplements iron to the food. They are traditionally meant for cooking meat.



Fig 7. Longpi Black Pot



Fig 8. Longpi Teapot

Traditional crops Millet

Millet is one of the stable crops in India. India is the largest producer of millet in the world. India produces 10,910,000(tones) according to the source provided by FAO of UN 2013 in which Rajasthan contribute the highest. Little millet and foxtail millet let alone earns on an average of Rs 11,506 and 12,116 ha⁻¹net returns. Karnataka also produces some minor millet. Millets are known to be 3-5 times nutritionally predominant than that of rice and wheat in terms of proteins, minerals like calcium and iron, vitamin and dietary fibres. They belong to the family Poaceac /Graminae. Different variety of millet can be



Fig. 9 Foxtail in field



Fig 10. Quinoa varieties

found including sorghum, finger millet, tordo millet, pearl millet, barnyard millet, quinoa, foxtail millet, porso millet, little millet and buckwheat . Among these finger millet has the most content of calcium with 34.4mg per 100g.foxtail millet with 12.9mg /100g then followed by little millet with 10.0mg/100g.Millet are tiny in size, generally round in shape. Millet contain 60-70% carbohydrate, 7-11% proteins, 1.5-

5%fat and 2-7%crude fibre. It is a rich source of proteins, calcium, dietary fibers and polyphenols. Essential amino acids like methionine and cysteine are also found. Linoleic, oleic and palmetic acid are found in free form whereas Monogalactose, diadiglycerols, digalactosyl diacylglycerols, phosphotichylethanolamine, phosphatidyl, serine, and phosphatidyl choline are found in bond form. Niacin, vit B, Focalin, riboflavin, and thiamine and phosphorus in millet helps in synthesis of our body . It helps to control blood glucose level, helps to reduce migraine , heart attack or cardiovascular diseases, lowers down the cholesterol level, helpful for diabetic patients, helps to prevent cancer as it contains phenolic acid, tannins and phytate properties(Sarita and singh.E et.,al 2016;Ashoka.p, Gangaiah . B and somitha N. H et al.,2020).

Millet contains catechin,epicetechin,epiglocatechin etc that reduces cardiovascular diseases and diabetes. Porso millet helps in repairing DNA damage ,goof for bone health,dyslipidemia,helps to prevent breast cancer. Sorghum are rich in flavonoids, condensed tannins and phenol acids. It has anti-carcinogen property and helps to lower the risk of oesophageal cancer. (Saxena.S

,saini.S,Samtiya.M,Aggarwal.S,Dhewa.T,Sehgal.S et al.,2021)Eating millet are also helpful for those who wanted to lose weight and those are suffering from celiac diseases as it is free from gluten. Millet mainly grows on dry land soils meaning they can be grown in extreme condition even there is little availability of water. They require no rich soil, fertilizer, pesticides as they do not attract any pests. They are environment friendly, agriculture friendly as lesser pollution are produce during production, they are highly sustainable and highly beneficial to our body. Traditionally people across the country consumed this by making it into a roti, bread, porridge, snacks, baby foods, wine, powder etc. Indigenous people also ferment the millet and used in treating diarrhea in children. It act as probiotics properties. However the importance is overlooked and mostly people do not preferred as this crop is regarded as poor's people food and thus less Cultivation of this crop is taken up. Government should look up unto this matter properly as this could help in combating malnutrition and food insecurity in the country. Proper channel should be provided among the supplier and consumer. (Sarita and singh.E et al.,2016;Ashoka.p, Gangaiah . B and somitha N. H et al.,2020)

Traditional food preservation methods

In order to prevent spoilage of food and prevent food from the growth of Micro-organism preservation is done. Food preservation has been practicing since ancient period. It is mostly done in fruits, vegetables, meat, grains, wheat etc. Some of the method employed include smoking, drying, salting, sugaring, fermentation, curing, pickling. This methods are employ in order to improve the shelf life of the foodstuffs. Drying is one of the oldest traditional way of preservation . Different variety of foods are subjected to drying including meat, vegetables, tubers, fruits, wheat, grains etc some example include tomatoes, mushroom, bamboo shoot, squash, gooseberries , plum, Jujubi, olive, wild apple, chilli etc. These are available everywhere at household or local store . Different fish and meats including prawns, beef, wild boar, frogs, silkworm, eel etc are subjected to drying and smoking traditionally. The drying process removes the moisture from the food and inhibits the growth of bacteria, yeast, mould etc.



