VIGYAN PRASAR

DREAM 2047

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SPICES
THE UNSUNG
SUPERHEROES

AAHAAR MITR
BACKBONE OF THE
AAHAAR KRANTI
MOVEMENT

A LITTLE ABOUT
MILLETS

AAHAAR KRANTI AWARENESS AND PARTICIPATION

आहार क्रांति
Aahaar Kranti

AAHAAR KRANTI SPECIAL

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MY WORD

NAKUL PARASHAR

Six Fundamentals of Aahaar Kranti

DURING the past couple of months, we have been talking about Aahaar Kranti, a movement that has been started in the country to create awareness in the masses about our diet. This nationwide revolution is aimed at creating awareness amongst all about the importance, urgency, and necessity of correct diet and its benefits. Well, based on the success of two previous food-related revolutions, the green revolution and the white revolution, this one is aimed at diet holistically. The success of these two revolutions was creating self-reliance for production of food grain and milk. These national efforts saved millions of lives at that point in time. Quantitatively, the wheat production grew by 2.5 times during 1967–1972. Similarly, much bigger growth in the production of milk was recorded during 1980–1989. These two movements were successful because there was a concerted effort for achieving improved health and economic growth. Inspired by these two revolutions, Aahaar Kranti was conceived on the basis of six guiding principles.

Ayushmaan, which focuses on increasing life expectancy, curbing malnutrition and emphasizing on related metrics.

Vidwan indicates that diet has a major role to play in improving cognitive and academic performance.

Ayurvedic lays impetus on return to the traditional knowledge on nutrition with Ayurved.

Krishi Pradhan provides the revolution the required attention to its agricultural aspect, means to obtain better yield per acre with value-added horticulture.

Samruddh means growth or to prosper. For a country to prosper, associated business opportunities are very important. This point would target delving deep into domestic and export opportunities for the food processing industry.

Vishwa Guru is to become world leader by becoming the agricultural and developmental role model for food production and its distribution for the developing world.

On April 13 this year when Aahaar Kranti was launched, the team kept the geographical vastness and its diversity in sight while planning its outreach. Communication strategies were planned accordingly for the print, electronic, social, and digital media. I'm glad to share with you that a monthly newsletter about the movement has been regularly reaching its vast audience since April. Short film promos were developed and telecast through various channels available including IndiaScience, the nation's Science OTT Channel, and other social media sites like Facebook, YouTube, and Instagram. India Science Wire, the nation's news feature service that provides ready-to-use features and stories about various S&T content, have been regularly carrying out articles about Aahaar Kranti. Meanwhile, efforts are on to reach out to the bigger portion of the population through radio, where phone-in and other formats like podcasts are being tried out. Several diet charts have been prepared and sent to schools in remote areas of the country for their students. Expecting that we land on the other side of the pandemic in near future, Aahaar Kranti would need *Aahaar Mitr*, volunteers on the ground to interact with the public. Outreach in remote areas would require content duly packaged in formats and languages adaptable to the locals. Target in the first phase would be to reach all the 718 districts of the country.

We are thus glad to bring you Dream 2047's July issue as the Aahaar Kranti special. Hope that you like it and join the movement. Let's reiterate here the Sanskrit phrase, Sarvam Annam, which clearly establishes the universality of food (everything is food).

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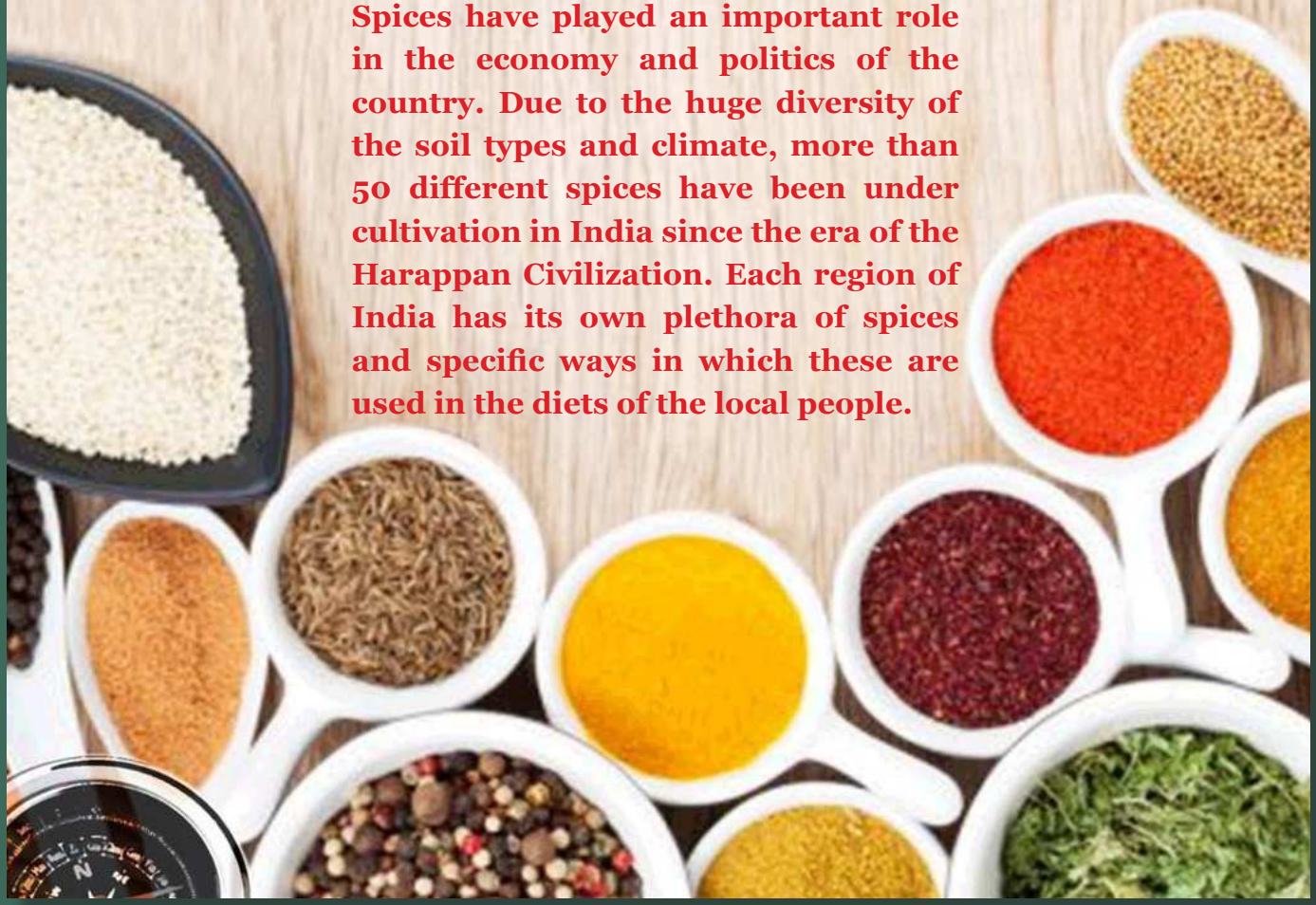
ANJALI A. KULKARNI

SPICES

THE UNSUNG SUPERHEROES

Since ancient times, India has been at the forefront of cultivation, use, and export of a number of spices. Majority of the invasions on the Indian soil were for gaining the control over the lucrative spice trade. Spices have played an important role in the economy and politics of the country. Due to the huge diversity of the soil types and climate, more than 50 different spices have been under cultivation in India since the era of the Harappan Civilization. Each region of India has its own plethora of spices and specific ways in which these are used in the diets of the local people.



