



drishti

Adverse Impacts of Food Fortification

 drishtias.com/printpdf/adverse-impacts-of-food-fortification

Why in News

Recently, a group of scientists and activists have warned the **Food Safety and Standards Authority of India (FSSAI)** of the adverse impacts of **Food Fortification** on health and livelihoods.

- It is a **pushback against the Centre's plan to mandatorily fortify rice and edible oils** with vitamins and minerals.
- In order to fight chronic **anaemia** and undernutrition, the government is making plans to distribute fortified rice through the **Integrated Child Development Services** and **Mid Day Meal Schemes** across the country from the year 2021, with special focus on **Aspirational districts**.

FOOD FORTIFICATION

- Process of adding micronutrients to food to provide extra nutrients i.e. vitamins and minerals (including trace elements)
- It was identified as the strategy by WHO and FAO for decreasing the incidence of nutrient deficiencies at the global level.
- The most common fortified foods are:
 - Cereals and cereal based products
 - Milk and Milk products.
 - Fats and oils.
 - Accessory food items.
 - Tea and other beverages.
 - Infant formulas.



Key Points

- **Inconclusive Evidence:**

- Evidence supporting fortification is inconclusive and certainly **not adequate before major national policies are rolled out.**
- Many of the **studies** which FSSAI relies on to promote fortification are **sponsored by food companies who would benefit from** it, leading to conflicts of interest.

- **Hypervitaminosis:**

Recent studies published in the medical journal Lancet and in the American Journal of Clinical Nutrition which show that both **anaemia and Vitamin A deficiencies are overdiagnosed**, meaning that mandatory fortification could lead to hypervitaminosis.

Hypervitaminosis is a condition of abnormally high storage levels of vitamins, which can lead to various symptoms such as **over excitement, irritability, or even toxicity.**

- **Toxicity:**
 - One major problem with **chemical fortification of foods is that nutrients don't work in isolation** but need each other for optimal absorption. Undernourishment in India is caused by monotonous cereal-based diets with low consumption of vegetables and animal protein.
 - Adding one or two synthetic chemical vitamins and minerals will not solve the larger problem, and in undernourished populations can lead to toxicity.
 - A 2010 study that showed iron **fortification causing gut inflammation and pathogenic gut microbiota profile** in undernourished children.
- **Cartelisation:**
 - Mandatory fortification would **harm the vast informal economy of Indian farmers and food processors** including local oil and rice mills, and instead benefit a small group of multinational corporations who will have sway over a Rs.3,000 crore market.
 - Just **five corporations have derived most of the benefits of global fortification trends** and these companies have historically engaged in cartelising behaviour leading to price hikes.
 - The **European Union has been forced to fine these companies** for such behaviour.
- **Decrease Value of Natural Food:**

Dietary diversity was a healthier and more cost-effective way to fight malnutrition. Once iron-fortified rice is sold as the remedy to anaemia, the value and the choice of naturally iron-rich foods like millets, varieties of green leafy vegetables, flesh foods, liver, to name a few, will have been suppressed by a policy of silence.

Food Fortification

- **About:**
 - According to the **World Health Organisation (WHO)**, food fortification is defined as the practice of **deliberately increasing the content of essential micronutrients so as to improve the nutritional quality of the food** supply and to provide a public health benefit with minimal risk to health.
 - It can be noted that **biofortification** differs from conventional food fortification in that **biofortification aims to increase nutrient levels in crops during plant growth** rather than through manual means during processing of the crops.

- **Types:**
 - **Targeted:**

Food fortification can be done for foods widely consumed by the general population (mass fortification), **to fortify foods designed for specific population** subgroups, such as complementary foods for young children or rations for displaced populations.
 - **Market-Driven:**

To **allow food manufacturers to voluntarily** fortify foods available in the marketplace (market-driven fortification).
- **Procedure:**

The extent to which a national or regional food supply is fortified varies considerably. The **concentration of just one micronutrient might be increased** in a single foodstuff (e.g. the iodization of salt), or, at the other end of the scale, there might **be a whole range of food–micronutrient combinations**.
- **Government Interventions:**
 - **FSSAI Regulations:**

In October 2016, FSSAI operationalized the **Food Safety and Standards (Fortification of Foods) Regulations, 2016** for fortifying staples namely Wheat Flour and Rice (with Iron, Vitamin B12 and Folic Acid), Milk and Edible Oil (with Vitamins A and D) and Double Fortified Salt (with Iodine and Iron) to reduce the high burden of micronutrient malnutrition in India.
 - **Nutritional Strategy:**

India's **National Nutritional strategy, 2017**, had listed food fortification as one of the interventions to address anaemia, vitamin A and iodine deficiencies apart from supplementation and dietary diversification.
 - **Milk Fortification Project:**

The **Milk Fortification Project** was launched by the **National Dairy Development Board (NDDB)** in collaboration with the World Bank and Tata Trusts, as a pilot project in 2017.

Food Safety and Standards Authority of India (FSSAI)

- **About:**
 - FSSAI is an autonomous statutory body **established under the Food Safety and Standards Act, 2006 (FSS Act)**.
 - It has its **headquarter in Delhi** and its administrative **Ministry is Ministry of Health & Family Welfare**.

- **Functions:**

- Framing of **regulations to lay down the standards and guidelines** of food safety.
- Granting FSSAI **food safety license and certification** for food businesses.
- Laying down **procedure and guidelines** for laboratories in food businesses.
- To **provide suggestions to the government** in framing the policies.
- To **collect data regarding contaminants in foods products, identification of emerging risks** and introduction of a rapid alert system.
- Creating an **information network across the country** about food safety.

Source: TH