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Fig 11. Dried Vegetables



Fig 12. Dried Ham

Another method for preserving meat include curing, this are done to increase the flavour ,to reduce the moisture content by osmotic process. Salting is done in vegetables, meat, fruits etc it kills the bacteria and slows down the oxidation process thus avoiding Rancidity. Sugaring process involves boiling of the food stuff and then sugar is added at great quantity. Jam is made by sugaring preservation method. Pickling is mostly done on fruits, vegetables, roots and tuber. Most popular pickles include chillies, mangoes, lemon, mixed vegetables, radish, garlic, chicken, fish, egg etc. It is done by subjecting the ingredients in vinegar or vegetable oil. This improves the texture, flavour, and taste of the food. (Kumar.A et al.,2019)

Fermentation is mostly wide preservation method and had been discovered since 1450 AD . Jalebi, idli, dosa, was first noted in Tamil Sangam literature in India in 6AD.wine was worshipped as the Liquid god. Alcoholic beverages have a strong ritual importance and was offered to family, gods, ancestors and used in spirit possession. (Tamng, p. J et al.,2016) . Fermentation is the process of breakdown of complex compound to simpler compound by the action of enzyme and microorganisms. It is done on many foodstuffs including meat, fish, beer, wine, cheese, soybeans, legumes, fruits, cereals, tubers etc. Fermentation is known as naturally fortified process as it has immense function. The process enhance the organoleptic properties, in olives it removes the bitter phenolic compounds. Fermentation of soybeans reduce phytic acid concentration, increase the content of vitamin c, it has anti- carcinogenic, anti- diabetic, antioxidant, anti-inflammatory and anti-hyperlipidemia properties (Dimidi.E, cox, R. S, whelan. K et al., 2019) . Bacteria and yeast ate responsible for lactic acid fermentation. It reduce the non digestible carbohydrates, enrich essential amino acids, vitamin, and minerals. Most commonly found traditional fermented in India include idli, dosa, dhokla. Idli are used as a supplements for the children who are suffering from malnutrition and Kwashiorkor. Lactic acid present in idli are lactobacillus, planetarium and Lactobacillus lacti. Dosa can be a best option for people who are suffering from glucose intolerance, diabetic patients, rheumatism patient etc. Fermentation increase the total acids, amylase, Proteinases, vit b1, b2, folic acid , zinc and iron.

Non dairy based fermentation foods include rice beer -haria. This has shown to improve the intestinal health. Rice beer in north-eastern is done by fermenting brown rice and rice bran. This is traditionally called as apong. It has antimicrobial, antioxidant properties and helps prevent the risk of forming kidney stone. Some millet based fermentation are kambu , koozh, ambali, soya food like kimena, Hawaii jar, alone akhuni, they are known to have antimicrobial, fibrinolysis, immunohistochemically, hypocholestronic and antioxidant properties. Dahi and yoghurt are also fermented dairy product and has antidiarrheal, anticarcinogenic, cholesterol lowering capabilities and immune boosting properties. (Chaudhary. A, Sharma. Dk and Arora. A et al., 2018) Dahi are known to have probiotics properties and helps in reducing cholesterol and triglycerols which helps in protecting against gastroenteritis, improved helps in curing dyspepsia, dysentery, encourage thiamine synthesis



Soft Idly Secrets-Padhuskitchen

Fig 13. Idli making process



Fig 14. Apong from Arunachal lactose intolerance,

etc (srinivasan.k et al., 2010) soma is a fermented juice of an East Indian leaf less vine sarcostemna acidum and other indigenous grapevine (Tamang, p. J et al., 2016)



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Fig 15. Dahi



Fig 16. Ragi Ambali

Traditional Indian functional foods

Functional foods are those foods that have the ability to promote health or prevent diseases aside from their basic function of supplying the nutrients to the body.