Plants that produce these spices use them as their 'chemical weapons'. These help in protecting them from the attacks of microbes, insects, grazing animals etc. When we incorporate these spices in our diet, they protect us from disease causing pathogenic microorganisms like bacteria, fungi, and viruses. Our immunity is improved and we also get benefits of antioxidants. Additionally, spices are rich in vitamins B and C, minerals like Calcium, Iron, Zinc, Selenium, and medicinally important Phytochemicals like Polyphenols, Flavonoids, Stilbenes, Terpenes, Volatile Oils etc.

Spices form an integral part of the Indian diet. They need to be used in optimum amounts. Spices help in enhancing our appetite and aid in digestion. They impart beautiful colour and taste to various dishes and help in keeping the food unspoilt. Because of so many advantages, spices can easily be termed as 'Functional Foods'.

Many spices are used either individually as 'whole spices' or as 'powders' forming part of a mixture of many. In 2015 a research was conducted by IIT Jodhpur scientists, where they showed that the highly flavourful nature of the Indian dishes results from the use of spices which have opposite flavours and properties. Their proportions and combinations were determined by our ancestors and we are still using the same! As opposed to this, the Western cuisines use similar tasting spices in their recipes.

Take the example of Garam Masala, which is used pan-India for preparing many vegetarian and non-vegetarian dishes. As per the region, combinations and quantities of some of these spices may vary. Up to 32 different spices may be used in preparing Garam Masala powder, and we can taste the differences in different cuisines. As the name suggests, all the spices have 'hot' property, which according to the Ayurveda translates into 'enhancers of metabolism'. If you look at the list of gravies in which Garam Masala is generally used, you will realise that all of them are 'heavy foods' and take longer time to digest. Thus, it makes perfect sense to use these 'hot spices' in these dishes!

Generally, the base of the Garam Masala is made of roasted and powdered seeds of coriander and cumin. We have to roast them for a very short time, ensuring that their colour does not darken. With short roasting, flavour molecules with nutty and fruity overtones are released, while molecules having stronger odours remain trapped inside the seeds. Let us explore some of the common spices that we use and their benefits.

Coriander (*Coriandrum sativum* L.) seeds are rich in many antioxidant molecules like vanillic acid, coumaric acid, and ferulic acid. They also contain many fragrant volatile oils. These seeds have anti-microbial and anti-inflammatory properties and thus protect our digestive system.

Cumin (*Cuminum cyminum* L.) seeds are rich in flavourful

compounds such as cuminaldehyde, cinnamaldehyde, pinene, cyamine, etc. These compounds protect our digestive system from microbes and allergies. Recent research has shown that Cumin seeds have antioxidant and anti-diabetic properties too.

Shahi Jeera/Black Cumin (*Elwendia persica* (Boiss.) Pimenov & Kljuykov / (B*unium persicum* (Boiss.)) B.Fedtsch contains cuminaldehyde, the major flavouring compound, identical with the small jeera seeds, but other volatile oils are different. That is why we get a more pungent flavour when we use Shahi Jeera in our masala.

Black Pepper (*Piper nigrum* L.) has always been at the forefront of export since ancient times. It was known as the 'Black Gold' and before the introduction of the green chillies by Portuguese in the 17th century, black pepper was used in the Indian and the European cooking both as a source of 'hot and spicy' taste and as a 'preservative agent'. Black pepper is highly medicinal and is effective in controlling a wide range of diseases including stomach upset and cancer. The flavour of black pepper is due to volatile compounds and alkaloids like piperine, kaempferol, quercetin, rhamnetin, and other Sulphur-containing compounds. They have anti-microbial, anti-diabetic, anti-allergic, and anti-inflammatory properties.

Another interesting property observed since ancient times is use of black pepper as the 'bio-enhancer'. When used with turmeric and many other medicinal plants, it helps in better absorption of the medicinal compounds in our intestine. That's why traditionally a pinch of black pepper powder is added while drinking turmeric-milk.

Clove (*Syzigium aromaticum* L. Merr. & L.M. Perry) consists of the dried floral buds of the clove tree. These buds are rich in aromatic compounds like eugenol, vanillin, kaempferol, etc. They have antioxidant, anti-diabetic, anti-cancer, anti-microbial, and anti-inflammatory properties. Traditionally, clove oil is used to control tooth ache and arthritis.

Cinnamon (*Cinnamomum verum* J. Presl.) is obtained from the bark of the tree commonly grown in South India and Sri Lanka. It is used in both sweet and spicy recipes. The spice contains more than 80 volatile oils such as cinnamaldehyde, eugenol, etc. which are effective against Cancer and PCOD. In addition, it contains many phenols and flavonoids which exhibit antioxidant potential. Modern research has shown presence of insulin-like molecules in Cinnamon. This helps in controlling diabetes and cholesterol. Traditionally, Cinnamon is used to improve digestion and inhibit growth of microbes.

Bay Leaves (*Cinnamomum tamala* (Buch.-Ham.) T.Nees & C.H. Eberm) are dried leaves from a plant related to Cinnamon. It has a strong and pungent smell due to presence of various volatile oils. It has anti-microbial and digestion enhancing properties as well due to the presence of many terpenes, pinene, eugenol, and lauric acid.

Green/Small Cardamom (*Elettaria cardamomum* Maton) is known as the 'Queen of Spices'. The pale green coloured fruit contains multiple black seeds, with sweet and slightly spicy flavour. It contains more amount of mild flavoured terpenyl acetate and less amount of strong flavoured cineol (with smell like Eucalyptus). Traditionally, cardamom seeds are chewed as mouth freshener for the cineol present and also used in tooth pastes and mouth washes due to its anti-microbial properties. Terpenyl acetate improves bile secretion and prevents kidney stones. Some recent researches have shown that it can prevent Cancer and Alzheimer's disease. Cardamom seeds should be powdered just before use; otherwise their delicate smell will be lost quickly during storage.

Black/Large Cardamom (*Amomum subulatum* Roxb.) contains multiple black seeds and has a more pungent and spicy flavour than the green cardamom seeds. It contains less amount of mild flavoured terpenyl acetate and more

amount of strong flavoured cineol. It also contains red-coloured pigments. Its medicinal uses are identical to green cardamom.

Star Anise (*Illicium verum* Hook. f.) comes from a small tree found naturally in China and Vietnam. Its fruit opens in 6-8 star-shaped compartments, when dry. This fruit along with seeds inside is the spice. It tastes good in both vegetarian and non-vegetarian dishes. It has antioxidant, anti-microbial and digestion enhancing properties. A molecule known as 'anethole' increases lactation in new mothers and is also useful to reduce menopause symptoms. The fruits are rich in shikimic acid and proto-catechuic acid. Both of these molecules are used in preparation of a drug known as 'TamiFlu' which is a useful remedy against Influenza and Swine Flu.

Nutmeg (*Myristica fragrans* Houtt.) is the name of the tree whose dried seeds are the nutmegs that we use. Nutmeg contains many volatile oils and terpenes such as borneol, eugenol, etc. It should be powdered just before use, otherwise the fantastic fragrance is lost. A pinch of Nutmeg powder tastes wonderful in a cup of coffee. Nutmeg powder has to be used in small amounts otherwise it may damage the liver. It has another interesting molecule, myristicin, which has shown anti-inflammatory, anti-diabetic, and anti-microbial properties.

Mace is the orange coloured seed covering on the Nutmeg seeds. It has a milder smell than Nutmeg, so it is much preferred in bakery products like cakes and breads. It also imparts a unique orange colour to the dishes.

Stone Flower (*Parmotrema perlatum* (Huds.) M.Choisy) is a lichen that is used to impart an earthy flavour to various dishes, especially rice dishes like Pulao and Biryani. It is rich in many phenols and has antioxidant and anti-microbial properties.

