

BANEGA SWASTH INDIA

National Nutrition Month: Can India Piggy Bank On Food Fortification To Achieve The Goal Of POSHAN Abhiyaan?

National Nutrition Month 2020: Food fortification is considered one of the best ways to add micronutrients in staple food items without changing its taste, aroma or texture

[Malnutrition](#), [National Nutrition Month](#), [Swasth India](#)

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Nutrition Month: One of the targets of the POSHAN Abhiyaan is to bring down stunting (low height for age) of the children in the age group of 0-6 years from 38.4 per cent to 25 per cent by the year 2022

HIGHLIGHTS

- Food fortification is the process of adding vital micronutrients in food
- In India, fortification of iodization of salt was mandated in 1962
- Fortified food is not the only way to eradicate malnutrition: Experts

New Delhi: In 2016, the Akshaya Patra Foundation along with the Government of Karnataka took up the initiative to improve the nutritional quality of meals served under mid-day meal through [food fortification](#). Fortification involves the addition of micronutrients (vitamins and minerals) to foods irrespective of whether or not the nutrients were originally present in the food. At the start of the project, a baseline study covering around 2,000 students was conducted which revealed that 16.9 per cent of children were afflicted with stunting (low height for age) and 28.6 per cent were found to be underweight. Under the project, mid-day meals prepared with fortified rice (having additional minerals and vitamins) and other staples were given to children. The increase in intake of micronutrients through fortified food is reflected as after almost four years, the project has noted about 9 per cent reduction in underweight cases, 3.8 per cent decrease in stunting and 3.5 per cent in wasting (low weight for height).

Under the aegis of the Prime Minister's Overarching Scheme for Holistic Nutrition or POSHAN Abhiyaan, India aims to bring down the levels of [various forms of malnutrition](#) – a medical condition caused due to an unbalanced diet. One of the targets of the POSHAN Abhiyaan is to bring down stunting (low height for age) of the children in the age group of 0-6 years from 38.4 per cent to 25 per cent by the year 2022.

In August 2019, while talking about health and nutrition, Prime Minister Narendra Modi had said,

Health and nutrition are the priority areas of our government. Health remains one of the key areas in our quest of building an inclusive and new India. An integral part of our vision is achieving [‘kuposhan mukt bharat’ \(malnutrition-free India\) by 2022](#).

To tackle the crisis of malnutrition, the Food Safety and Standards Authority of India (FSSAI) has been promoting food fortification. But can India rely on food fortification to [eradicate malnutrition](#) and achieve the goal of malnutrition free India?

Food Fortification And Its Impact On Malnutrition

A human body needs both macro nutrients (carbohydrates, proteins, fats) and micro nutrients (vitamins and minerals). Deficiencies, excesses or imbalance in a person's intake of one or more vital nutrients can cause malnutrition. Worldwide including in India, the three most common forms of micronutrient deficiencies are iron, vitamin A and iodine.

Micronutrient deficiency disorders (MNDs) have many adverse effects on human health, not all of which are clinically evident. Even moderate levels of deficiency can have serious detrimental effects on human functioning along with profound implications for economic development and productivity, particularly in terms of potentially huge public health costs and the loss of human capital formation, explains Bishow Parajuli, Country Director, World Food Programme.

According to the health experts, adequate [nutrition](#) is a key for the full brain development of young children, most of which take place within the first two years of birth. Adolescence girls, pregnant women and lactating mothers also need nutrition for their growth as a healthy woman can produce healthy babies.

There are three ways to consume micro nutrients – eating food rich in essential micro nutrients; supplements like calcium pills, multi vitamin tablets; fortified food. Fortification simply means adding essential nutrients in staples like wheat flour, rice, oil, salt, and others, without changing the taste, aroma or texture.

India has been promoting fortified food since the 50s; fortification of Vanaspati was mandated in 1953 and iodization of salt was mandated in 1962. The mandatory 'Universal Salt Iodization' has addressed the major public health challenge of iodine deficiency disorders especially goiter in the country. Elaborating more on the role of food fortification in providing essential micro nutrients, Bishow Parajuli said,

Fortification generally aims to supply micronutrients in amounts that approximate to those provided by a good, well-balanced diet. Consequently, fortified staple foods will contain natural or near natural levels of micronutrients, which may not necessarily be the case with supplements. It is a cost-effective intervention and it does not require any behaviour change in existing food patterns on part of the consumer.

But is food fortification the only way to eradicate malnutrition? Dr Rajiv Tandon, Health Director, RTI, International India believes that fortified food can help but it's not the only way out. He said,

Food fortification is no magic wand. Imagine a situation where macro nutrients are not available to you then even if you do ensure fortification it will not help. For nutrition security, we need a complete nutritious diet, on a regular basis, to everybody across different social economic strata.

In its guidelines, FSSAI (Food Safety and Standards Authority of India) has also titled food fortification as a 'complementary strategy' rather than a 'replacement of balanced, diversified diets' to address malnutrition. Dietary diversification is indeed the best choice but in the current scenario it may be difficult to achieve by everyone, therefore, a more universal approach is required. As explained by FSSAI, fortification only bridges the gap between the need and actual consumption of required micronutrients through food.