(Srinivasan.k et al., 2010) . Traditional food are considered as functional food because it does not contain any preservative, harmful chemicals etc. The food contain body -healing chemical, antioxidant, dietary fiber, and probiotics (Anadani.sv, Akbari. SH, kumar. N and Ravani. A et al., 2019).consumption of traditional functional food systematically acts as preventive medicine and helps to prevent or cure diseases. Some important traditional functional foods are discuss below

Ghee Sage sushrutu, profounder of Ayurveda believe that the milk cream (santanika) we're beneficial to health. Ghee is mainly used as a medium of cooking.Ghee was given importance since vedic period. Ghee stored for more than century is called Maha ghrita. (Srinivasan.k et al.,

2010).Ghee(Ghrita) was produced during 1500 Bc. It was used as a therapeutic agent in Ayurveda and used for religious rituals. In desi ghee milk fat are obtained from fermented milks either from cow or Buffalo. Then the curd is churned to form butter followed by heat clarification to separate out fat from non fat medium. It is composed of glycerides and minor constituents like free fatty acids, phospholipids, sterols, sterol esters, fat soluble vitamins, carbonyls, hydrocarbon, Carotenoids. People who have lactose or casein intolerance can also consume this. It consist of soluble vitamin A, D, E, k. They are superior to other oils and fats because of its medium chain fatty acids content and is absorbed readily by the liver. It is helpful in healing wound and reduce inflammation. It helps in secretion of gastric acids and helps in digestion. (Kumar.A, Tripathi. S, Hans. N, Pattnaik. F, Naik, N. S et al., 2018) . It is useful in treating many diseases such as asthma, anti aging, cough, dermatitis, digestive problems, hysteria, leprosy, leucoderma and piles. However over consumption should be avoided as it may lead to obesity or may increase the risk of having cardiovascular diseases. (Srinivasan.k et al., 2010).

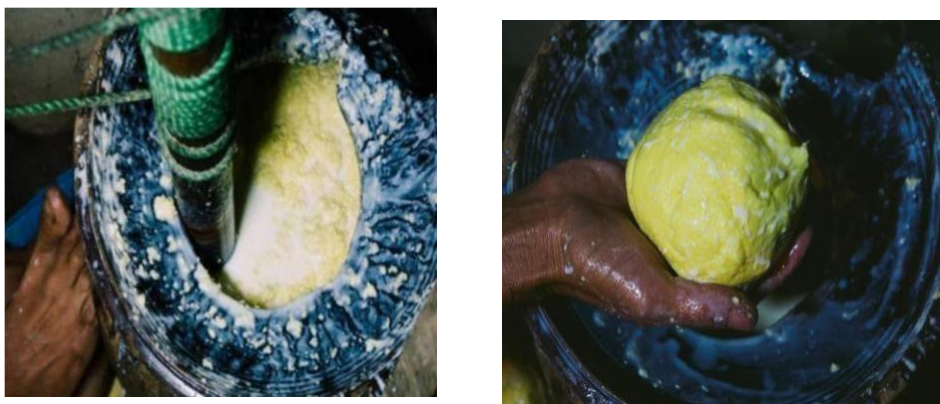


Fig 17. Traditional Ghee

Traditional medicinal plant

There are about 250,000 registered medical practitioner of the Ayurvedic system,20,000 medicinal plant are recorded and 7000-7500 are used for treating several diseases.(Pandey .MM,Restogi.S,Rawat.s et al.,2013)Traditional food culture depends upon the geographical area,

climatic conditions, seasonal changes, types of soil, availability of water, forest region, agriculture, immigrants, etc. Many medicinal herbs ,plants, fruits ,tubers are available across the country. These serve as a therapeutic agent. With traditional knowledge these plants are used as a remedies to prevent or control many health issues. Achyranthes aspera or chaff flower is used for treating piles, renal dropsy, pneumonia, cough, kidney stones, skin eruption, snake bite, gonorrhoea and dysentery etc. Adusa saag (Adhatoda

zeylanica medikus) is known for its function to treat respiratory tract infections. The leaves contain alkaloids and vasicine acetate which have antimycobacterial, antioxidant and anticancer properties. Kurdu bhaji has antihypertension and hepalo protection properties and help in wound healing, flatulence, nausea, vomiting, cough, bronchitis, diarrhoea, dysentery and diabetes. *Amaranthus caudatus* leaves are rich in calcium, iron, zinc, phosphorus and other minerals. Kantabhaji (*Amaranthus spinosus* L.) act as diuretic, antidiabetic, analgesia, antipyretic, antileprotic and used for treating bronchitis, piles. *Basella rubra* (Malabar spinach) have antibacterial, antihyperglycaemia, anti-inflammatory antiproliferation properties. *Centella asiatica* is used as cognitive enhancer, neuroprotection, antinociceptive, and anti-inflammatory effect, immunostimulant, antidepressants etc.