Nagkeshar/Nagchampa (*Mesua ferrea* L.) is a lesser-known spice that comes from the dried fruits of this tree. The fruits are rich in very unique compounds like mesuanic acid, amyrin, various sterols, and alkaloids. There is an urgent need to study this plant and its chemical constituents critically. Traditionally, the fruits are known to have a property of stopping oozing blood.

Poppy seeds (*Papaver somniferum* L.) are seeds obtained from Aphim or Poppy plants. The plant has been known to the humans since the time of the Egyptian civilization. Poppy seeds and the oil extracted from them do not have any narcotic properties. On the other hand, they help to regulate cholesterol levels and blood pressure. The seeds are rich in minerals and Vitamin B. Due to their nutty and oily flavour, poppy seeds can be used in both sweet and spicy dishes. They are used extensively in bakery products too.

Tirphal/Teppal/Chirphal (*Zanthoxylum rhesta* (Roxb.) DC) is used mostly in cuisines of Konkan, Goa, and Karnataka. The tree is related to Oranges but the fruit coverings that are used as the spice have just a faint smell of orange. It has a unique pungent smell and taste. The actual fruit as well as the seeds are discarded. The dried fruit covering is rich in many terpenes and volatile oils and hence needs to be used at the end of cooking, to impart its flavour. At the time of eating, these fruit covering should be removed as they contain few tongue paralyzing molecules. The spice has very good anti-microbial and wormicidal properties. Recent research has shown that the spice can prevent growth of the cholera parasite as well. In Chinese cuisine a closely related spice to this, known as 'Sichuan pepper,' is widely used.

The spices we talked about are just a miniscule portion of the huge repertoire of Indian spices. Many of them are still not well understood and need serious research from different perspectives in order to understand their full potential.

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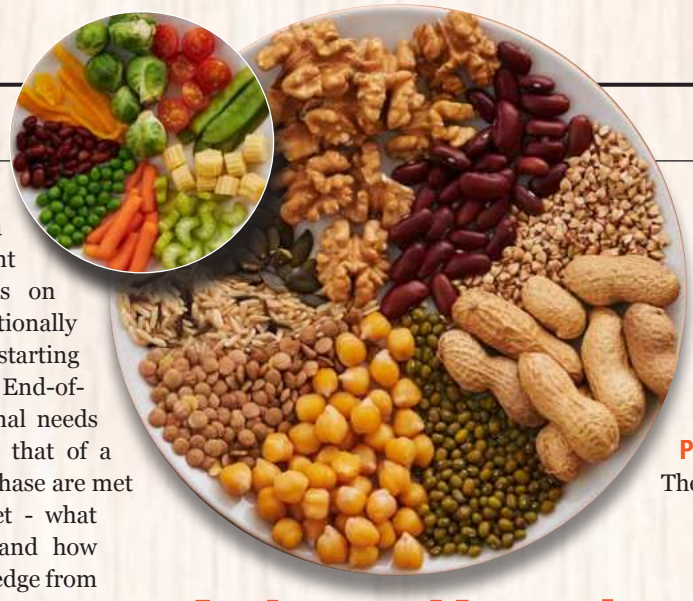
YELLOJI-RAO MIRAJKAR



Aahaar Kranti Awareness and Participation

Aahaar Kranti is a national movement to raise awareness on the importance of a nutritionally balanced diet in our lives starting from the Embryonic till the End-of-life (E-to-E). The nutritional needs of a growing embryo and that of a baby during the lactating phase are met solely by the mother's diet - what she eats, how she eats, and how much she eats. Both knowledge from traditional practices and scientific data from modern equipment and methods suggest that while the mood of the mother would influence the growth of the to-be-born baby, the physical health and the mental wellbeing of the mother, supported by a nutritionally balanced diet, help in delivering a healthy baby with minimal or no complications to either the mother and the baby.

Starting from the embryo, it takes about 21 years for the growth of the brain and about 24 years for its functional maturity. When a child passes the breastfeeding phase close attention needs to be paid for fulfilling the balanced nutritional needs (macronutrients, micro -nutrients, minerals, vitamins and spices) because they are essential for growth of the brain and associated development of cognitive skills (core skills that the brain uses to think, read, learn, remember, reason, and pay attention). With the help of such skills, incoming information is received and moved into the bank of knowledge as “learning” and used later as “performance” every day at school, at work, and in life. Later in life such a mind would be able to develop and inculcate skills such as critical and analytical thinking, complex problem solving, leadership and social influence etc.

To fulfil these needs, an ecosystem should be in place involving mothers, family members, and the society. The society needs to support and strengthen the efforts of the mothers and the family members for fulfilling the needs through making available food items with a balanced nutritional diet. Caveat here is to recognize that locally grown food items are the best compatible items that fulfil the needs.

Dietary risk

Dietary risk is among the fastest growing factors in India, about 4.0% in 2014 to over 10% in 2019, primarily due to cardiovascular, diabetes, and kidney diseases. These numbers are further increasing due to increased rates of cancer, tumour, etc. which are due to increased consumption of ready-to-eat and prepacked foods having chemical preservatives used for enhancing their shelf life. Researchers are finding more and more evidence that suggests cancer is a man-made disease caused due to use of more artificial and synthetic chemicals in our food. As we make transitions to different phases of our life (childhood, teenage, youth, adulthood, and old age) and the longer we adopt a nutritionally balanced diet, the longer we could live and that too being healthy. Otherwise, the onset of diseases due to dietary risks could take place earlier while we are still young; and by the time symptoms become prominent and detectable it would be too late. Lots of research studies have shown direct evidence in this regard. Awareness of a balanced nutritional diet is the first step and practicing it daily is the secret for a healthy long life.

Post Green Revolution

The major crops cultivated in India till 1960s were rice, millets, sorghum, wheat, maize, and barley. The production of rice and millets were higher than wheat, barley, and maize combined. The varieties of millets were probably the highest compared to the rest of the world.

The Harit Kranti **(Green Revolution)** initiated in the 1960s and led by agricultural scientist Dr M.S. Swaminathan increased food production by introducing high-yielding varieties of rice and wheat; and by leveraging agricultural research and technology, per capita net availability of rice increased from 58.0 kg/year in 1951 to 69.3 kg/year in 2017. Similarly, availability of wheat increased from 24.0 kg/year to 70.1 kg/year.

The Shweta Kranti **(White Revolution)**, known as Operation Flood, an initiative by India's National Dairy Development Board (NDDB) launched in 1970, transformed India from a milk-deficient nation into the world’s largest milk producer. By the end of 1985, domestic milk powder production increased from 22,000 tons in the pre-project year to 140,000 tons.

Together both Harit Kranti and Shweta Kranti have alleviated poverty and hunger in India to a large extent. The measures initiated by the government and the use of fertilizers, pesticides, and groundwater resources increased the production of rice, wheat, pulses, and other crops leading to the self-sufficiency of food in the country. However, mismanagement and overuse of chemical fertilizers, pesticide, and lack of crop rotation made the land infertile,

and loss of groundwater became a common occurrence in agricultural areas resulting in increased expenditure on the cultivation of crops.

More significantly, the Green Revolution destroyed the diversified gene pool available; production of millets has gone down and crops that were once consumed in every household became a fodder crop. In tune with that, per capita net availability of other cereal grains such as millets and pulses have also decreased over the years. This has led to the change in the consumption pattern over the years and a shift in focus from the minor cereals and pulses to the major cereals, rice and wheat. A number of traditional rice varieties have become non-existent, and the availability of local (indigenous) rice varieties have decreased to about 7000. Thus, India has lost more than 1 lakh varieties of indigenous rice after the 1970s that took several thousands of years to evolve. This loss of species is mainly due to the focus given to production of subsidized high-yielding hybrid crops and the emphasis on monoculture.