Dr Arun Gupta, Paediatrician and Central Coordinator of Breastfeeding Promotion Network of India (BPNI), is of the opinion that food fortification is just one small part of the process. He said it's not a solution to the nutrition deficit and food and added,

Exclusive breastfeeding is inadequate during the first 6 months. Only a small percentage of children under two receive optimal feeding. About 10-20 percent babies get minimum acceptable diet or diverse foods as part of complementary feeding. I wonder how fortifications will bridge this gap.

According to Bishow Parajuli, food fortification will work better and faster if implemented along with other strategies such as dietary diversification, supplementation, social behaviour changes communication and public health measures. He added,

For food fortification to address anaemia and micronutrient deficiencies at a population level, it is important that fortified foods are consumed in adequate amounts over long periods of time by large sections of the community.

How Is The Government Promoting Food Fortification And What More Can Be Done?

In 2018, FSSAI introduced a new F+ label for fortified foods and mandated it for the brands to print the logo. Mr Parajuli believes that the mandate has helped with popularising the use of fortified commodities within a restricted section of the society and there is more that needs to be done.

The Food Safety and Standards (Fortification of Foods) Regulations, 2018 provides an opportunity for voluntary fortification. With my experience in Bangladesh and other countries, I would suggest a mandatory fortification of staple foods along with strong food safety, regulatory enforcement, monitoring and penalty measures along with very robust quality assurance and quality control measures. The monitoring at district and below would be the key, suggested Basanta Kar.

In 2019, the government of India approved the Centrally Sponsored Pilot Scheme on 'Fortification of Rice and its Distribution under Public Distribution System'. As part of the scheme, rice will be fortified with Iron, Folic Acid and Vitamin B-12. The Pilot Scheme has been approved for a period of three year beginning 2019-20 and will focus on 15 districts, preferably one district per State during the initial phase of implementation.

Fortified rice will also be distributed under ICDS (Integrated Child Development Services) as well as the mid-day meal scheme in the selected districts. Further, both the Ministry of Women and Child Development and Education have issued guidelines to the states for use of fortified oil, wheat flour, rice and double-fortified salt (having iron and iodine) in the preparation of the hot cooked meals provided under the ICDS and the Mid-day meal scheme.

Both Dr Arun Gupta and Mr Parajuli are of the opinion that going forward, the government needs to move out of the campaign and issuance of guidelines mode to working on the ground. Mr Parajuli also suggested convergence of all stakeholders to strategise and push for fortified food both in the open market as well as the food-based safety nets. This has been noted to be an important success factor in other countries such as Costa Rica. He added,

It is time for the government to mainstream all fortified foods in its food based safety nets and provide an assured market to the private sector. This will enable the private sector to make the necessary investment needed for fortification.

While addressing nutrition, there are two kinds of interventions – nutrition specific and nutrition sensitive. While nutrition specific interventions involve giving rebate on ration, breastfeeding, complementary feeding, among others, nutrition sensitive covers all other factors responsible for a well nutritious child like safe drinking water, safe sanitation, and others. Talking about how nutrition sensitive interventions can help in eradicating the problem of malnutrition, Basanta Kumar Kar, a recipient of the Global Nutrition Leadership Award, said,

Addressing malnutrition requires an investment in Atmanirbhar POSHAN (nutritional self-reliance). This is an important lesson from the novel COVID-19. Each district should be self-sufficient in the production of minimum of six food groups necessary for children and women who are hardest hit. Food fortification, supplementation, dietary diversity,

management of excess salt, sugar and fat in the diet, infection management, deworming medication, proper waste management and good WASH practices are necessary to address malnutrition and micronutrient deficiency. It requires investment in the first one thousand days of life as the first window of opportunity and adolescent girls as a second window of opportunity.

Has The Role Of Food Fortification Become Even More Important During COVID-19 Pandemic?

The Coronavirus pandemic has affected various government schemes aimed at providing nutritious food to children and pregnant and lactating women. The pandemic has led to loss of livelihoods which has further impacted the purchasing power, to add to the disruption, production and supply chain has been disrupted, and as per Mr Parajuli there has been dietary diversity-shift to more shelf-stable and pre-packaged foods. Considering this, the role of food fortification has become important more than ever.

All of the food-based safety nets provide rice and/or wheat flour as the main staples, which could be fortified and distributed to limit the impact of reduced dietary diversity, suggested Mr Parajuli.

Contrary to this, Dr Arun Gupta believes that the focus needs to be on food based approaches than their fortification. Once that is achieved, government can evaluate public health deficiency following which decision on fortification can be taken.

Governments can fight during Corona by adding additional funds and food for the poor, said Dr Gupta.

Mr Basanta Kar predicts coronavirus pandemic leading to nutrition vulnerability specifically among the women and children and migrants who are hardest hit due to disruption of services and supplies. To address the same, he reiterated the idea of nutritional self-reliance and added,

The local food system has to be accountable, inclusive and responsible. The people and specifically women and children should be able to access safe and nutritious diets so as to prevent food borne diseases, co-morbidity and co-infection. Nutrition should be a household name and there has to be Jan Andolan (people's movement) with women leading at the front.