Fig 18. *Achyranthes Aspera*

Fig 19. Adulsa Plant *Adulsa*



Fig 20. Kurdu Bhaji

Fig 21. *Amaranthus Caudatus*

Tubers such as *Amorphophallus paenoniifolius* is used for treating arthralgia, elephantiasis, tumours, inflammation, haemorrhoid, vomiting, cough, bronchitis, asthma, anorexia, Dyspepsia, constipation, helminthiasis, keratopathy, dysmenorrhoea, fatigue, anaemia etc.



Fig 22. *Amorphophallus paenoniifolius*

Fig 23. *Asparagus racemosus*

Asparagus racemases helps to improve the sexual health for female. Costus speciosua are used in treating jaundice, diabetics, pneumonia, rheumatism and skin diseases. Pueraria tuberosa is used for treatment of fever, menorrhagia, skin diseases, wounds bronchial asthma and jaundice. (Shukla, A et al., 2021)

Leaves of solanum spirale (banko) is used to cure malaria, helps in balancing blood sugar, reduce high blood pressure, cardiac and gastric illnesses. (Sidiq.FF, coles. D, Hubbard. C, clark.B., frewer. LJ et al., 2001) . Green leafy vegetables like chakod(cassia tora), saru(colocasia antiquorum) etc contain high levels of beta carotene (1, 980-10, 512mg/100g) and ca of (110800mg/100g). Tulsi and katai leaves and fruits of Sarai plant are used to treat diarrhoea and vomiting. The bark of charaigodwa helps to improve immunity (Jerath.SG, singh.A, kamby. P, Goldberg. G and Suasanbol. M et al., 2015).

Papaya has nutraceutical values and latex papaya tree is used to relieve dyspepsia. The ripe fruits are eaten to relieve diarrhoea. The seed are made into juice and used for treating bleeding piles and enlarge liver. (Sarkar. P, Kumar. L, Dhupal. C, panigrahi SS and choudhary. R et al., 2015).Emlica has high content of vitamin c about 950mg/100g . It has many function , it is use for treatment of chronic dysentery, bronchitis, diabetes, liver ailments, diarrhoea, jaundice and dyspepsia. (Srinivasan.k et al., 2010)

Spices and oil

The benefits of mustard oil has been noted in the Ayurvedic literature:caraka Samhita, susrula Samhita, Bhela Samhita etc. It is used for treating abdominal swelling, skin diseases, epilepsy, frozen thighs. It is used in treating diseases affecting the head, haemorrhoids and wounds(P, Monohar. R, pushpan. R and S. Rohini et al., 2009) . Some of the most common spices used are cumin seeds, coriander seeds, fenugreek seeds, Nigella seeds, black and green cardamom, mace, saffron etc. Cinnamon function by reducing blood glucose levels, helpful for those suffering from diabetes type 2, reduces triglycerides, LDL and total cholesterol. Basil is a rich source of vitamin A, c, phosphorus , CA, iron, magnesium and potassium and helps to protect the cardiovascular system. Clove are antifungal, anti microbial in nature and use in treating dental health and athlete's foot. Thyme helps in relieving stomach cramps, diarrhoea, improves gut health.

Cumin seeds are rich source of iron, copper, calcium, potassium and zn, has antiseptic properties. Ginger is used in combating motion sickness. Turmeric acts as an antioxidants. (Shukla.A, Yadav. N et al., 2018) . It also has anti-inflammatory compound called curcumin which helps to relieve fever. (Singh.A, Banerjee. P, Anas. M, Singh. N and Qamar. I et al., 2020)



Fig 24. Mustard oil



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Fig 25. Cumin seed

Traditional Fruit and Seeds

Jamun is scientifically known as *Syzygium cumini* belongs to family Myrtaceae. It is also known as Jambul, black plum, Java plum, Indian blackberry etc Ramteke.v, kurreg. V and kas. S et al.,