Ayurveda: Hidden secrets for healthy long life

The values and benefits hidden in Ayurveda and the practices that our elders followed for generations in our homes need to be unearthed. Each and every aspect of Bharat including the timeline, pearls of wisdom for peaceful and coordinated existence, and importantly Ayurveda, need to be re-established.

During the first wave of the pandemic, the world's eyes were on India because the severity of its impact was far less compared to many of the economically advanced and developed countries. Researchers around the world speculate and attribute this to the immunity that Indians have developed over the years through their lifestyle and diet that consists of various foods, spices, the cocktails of herbs known as kashaya, kada, etc. Most important part in the Ayurveda diet is the understanding of food items and their compatibility and incompatibility (Viruddha aahaar) which

the western diets lack. The food pyramid that is widely referred to in the world suggests meat and animal products as the primary sources for protein. However, in India more than a third of the population are vegetarian and many of their parents and grandparents have lived long beyond the age of eighties and nineties without consuming any meat products. A considerable section of the population in the world is slowly turning into vegan, which is about 10% now and anticipated to increase in the coming decades. Therefore, there is an urgent need to construct a food pyramid that includes vegetarian options for protein and must list compatible and incompatible foods.

An important piece in the puzzle of awareness is also to motivate the research fraternity across the world and generate data by conducting studies to dispel any myths and doubts on Ayurveda principles and help build confidence in the practice of it in our daily life. Traditional medicine systems embrace the natural defence system of the body and help in curing the root cause of the disease. The combined benefits of Allopathy, Homoeopathy, and Ayurveda could be adopted for a healthier and longer life. We must aspire to have food that would work as the medicine.

The last piece in the puzzle is also to increase awareness in the academic institutions, research organizations (food, processing, nutrition, etc.) and departments and ministries for developing programmes and policies and provide support with budget and resources. These will support the production of food items in India that are required for consumption in the country and reduce the burden of importing them.

That will be the success of Aahaar Kranti.

To spread the message of the need for nutritionally balanced diet and to understand the importance of economically accessible local fruits and vegetables, Global Indian Scientists' and Technocrats' Forum (GIST) and Vijnana Bharati (VIBHA) have come together and launched आहार क्रांती (*Aahaar Kranti*) with the motto: उत्तम आहार उत्तम विचार (*Uttam Aahaar Uttam Vichaar*). Council of Scientific and Industrial Research (CSIR), Pravasi Bharatiya Academic and Science Sampark (PRABHASS), Vigyan Prasar (VP) and many other organizations have joined to participate in this great initiative that is so critical for New India. Many details about the Aahaar Kranti are available at www.aahaarkranti.org.

Aahaar Kranti is meant to renew our focus on nutritionally balanced diets –उत्तम एवं संतुलित आहार (*Uttam aivam santulit aahaar*) replete in locally sourced fruits and vegetables. It is meant to train our teachers, and through them the multitudes of our students, and through them to their families and to the society. While Aahaar Kranti is starting in India, it sets a model for the entire emerging world to follow and establishes India as a *Vishwaguru*.

Aahaar Kranti was launched on the day of Varsh Pratipada or Vaisakhi, 13 April 2021 by Dr Harsh Vardhan, Union Minister for Health and Family Welfare, Science & Technology and Earth Sciences and was joined by various central and state government ministries and government agencies.

We request your help and association as we go along in our mission.

Dr Yelloji-Rao Mirajkar is the Convener, Global Indian Scientists and Technocrats Forum, USA.
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AKSHAY KULKARNI

Aahaar Mitr
Backbone of the Aahaar Kranti movement

Aahaar Kranti literally means Revolution in the food we consume. However, in reality, Aahaar is much more than just the food. It is something that impacts our entire life, from cradle to grave, influencing multiple aspects of it. Even before we are born, good health via good Aahaar of the mother ensures the best possible start in life for infants. Infants and babies need nutritious Aahaar to grow into healthy children who develop strong physical and cognitive abilities to learn ways of life and then into healthy adults to employ those life skills to live a happy and fulfilling lives.

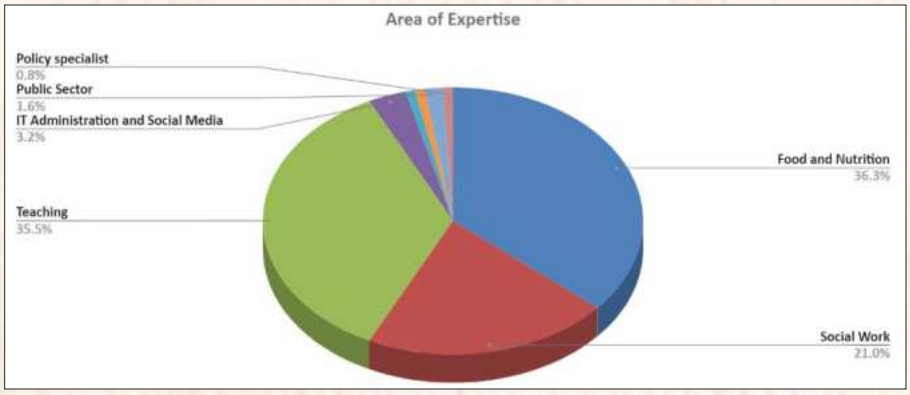
In this way, Aahaar Kranti is the movement that is fundamental to the development of strong and healthy citizens who will build tomorrow's strong and healthy Bharat.

Aahaar Mitr: Aahaar Kranti Champion

We know that any chain is as strong as the links it is made up of. Thus, any movement is built and sustained by the contribution and commitment of the people involved in it. Aahaar Kranti is organized and driven entirely by volunteers. Members of the Global Indian Scientists & Technocrats (GIST) forum started the Aahaar Kranti. GIST includes the global Indian diaspora. When Aahaar Kranti was launched by Dr Harsh Vardhan ji on April 13, this year, many self-motivated individuals answered a call to join the movement and registered themselves as Aahaar Kranti volunteers. These volunteers are our ***Aahaar Mitr***. Every Aahaar Mitr is the 'torch bearer of Aahaar Kranti, taking its message-*Uttam Aahaar, Uttam Vichaar*-to Indian citizens and spreading the mission goals of the movement through diverse activities and community engagement'. They can be citizens of India or people from the global Indian diaspora. They have one thing in common; they all wish to work towards building a strong, healthy nation through the revolution in Aahaar. Till date, we have been joined by more than 1600 Aahaar Mitrs. We are confident that new volunteers will join this movement and will plan and organize events in this year and further years to come as the Aahaar Kranti movement starts reaching diverse social groups in India.

Richness and diversity in expertise

Aahaar Mitr brings expertise, vision, energy, and experience in multiple professions and vocations with them. Top three areas of expertise are Teaching, Social work and Food and Nutrition which is an ideal scenario for having Aahaar Kranti volunteers at the helm of our events and activities.



Experienced teachers are vital to Aahaar Kranti. They are in the best position to deliver the nutrition awareness message to the core target group - Students - and to positively influence them. Experts in Food and Nutrition are essential to create scientifically validated knowledge sharing and training modules for the movement. Aahaar Mitrs with expertise in Social work are critical to effectively and efficiently spread the message of Aahaar Kranti to masses. Within Aahaar Mitr, we also have much needed expertise in IT and social media which are indispensable in the current digitally connected world to effectively communicate with the younger generation.

Impacts of Aahaar Mitr

There are three verticals (Focus Areas) in Aahaar Kranti currently-Nutrition, Education and Agriculture. The Nutrition group focuses on developing expert material on nutrition awareness campaigns. The Education vertical focuses on creating content using various media to effectively distribute the nutrition awareness material to the trainers, educators and to students. The Agriculture group is working on a long-term goal which includes dynamic market mechanisms, digital innovations, and best practices in sustainable farming in line with the goal of production and distribution of nutritious food. Each group has a number of sub-groups working on various topics. There are various activities in which an Aahaar Mitr can participate according to their preference of area of expertise.

For example, an Aahaar Mitr can contact schools in their local area and distribute and present the 'Food as Medicine' charts there. They can engage with those schools further and encourage educators and teachers to participate in the Train The Trainer (TTT) modules' workshops which are designed to educate Aahaar Kranti trainers on nutritious Aahaar choices. Or if they themselves are in teaching, they can help Aahaar Kranti education and Nutrition experts to enhance and constantly customise TTT modules using their experience. Using their local network of engaged

VEERVATI SINGH from Delhi, India is a teacher and mentor in SDMC Primary Pratibha School. She joined Aahaar Kranti as Aahaar Mitr. Veervatiji strongly believes in the need of Aahaar Kranti and the need of children to be at the core of receipt of its message - Uttam Aahaar, Uttam Vichaar. She observes that a teacher is an expert for implementation of creative and innovative teaching strategies according to the needs of individual children. Classical black board method may not work for teaching health and nutrition or create awareness about health among children. It requires interesting, innovative, and creative methods. A teacher is also a role model for his or her students. They can positively influence their students on healthy eating habits.

Veervatiji joined the Education vertical of the Aahaar Kranti. With her immense creativity and enthusiasm, she started developing content and material for her students. She also carried out a few outreach programmes in her local areas. One of the sections of school-going children that is in her focus is the children in the local slums. Considering that the children in slums have different needs and therefore different approaches to food and nutrition, she plans to engage them using low-tech audio and visual aids and more hands-on creative methods such as street plays and Nukkad natak. Her work and vision is inspiring many other Aahaar Mitrs and the members of Aahaar Kranti team.

citizens, they can plan and organise seminars, webinars and workshops with local subject matter experts in nutrition to create awareness using Aahaar Kranti banner and promotion materials.

Researchers and writers can contribute by reviewing vast literature available on Indian nutrition to create a knowledge base and database from research papers to guide and support Aahaar Kranti actions. This knowledge base will form the basis for generation of media and educational content for the movement. Writers can contribute in creating content for Aahaar Kranti magazine, print and social media. Policy experts in Aahaar Mitr groups can help the team to work with Government of India bodies, NGOs and private sector companies and engage them to include Aahaar Kranti awareness in their public health and CSR programmes. Any Aahaar Mitr can contribute to translation of Aahaar Kranti collaterals and training material into their native regional languages and making Aahaar Kranti a truly pan-Indian awareness movement.

Inspiring others to be new Mitr

One thing that any and every Aahaar Mitr can do is to motivate other like-minded people to join Aahaar Kranti movement as Aahaar Mitr. This can be done by proactively talking about the need and importance of Aahaar Kranti for Bharat and sharing Aahaar Kranti initiatives within one's sphere of influence. As always, the best way to inspire and motivate others is to lead by example. Many of our Aahaar Mitrs are doing just that. We will be showcasing the stories of the efforts and activities these Aahaar Mitrs in the Aahaar Kranti newsletters. Aahaar Mitrs lead by example and implement the mission activities in their role as local leaders. Aahaar Kranti team has set themselves the target of 10008 registered and dedicated Aahaar Mitr by the end of the year 2021. We are confident that if every current Mitr motivates one more person to join the movement as a new Aahaar Mitr, each month, we could easily reach the target.

Aahaar Mitr: Orientation and engagement

Every Aahaar Mitr that registers with Aahaar Kranti is invited to join an introductory call. In that call, Aahaar Mitr Coordination Team welcomes them to the movement and takes them through the introduction of Aahaar Kranti and its goals and presents them with Aahaar Mitr engagement plans. The Coordination team invites them to share their ideas on how to make this awareness campaign more effective and widespread. Such calls happen once or twice a week depending on the availability of the volunteers. Once the Aahaar Mitr completes this orientation, they can get associated with various working groups. In the working groups they pursue their ideas to translate them into actions and programmes with the help of Aahaar Kranti team and subject matter experts from GIST and other partnering organisations.

Join us!

Do you wish to make a difference in the livelihood of children in your local area? Are you inclined to do something to help create a healthy and strong society and thus a stronger Bharat for tomorrow? Please take the first step of joining Aahaar Kranti as Aahaar Mitr by registering yourself here.

Register at https://forms.gle/UXndT3xayhWTxN2E9

If you have any questions about Aahaar Kranti or about joining Aahaar Mitr, kindly use the following link to find out more. Please feel free to write us a mail with the subject "Aahaar Mitr".

Email: aahaarmitr@aahaarkranti.org
Website: www.aahaarkranti.org
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SHIKHA SRIVASTAVA

All about Fruits

Fruits are human's oldest food and always have been source of pleasure because of their aroma and flavour. Fruit is always symbolised with success and happiness and perhaps that's why we always say, "Patience is bitter, but its fruit is sweet". In pre-agricultural days, our early ancestors survived on wildly growing fruits and succulent herbage. When human started organized agriculture, they mainly cultivated grain crops and fruit trees around their habitat. It is quite possible that they might have started cultivating fruits before growing the cereals. Grapes, dates, and figs were some of the earliest fruits that were cultivated by them. Archaeological findings in the form of desiccated faeces gave an idea about primitive diet and the gradual change that occurred with the domestication of plants. No important fruit plants were common to both the hemispheres except coconut.

Cultivation of fruits is called pomology. Technically, fruit is the seed bearing portion of the plant and consists of a ripened ovary. When other floral parts such as receptacle, sepals, petals, and stamens are associated with the ovary and results in a fruit, they are known as false fruits. All fruits developing from an inferior ovary are also called false fruits. A false fruit is also formed if the receptacle or some other floral parts become associated with fruit developing from superior ovary. Based on the number of ovaries involved in fruit formation fruits are classified into the following three groups:

1. Simple fruits: Derived from a single ovary of one flower;
2. Aggregate fruits: They develop from numerous ovaries of the same flower; and
3. Multiple fruits: They are produced from the ripened ovaries of several flowers crowded on the same inflorescence.

Fruits vs. vegetables

There is much confusion over the use of the terms fruit and vegetable. Many fruits, such as tomato, squash, cucumbers, corn, and eggplant are popularly called vegetables, although botanically they are ripened ovaries. On the contrary, few vegetables are classed as fruits, for example, Rhubarb, which is used as fruit but it does not meet the botanical definition of a fruit. In everyday usage the term fruit usually refers to matured ovaries that have fragrant aromatic flavour and is naturally sweet or sweetish sour. In spite of so many differences, fruits and vegetables share many common properties. It is very difficult to draw a clear line between them.

Like vegetables, fruits are quite juicy but low in proteins and fats except walnuts, almonds, and avocados. Thus, fruits are inferior in food value with exception of banana and dates as they have carbohydrates that give energy. Fruits are also important sources of digestible and indigestible carbohydrates. The digestible carbohydrates are present largely in the form of sugars and starches, while the indigestible cellulose and pectin provide roughage that is essential for the proper functioning of the alimentary tract. In general, fruits are good sources of minerals and vitamins particularly vitamin A and C. Apart from aforementioned constituents, fruits contain organic acids (for example,

malic acid in apple, citric acid in oranges, and tartaric acid in tamarinds), ethereal substances, pigments, and tannins.