2015). This tree is grown in Indian sub continent and in other region of South Asia such as Nepal, Burma, Sri Lanka, Indonesia, Pakistan and Bangladesh from ancient time(Rizvi.I,S,Mishra.N et al.,2013)The fruit is used to make different health drinks, sherbet, syrups, squash, wine, jellies, vinegar or even a distilled liquor. Jamun is known to consist many properties such as antioxidant, anti-inflammatory, necropsy, cho-pharmacological, anti microbial, nitric oxide scavengers, free radical scavengers, anti Diarrhoeol, anti fertilizer, gastroprotection , redio protective properties. The seeds show anti inflammatory properties in rats and in human show antioxidant properties in diabetes. The seed are used to treat diabetic patient by lowering blood glucose levels and delaying diabetic complications. The fruit seeds contain glucoside, Jamboline and allagic acid that helps in the conversion of starch into sugar if the production of glucose is in excess. (Ramteke.v, kurreg. V and kas. S et al., 2015) . *Eugenia jambolana* seed extract helps to reduce blood pressure because of the presence of ellagic acid. Rizvi.I,S,Mishra.N et al.,2013)

Pumpkin scientifically known as cucurbita are mainly consumed as vegetables all over the world. They are mostly grown in tropical and subtropical areas. *Cucurbita pepo*, *Cucurbita maxima* and *Cucurbita moschata* are three types of pumpkin mainly cultivated. The pumpkin is also used for thanksgiving feat and gravings in USA. The seeds are used to cure many diseases (Syed QA, Akram M, and Shukat R et al., 2019) . The seeds are packed with nutrients as it contains high content of vitamin E(tocopherols), Carotenoids, provitamin, pigments, pyrazine, squalene, saponins, phytosterols, Triterpenoids, phenolic compounds along with their derivatives such as coumarins, unsaturated fatty acids, flavonoids and proteins. They are rich in magnesium, potassium, phosphorus,zinc iron ,copper as well. (Dotto.MJ,chacha SJ et al.,).The fatty acid present are linoleic with 33.1%,palmitic with 13.4%,oleic with 43.8% and stearic at 7.8% .The seeds helps to improve sexual stimulation and intromission (Shaban A and Sahu PR et al.,2017)The



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Fig 26. Jamun fruit



Fig 27. Pumpkin seeds

seeds should be consumed as it helps to reduce the risk of non communicable disorder including tumors, microbial infection, hyperglycemia and diabetes, and other complications related to stress. Helps to treat prostrate diseases, urinary bladder complications. The fatty acid present are important for proper development and growth of brain and nervous system, helps to relieve inflammation, autoimmune related disorders and even cancer(Dotto.MJ,chacha SJ et al.,).only 2% concentration of pumpkin seed oil can inhibit the growth of *Aeromonas neronii*, *Candida albicans*, *Entericoccus feacalus*, *E. coli*, *Salmonella enteria*, *Typhimurum* and *staphylococcus*. The high magnesium content in the seed helps to ward off the risk of coronary heart attack. It is useful to fight against cancer as it consist high quantity of various carotenoids pigments(Syed QA, Akram M, and Shukat R et al., 2019)

Jackfruit scientifically known as *Artocarpus heterophyllus*. They belong to the family Moraceae. It is considered as a common food in Sri Lanka from ancient period of time. It is also known as a poor man's food as it used as a staple food during shortage of staple crops. Its root started from southwestern part of India. (Ranasinghe R. A. S. N, Maduwanthi S. D. T and Marapana R. A. U. J et al., 2018). They are also eaten as curry dishes to substitute the meat. (Islam S. MD, Begum R, Khalon M, Dey CK et al., 2015). Traditionally the seeds are used many snacks like karasev, Jamun cereal bars milkshake and even chappatis. Not only that the fruit is delicious the seeds also impart many health benefits. The seeds are first roasted and grounded as powder and used to make bread or added in bakery or sweetmeats products. They are good source of protein, fiber, and starch, minerals like N, K, Ca, Mg, S, Zn, Cu etc. Ligands, saponins and isoflavones are some phytonutrients present in the seeds. Many health problems including heart diseases, constipation, can be prevented since the seeds are high in dietary fiber and B-complex vitamins. The antimicrobial activities help to ward off the foodborne diseases. Another superior quality is the high content of magnesium that reduce the risk high blood pressure. This feature also helps to promote the bone health, contribute in the calcium absorption and makes the bone stronger. (Waghmare R, Memon N, Gandhi S, Kumar V, Panghai A et al., 2019)