Most of the fruits are extremely perishable once they reach maturity, for instance, Indian gooseberry, mango, lime etc. They are generally consumed fresh to harvest its maximum nutritional benefits. Some fruits such as coconut and citrus have protective rinds and can be easily handled and shipped from one place to another. Unfortunately, many of the delicious fruits such as tropical cherimoya and mangosteen are very delicate and can't be easily shipped making them virtually unknown beyond the area of cultivation.

Climatic adaptability

From horticultural standpoint, fruits are divided into three distinct classes depending on their climatic conditions: temperate, subtropical, and tropical. Temperate fruit crops are deciduous and need cold temperature. Tropical fruit plants are evergreen and very sensitive to low temperatures. The subtropical crops may be either deciduous or evergreen and can withstand light frost. In each category three more subcategories can be seen: tree fruits, small fruits, and nuts.

FRUIT SOURCES OF SOME IMPORTANT COMPONENTS

Vitamin A: The requirement for normal healthy adult is 600 mg per day. The main sources are ripe mangoes, oranges, papaya, figs, banana, watermelon, muskmelon, and peaches.

Vitamin C: The daily requirement of a healthy adult is 60-75 mg. Vitamin C, being water-soluble, is best suited to target free radicals in blood and plasma. The fruit sources of vitamin C are Indian gooseberry, guava, oranges, sweet lime, lemon, raw mangoes, pineapple, and strawberries.

Vitamin E: Being fat soluble Vitamin E is the best antioxidant to protect cell membranes or cell walls. The fruit sources are Kiwi fruit and nuts like almonds, walnuts, cashew, and groundnuts.

Polyphenols: These are plant compounds found largely in fruits. Rich colours such as violet, black, and red in fruits indicate that such fruits are excellent sources of polyphenols. Examples of fruits having high level of polyphenols are blackberries, strawberries, raspberries, blueberries, dark plums, red currants, cranberries, peaches, pomegranates, raisins, apples with skin, purple grapes, etc.

Flavonoids: These are also polyphenolic compounds that are ubiquitous in nature and are categorized based on their chemical structure. Flavonols (such as quercetin, rutin, and hesperidin) are found commonly in fruits and are responsible for their flavours.

Fruits borne on trees are termed as tree fruits, for example, pear, cherry, orange, apple, papaya, and date. Fruits borne on low growing plants like shrubs, lianas, and a few herbs are referred as small fruits; for example, raspberry, cranberry, grape, strawberry, etc. Nuts are characterized by hard shell that is separable from the inner kernel - the meat, like walnut, cashew, and almonds. Many of the fruits like banana, mango, citrus, etc. are indigenous to India while others have been introduced. The majority of our cultivated fruits belong to two families. The most important is the Rosaceae to which many of outstanding fruits of temperate zones belong. The family Rutaceae is second in importance, and single genus citrus contains many of the fruit bearing species.

Fruits and health

Antioxidants found in fruits and vegetables are known to scavenge harmful, pro-inflammatory free oxygen radicals from the human body. This free oxygen radicals cause oxidative damage, leading to ageing, cardiovascular diseases, cancerous growth, and several neurodegenerative disorders like Parkinson's and Alzheimer's. The free radicals can mutate the genetic code of the DNA so that at times it becomes cancerous. Antioxidants found in fruits can help fight off and repair some of the damage that the free radicals cause. The main antioxidants are vitamin A or Retinol, C and E, polyphenols and flavonoids (flavour containing compounds). Fruits like berries are treasure of antioxidants, especially deep purple blueberries and blackberries, cranberries, raspberries, strawberries, black currants, dark coloured plums, etc.

Tree nuts that have highest antioxidant contents are walnuts and chestnuts. Almonds have higher values when consumed along with the skin that contains tannin. Peanuts also have good amounts of antioxidants. It is good to have natural sources of antioxidants instead of taking them as supplements. The more colourful the fruits are, the richer they are in antioxidants.

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SUJATA GOKHALE

A little about Millets

Millets are traditional grains, small and whole round grains which are consumed by both humans and livestock from ancient times in India. In India, millets have been mentioned in some of the oldest Yajurveda texts, including Foxtail millet (priyangava), Black Finger millet (shyaamaka), and Barnyard millet (aanava). So, it can be said that millets were consumed during Indian Bronze Age (4,500BC). They are hardy grains which require low amounts of water and can be grown in arid areas. When 5,000 litres of water is needed to grow one kilogram of rice, millets need just 250-300 litres. They are to a certain extent pest resistant as compared to other grains. They also require a shorter time for cultivation as compared to other grains. Presently, millets are grown in Andhra Pradesh, Rajasthan, Uttar Pradesh, Maharashtra, Gujarat, Karnataka, Odisha, and Punjab.

Disappearing millets

The green revolution and the subsidies that followed made wheat and rice a more profitable option. Also, mechanization made it easier to separate grains such as rice and wheat from the chaff and to package and market. The households that commonly used millet slowly switched to cereals like rice and wheat.

Millets through a new lens

The growing influence of packaged foods, processed foods and a change in diet brought in an epidemic of lifestyle diseases. As more and more people began to delve into the cause of these diseases, it was apparent that lack of natural foods, local and seasonal produce was the reason behind these debilitating lifestyle diseases. The importance of diverse foods like various fruits and vegetables or the grains has been felt by all.

India is one of the largest millet producers of the world but very few in India were actually consuming it. As more and more research was carried out on these ancient grains it became clear as to why our ancestors incorporated millets into their food regime. Nutrient dense millets are known to have plenty of health benefits. Millets are

• High on dietary fibre content and hence promote slow release of blood sugar and prevent diabetes.

• Helpful in preventing gut related-issues such as constipation, colon cancers etc.

Kodo Millet

Pearl Millet

Barnyard Millet

• Good for cardiovascular health.

• High on antioxidants and therefore useful in reducing inflammations and oxidative stress.

• Rich in micronutrients which can be used in our fight against malnutrition and associated diseases.

For example, Pearl millet (Bajra/ Sajjalu) is rich in iron, calcium, fibre and can help overcome Anaemia; Finger millet (Ragi) is calcium rich and known to improve blood sugar levels; Foxtail millet is rich in iron and calcium and has low glycemic index; Sorghum (Jowar) is known to contain micronutrients like iron, calcium, magnesium, phosphorus, potassium, copper, manganese, selenium, thiamin, niacin, and riboflavin; Barnyard Millet contains good amounts of calcium, phosphorus, magnesium, iron, protein, potassium, dietary fibre; Little Millet is nutrient dense and has lower levels of carbohydrates and high fibre content

Foxtail Millet

making them effective in reducing blood sugar in diabetics and for other diseases arising out of high cholesterol such as cardiovascular diseases; Kodo Millet are known to have phytochemicals and antioxidants.

The Centre and various State governments have adopted a mission-mode approach for promoting millets and this has completed a full circle in our farm policy. Till recently, known as coarse cereals, these grains are now been renamed as nutri-cereals. Year 2018 was declared Year of Millets in India.

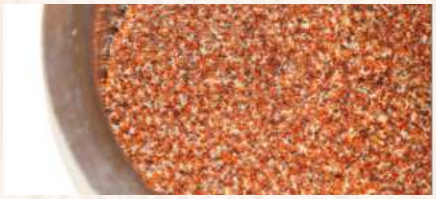
Processing millets

With awareness growing on the benefits of millets more and more households are slowly introducing them in their daily routine. However, millets need to be prepared and consumed appropriately. Introducing millets directly by cooking them may not show the necessary improvement in health. If not prepared properly they may create constipation or nausea post consumption. We must look for traditional ways our ancestors used to cook the millets. Processing of millets at home also used to play important roles. Some of the millets could directly be used once harvested while the others needed pre-processing. There are two types of millets, namely the naked variety like Sorghum, Pearl Millet and Finger Millet and the husked variety like Kodo Millet, Little Millet etc.

Millets are processed to remove their indigestible husks or the seed coats. Mechanical processing includes decortication and milling and sieving. The presence of phytates in millets forms phytic acid that acts as inhibitors of micronutrient absorption. Therefore, in order to make the micronutrient more available these millets need to be processed before consumption. Traditional processes include germination, fermentation, puffing and popping, and soaking and cooking. Mechanical processing is done before the millets are packed and brought to our tables. It is the way we process the millets at home while cooking helps increase the bioavailability of the nutrients in the millet.

Soaking, germination, fermentation and malting

Processes such as soaking, germination, fermentation, and malting result in biochemical modifications and known to reduce the anti-nutrient content in millets. These processes, especially germination, have shown to increase the protein and starch digestibility of the millets such as Pearl Millets and Finger Millets. Soaking and germination have also shown to decrease in phytic acid and increase in the bioavailability of minerals like calcium, iron, zinc etc. Germination and probiotic fermentation lead to increased availability of micronutrients and soluble dietary fibre and also improvement of gut flora and fauna (microbiome).



Germination of Finger millet

Ragi Poori

Millet Snacks

Sorghum Flour Banana Bread

Millet Idli

Millet recipes

Traditional millet recipes usually took into consideration the way the millets were processed at homes. One such example is the Finger Millet or Ragi. In many households Ragi is still used as weaning formula for infants (6 months to a year old). This is basically made by soaking them overnight, sprouting them, before processing them to extract the milk to make the infant formula. This process ensured that the formula is devoid of the anti-nutrients and also suitable for digestion by the infant. Some of us may have tasted Ragi malt in our childhood. Traditional dishes included the flattened bread like roti or bhakri in many parts of the country or as dosa, idli, upma and other varied dishes in the southern states.

Millets can be used to substitute any dishes that use grains like rice or wheat. Today, millets are making their appearances on market shelves in various forms. Sprouted Finger Millet flour and puffed, popped, and flattened forms of a variety of millets are readily available. With this increased availability of easy-to-use forms it can now be included in our daily diet. Gluten free breads, variety of snacks, cookies, ladoos etc. are some ways to make millet an interesting part of our daily food regime.

Marvellous rillets

Millets can have myriad benefits such as improving the agrarian economy, while withstanding drought conditions. It has proved to be beneficial in combating various lifestyle diseases and could help overcome the issue of malnutrition in India. Therefore, more thought must be given on including these marvellous grains into our daily diet. However, these grains need to be processed well before consumption to enhance its nutrient bioavailability, digestibility, and decre ase its anti-nutrient contents such as phytic acids.

The author is an engineering professional with passion for nutrition. She is currently working as a volunteer with GIST on Aahaar Kranti and is associated with Science India Forum-Qatar.

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N.K. PRASANNA AND S.K. VARSHNEY

BLACK FUNGUS
Another unforeseeable threat for patients with COVID-19

The second wave of COVID-19 in India shook its healthcare infrastructure. Physicians reported high number of cases of Mucormycosis, popularly known as black fungus. It is a rare fungal infection caused by a group of molds called mucromycetes. It mostly targets those with underlying health issues or people who take medicine that lowers their body's ability to fight germ and sickness. It affects the sinuses or the lungs after inhaling fungal spores from the air. It can also occur on a cut on the skin or burn. An individual may experience headache, facial pain, nasal congestion, loss of vision or pain in the eyes, swelling in cheeks and eyes, and black crusts in the nose. It could be fatal if it goes untreated for a long time. If it appears on the nose, one should be aware that it is not limited to that area but may extend to the eyes, lungs and brain. If the infection reaches the lungs or the brain, it could cause paralysis, pneumonia, seizures and even death.

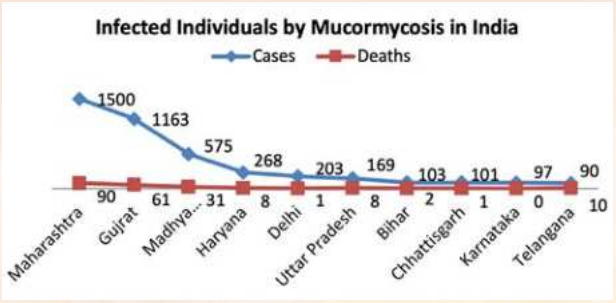
In recent past, it has been more in news because of its high occurrence in patients who have been treated for COVID-19, primarily the diabetics who have been treated with corticosteroids as part of their regular therapy. Mucosal mycosis, which is becoming more prevalent, is a condition linked to COVID-19.

What is Mucormycosis?

Mucormycosis is a fungal infection that causes tissue necrosis and infarction (tissue death due to inadequate blood supply). Though it is an extremely uncommon fungus infection, it is thought to be 70 times more common in India than the rest of the world. Mucor mould, which may be found in soil, plants, manure, and rotting fruits and vegetables causes the disease. It is everywhere: in soil and air and even in healthy people's noses and snot. The most common risk factor is diabetes mellitus, cancer and solid-organ transplantation. Often, patients with post-pulmonary tuberculosis and chronic renal illness are at an increased risk of developing the disease.

Fungus of concern: Yellow and white fungus

Black fungus is not the only type that is affecting humans right now but also their variants including white and yellow fungus. Experts believe that yellow fungus can be more harmful than black and white fungus since it affects lungs and other body organs. The white fungus can be fatal, affecting the brain, respiratory system, and digestive tract. The main cause of yellow fungus infection is poor hygiene.



Symptoms: Need not to be overlooked

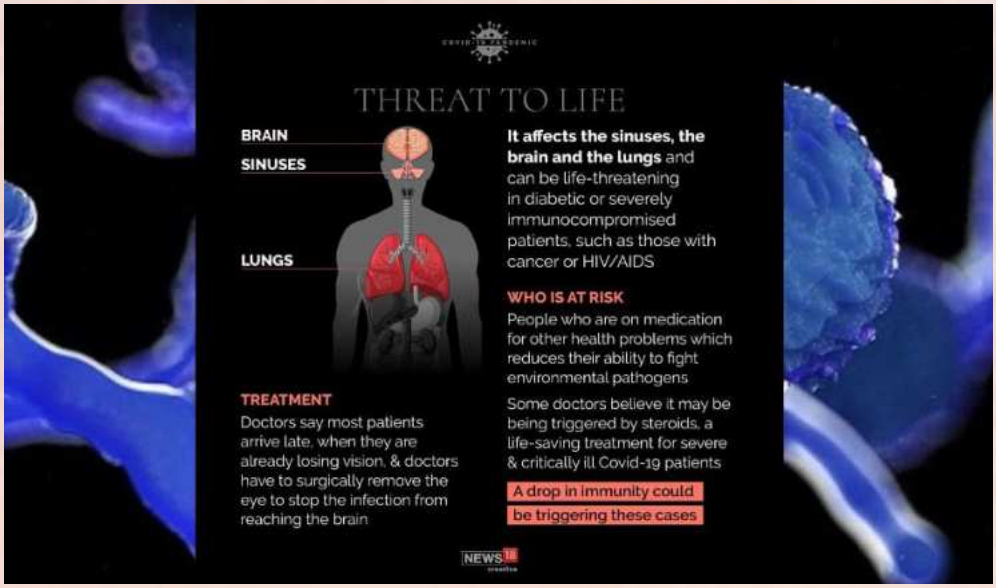
Mucormycosis, which affects the nose, mouth, eyes, and brain, has a wide range of symptoms. A bad headache, nasal congestion, runny nose, and dark and black mucus might be noted in the early stages. Our nose has three turbines that keep the moisture in the air we breathe at a healthy level. These, along with the nasal passages, become black after myocardial infarction.