Traditional storage structure

People in the olden days have different kind of storage structure in order to store grains, seeds, vegetables etc. They help to prevent the food from contamination, spoilage, spillage, pest infestation etc or simply to put for longer shelf life. Indigenous people all across the country practice different storage methods and have been practicing till now. However these are less used in these modern era because of the introduction of different storage machines. In order to keep the grains free from infestation many methods are imparted such as keeping matchbox, washing soaps, neem leaves, husk, salt, csmphor, aak plant leaves are kept along with the grains. In the study conducted in small village of India many storage structures were found

Bukhari : it is made from brickwork or muds or maybe even cement, generally constructed at the ground. The shape is square and the upper parts are overlaid with plastered coats with mud or hay or straw followed by covering it with a sheet preferably polythene. Certain grains like wheat, moong scientifically known as *Vigna radiata* are stored in this for safe storage and to protect against insect pest. Sand, straw, ash, gunny bags may be used to prevent from the attacks of the pest.

Bharola: it is a storage bin with oval in shape. It has opening on top with storage capacity of 40-80 kg.

Kupp: wheat straw are mainly stored in this. It is round shaped structure made up of cotton sticks which are fastened together with the help of a rope. This is then coated with mud which helps to stay glued together and make it more firm. (Dhaliwal RK, Singh G et al., 2010).

Kanaja : this are generally built underground made from bamboo. The bottom is round whereas the opening is wide at the top. It is affixed with a coat made from a mixture of cow dung and mud. This makes it firm and tight and secures the grains or seeds from spillage and filching.

Sanduka or wooden boxes: the purpose is to store small quantities of grains, seeds or pulses. Inside the box, there is a section to store different kinds of foodstuffs. It has a lid with a hole. The purpose of this is for easy accessibility of the grains. It is constructed in such a way that it stays from the moisture and thus kept above the ground level at the distance of 12 inches.

Kothi : it is a room characterized with a door for hoarding paddy, jowar and sorghum. Then there is also a small channel for taking out the grains. (Bashir AA, Mann S, Dixit KA and Tushir S et al., 2016)

Utrani: it is a mud pot built from a burnt clay muds for storing small amount of grains(Nagnur S, Channal G, Channamma N et al., 2004)

Kuthir : it is long pot made from mud, clay soil along with plant fibres. The height is usually 13m. It has a small opening . It comes along with a lid too.

Thombarai: It is Rectangular shaped storage usually constructed above the ground at the height gap of 1m with the help of four supporting wooden structure at the base. It has the capacity to hold 100kg of grains.

Kalangiyam: brickwall which are 20cm thick which are usually rectangular in shaped and made up from stone inside the room. Dimension usually adopted is 2.43×1.82m of length and breath. Height is 2m.(Karthikeyen C, veeraragavathatham D, karpagam D, Firdouse A et al., 2008)

Lakolu: This are seed storing structure which can only constructed in kutha houses, generally frame in the centre of a wall of the room. The depth digged is approximately 30 CM.

Peru: The main material used in this storage structure is magar, this are oval shaped storage bin in which the bamnoo is slit into strips approx. 3cm . This are then woven together and then covered with cow dung and then it is subjected to sunlight.

Peti: this are wooden box with a holding capacity of 300-1200kg . Mainly two types of wood are used cedrella toona Roxb (tuni) and Juglans regia Linn(Akhrot) .

Khach: this are made to store vegetables,dry fruits etc. It is built underground with a roof on the top. This are used in those areas which are very cold (-30°c)to keep the food fresh and safe from the above ground freezing temperature.(Kanwar P and Sharma N et al., 2005)

Conclusion

This article highlighted the notability of traditional food system including the food cooking practices, the cookware used, food storing techniques, preserving style , etc. The valuable knowledge on how to cure or prevent diseases by using traditional plants, spices, crops or herbs etc is quite simple and has little or no adverse side affect. This wisdom has been passed down from generation to generation although only some household are abiding this food system. Most of the people are now shifting to the new global food system in which there is much influence of conventional food causing major health complications. Eating traditional food should be encourage as it has many golden properties to combat many physical and health problems. Aside from this, it also help to boost economy, reduces carbon footprint, helps in coping major world problems like malnutrition, Under nutrition, food security, cardiovascular disease etc. This article provide the collective wisdom of traditional food system. The traditional ways could be further incorporated with the modern technique in order to achieve the optimum health benefits .Also the government should give enough platform to inform about the therapeutic benefits provided by the traditional food and further adopt the healthiest option to combat many country's problems. The government should properly look upon this matter for the citizens betterment and for sustainable food consumption.

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