Ocular problems like pain behind the eyes, puffiness of the eyelids, protrusion of the brows, impaired vision, redness of the skin surrounding the eyes, and subsequent blackening are all symptoms of this condition. The infection spreads from the nose and mouth into the air chambers near the brain. Our nose has eight air chambers. There are two air chambers each at the forehead (frontal), ethmoid (between the eyes), maxillary (behind the cheek), and near the brain (sphenoid). The infection can spread from the nose and mouth to the air chambers at the brain. The cavernous sinus runs along the walls of these rooms. It has 3, 4, and 6 skull nerves that regulate the movement of eye muscles. When these are harmed by the infection it causes drooping eyelids, stoppage of ovarian movement, Iris enlargement, as well as persistence and hazy vision.

Numbness and discomfort in the cheeks might be caused by an infection of the air chambers surrounding the nose. Furthermore, if a fungal infection begins in the air sacs of the cheeks, the jaw and teeth hardly move leading to toothache.

Who are at risk?

COVID-19 patients, diabetics, those having chronic renal diseases and those who have been using steroids for a long time are more likely to get infected with black fungus. People with a weakened immune system are more likely to become infected with white fungus. Mould-infested settings make people more susceptible to contracting this



fungal ailment. Those with weakened immunity should stay vigilant and call a doctor if they observe any symptoms. Cancer patients, individuals with leukaemia, individuals receiving chemotherapy, people having organ transplants, individuals on econazole for fungal infections, and those on immunosuppressive medicines can be affected.

Intravenous steroids such as dexamethasone and methylprednisolone should be administered to people who are receiving oxygen from the outside and those who are on a ventilator. However, consuming too much medicine without consulting a doctor could increase the risk. Self-medication for COVID-19 based on messages circulating on social media platform causes more harm.

Diagnosis

Nasal endoscopy and CT scan of the nose and air chambers can identify the extent of the illness. If the infection has gone to the brain, cavernous sinus, or eye, an MRI can be used to identify it. Medication alone may not be as successful in treating myocardial infarction. Surgery may be necessary prior to starting medications. After surgery, the medication should be maintained. Otherwise, the fungus will likely resurface. Endoscopic sinus surgery removes blackened tissue and pus from the nose and airways, as well as pus from the nasal cavity. If the cheekbone and a portion of the palate are also damaged, the cheekbone and a portion of the palate may need to be removed. If the infection progresses to the eye, some patients may need to have their eyes removed. Otherwise, the infection may move to the brain via the optic nerve and become more severe.

Things to be avoided

Inappropriate use of steroids, including incorrect doses, timing, and self-medication, leads to this disease directly or indirectly. Hyperglycaemia must be controlled quickly, sanitation must be maintained, and steroids must be used sparingly, only after being prescribed by doctor. If treatment is delayed, the illness spreads to both sides of the air chambers. If it spreads to the brain, it can cause paralysis. Some have fallen into a coma and are on the verge of passing away in a matter of days. As a result, it is critical to detect the infection as soon as possible. This has the potential to save both eyesight and lives. If you get a strong headache and/or discomfort in cheek or eye, see a doctor right away.

Many patients have been consuming medicines including steroids without consulting a doctor. Steroids within the first five days after corona onset are not recommended. If needed, it could be taken after 5 days in appropriate dose under the guidance of a physician. Otherwise, it may raise the risk of diabetes, hypertension, gastritis, hydrocephalus, and TB. Non-diabetics are also developing new diabetes as a result of steroid use. Increased level of ferritin in the blood helps the fungus to attach to the tissue more easily. Mucormycosis affects a variety of organs. Therefore, dedicated medical experts and doctors such as ENT surgeon, neurologist, neurosurgeon, ophthalmologist, dentist, face maxillary surgeon, oculoplastic surgeon, dermatologist, public health personnel, intensive care specialist and others should work together collectively. Due to delays in seeking medical attention and diagnosing the disease and challenges in managing the advanced stage of infection mucormycosis-related mortality is extremely high in India.

Preventative measures

To prevent infection, appropriate dosage of steroids is used as prescribed by the physician. For patients on oxygen use clean water in the humidifier and regularly replace the humidifier and hoses. Cleanliness should be maintained in the environment. Mouth has to be rinsed twice a day with Betadine mouthwash. The fungus could be prevented from entering the nose and throat by wearing a mask. Anti-infective pills can be used as a precautionary measure by patients who are on ventilator for more than two weeks; those who have taken oxygen and steroids; uncontrolled diabetic conditions; and those who are immuno-compromised. Persons with bacterial sinusitis are also infected with COVID-19, which can cause mucormycosis. It is recommended that patients who are exposed to oxygen, rinse their nose periodically with saline solution.

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PRAFUL KRISHNA

Bringing about the Aahaar Kranti

Aahaar Kranti is an ambitious initiative, conceived at a time when centuries seem to coexist in India. On one hand the nation has embraced the digital era, on the other efforts are on to increase the digital penetration in the remotest corner of the country. While we have had prior successes in nationwide movements, like the Harit Kranti and Shwet Kranti, if Aahaar Kranti is to reach the 31.5 crore school children of India, we must adopt an innovative approach reliant on individual contributions and supportive partnerships.

Aahaar Kranti needs all of us to focus our energies on conceiving the most innovative questions like–What is the best way to scale our message to schools and Aanganwadis? How do we work with our partners in the Government and Private Sector? How do we wrap our messages in an engaging and instructional medium? How do we take our content across languages or across various delivery formats (including digital media)? How can better nutritional practices translate to better agricultural practices?

A true revolution comes about only when people come together. It is driven by the personal aspirations of individuals. A true revolution will be seeded once you, the reader, sign up for it.

The most important contribution you can make to Aahaar Kranti is to follow its tenets in your life. It's very simple- Eat a balanced diet including spices; eat colourful fruits and vegetables; and avoid fast food, packaged foods, and foods with preservatives. This by itself is the biggest contribution you can make to Aahaar Kranti, and for your own health, your own cognitive development, and your immunity.

Second, please spread this message in your own sphere of influence: your family, your friends, and your community. Please let us know if we can help in this–our शिक्षा team has developed world class "Train the Trainer" modules for this very purpose. If you are associated with any school, institute, or organization, then you can help us by taking this message far and wide. Our सहयोग team is always looking for partners that can provide exponential leverage to our initiatives. For example, you are reading this because of our cherished partnership with Vigyan Prasar.

Third, please come and join us as an Aahaar Kranti volunteer or आहार मित्र. As of today, we have five strategic initiatives:

1. शिक्षा (Education): Please help us create world-class educational repositories for knowledge related to nutrition in various languages, various mediums, and various formats.
2. सहयोग (Partnership): Please help us foment strategic partnership with other academic, governmental, or private bodies in India that can help us multiply our efforts.
3. संयोजन (Coordination): Please help us roll out our message on the ground in a systematic way, working with our partners and other grass-root organizations.
4. संपर्क (Connection): Please help us spread our message out over digital/ social media.
5. मैत्री (Friendship/ Volunteering): Please help us find more gems like yourself.

If none of what is in this article appeals to you, you must still join us. These are the initiatives only as of today. As we bring more partners to the fold and evolve ourselves these initiatives will keep changing, and we need your inputs in that too.

You must come together with us if we are to bring about Aahaar Kranti.

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