Nutrition, food and global health

1. Decade of action on nutrition

The United Nations (UN) announced 2016–2025 as a Decade of Action on Nutrition. This Decade is expected to increase visibility of nutrition action, strengthen multi-sectoral collaboration, create synergies and measure progress towards sustainable food systems and food and nutrition security for all. The UN Food Systems Summit on September 23, set the stage for global food systems transformation to achieve the Sustainable Development Goals by 2030. The Food and Agriculture Organization declared its Foundation Day, October 16, as World Food Day to promote worldwide awareness and action. The participants of United Nations Climate Change Conference that was recently organized at Glasgow were served local vegetable-based seasonal food from Scotland. These international efforts underscore the importance of good food and nutrition for global health.

The Government of India has taken several affirmative actions in support of the UN declarations. Prime Minister Modi has announced Poshan Abhiyaan (Nutrition Initiative) as a flagship program involving 17 Ministries to improve nutritional outcomes and holistic nutrition. The Food Safety and Standards Authority of India (FSSAI) has launched ‘The Eat Right Movement’ involving all stakeholders to improve public health and combat negative nutritional trends to fight lifestyle diseases. The Ministry of Ayush (MoA) is actively participating in the Poshan Abhiyaan with composite nutritional guidelines and has organized nationwide awareness campaign, webinars, video and plantation drives.

2. Ayurveda for better nutrition

The theme for Ayurveda Day celebrated on November 2, 2021 was ‘Ayurveda for Nutrition’. The Consulate General of India, Shanghai and Center for Innovation in Science and Social Action organized a conference on the same theme. The National Institute of Ayurveda, Jaipur; All India Institute of Ayurveda, New Delhi and several other institutions celebrated Dhanwantari Jayanti to highlight the role of Ayurveda in nutrition and good food practices. Ayurveda advocates diet and nutrition specific to an individual’s phenotypic constitution, which is nutrigenomics and personalized nutrition approach. Ayurveda concepts of Dravya, Gun, Rasa, Prakriti and Agni as regulators of metabolism are also unique.

Ayurveda has a branch dedicated for health of plant kingdom called Vriksha Ayurveda. It includes strategies to enhance nutritional properties, seed preservation, pretreatment, nutrition of seedlings, plant maintenance, post-harvest processing and storage. Vriksha Ayurveda could be one of the most ancient agricultural and forestry practices based on principles of nature and organic farming. Traditional varieties of food and literature related to cooking practices offer a rich treasure, for healthy food. The conservation and use of local varieties can protect biodiversity and also improve health status of communities.

Ayurvedic concepts of Swasthavritta including ahara, vihar and nidra form a basis of health promotion. The relationships between individual prakriti types as kapha, vata and pitta; and effects of food on mental states such as satvik, rajasic and tamasic, and advice regarding daily and seasonal variations need to be included in health food advice. The approach of integrating modern food chemistry and traditional knowledge of Dravyaguna Vidhyana can provide deep insights and enrich holistic understanding of food and nutrition and benefit the global community.

3. Good food practices

The WHO proclaims that a healthy diet helps to protect against malnutrition and prevents several diseases including diabetes, heart disease, stroke and cancer. Reducing intake of saturated fats, sugar, salt and increasing consumption of fresh fruits, vegetables and other natural foods is highly recommended. Unhealthy diet and lack of physical activity are leading global risks to health. The WHO General Assembly has strongly recommended reduction of salt/sodium intake and elimination of industrially-produced trans-fats from the food supply as priority actions.

The value of natural foods, their diversity, affordability and cultural relevance remain undisputable. It is worrying to witness rapidly emerging business trends in nutraceuticals, food fortification, and supplementation, which are converting natural foods into packages of tablets, capsules, granules and drinks.

4. Health supplements

Various deficiency diseases and disorders including protein energy malnutrition, anemia, scurvy, rickets, beriberi, hypocalcemia, osteomalacia, pellagra, xerophthalmia and so on can be treated by evidence-based food supplementation. Micronutrient deficiencies are a major public health concern in many low- and middle-income countries. Various categories of health foods and supplements including nutraceuticals, functional foods, dietary, and herbal products are being pushed into market. Sometimes specific types of nutrition supplementation may be beneficial; however, they cannot and should not replace the natural foods.

Development of nutraceuticals requires much less investment, has less stringent regulatory controls, and higher profitability than the highly regulated pharmaceutical drug market. Many local and multinational companies are involved in manufacturing...
nutraceutical products and health supplements. In several instances, the evidence emerging from systematic reviews and meta-analysis of food supplement interventions does not fully guarantee the various health-benefit claims made for them, be they antioxidants, vitamins, minerals, probiotics, fibers, or phytochemicals. The market-driven approach of pushing them without sufficient evidence is under criticism. There is a consensus among many credible, professional associations that it is better to consume natural food, than to depend on health supplements.

5. Processing and fortification

While food processing is necessary in many situations, increased use of ultra-processed foods (UPF) is another emerging new threat. Recent research indicates that the proportion of energy intake from consumption of UPF in the United States has significantly increased over last two decades [1].

The prevalence of metabolic syndrome including obesity, high blood pressure, and diabetes, has risen globally. The overuse of UPF is expected to become a serious public health concern in the near future.

Fortification of food is considered to be the simpler way for mass supply of the micronutrients. These may be useful as immediate interventional measures. The success of iodized salt has opened doors to many new ideas such as folic acid-fortified cereals, and vitamin D-fortified dairy foods. Fortification programs for iron, zinc, vitamin A, and vitamin B12 are also emerging. These are becoming attractive business opportunities and it is worrying to witness increasing attempts to fortify staple cereals, edible oils, condiments, and other food products without adequate studies on their bio-assimilation. The new emerging fortification industry may pose environmental and health challenges especially for low- and middle-income countries.

6. Food crises

Climate change, demographic transitions, flood and famine, discrimination, terrorism, conflicts and wars are considered to be responsible factors for compromised food security and sovereignty. The hunger map of the United Nations World Food Program estimates that as of now about 957 million people living in 93 countries may not have enough food to eat. The anthropocentric, totalitarian, materialistic, acquisitive bodies are becoming more organized, powerful and influential. Industrialization and intensification of agriculture involving monopolies, mechanizing, chemicalizing coupled with genetically modified organisms are posing new opportunities, challenges and threats. This situation has only intensified the challenges to environment and humanity largely influencing agriculture and healthcare sectors. As a result, small farmers, cottage industries and interdependent village economies are facing existential crisis.

7. Food sovereignty

Food sovereignty allows the communities to have control over the production, distribution and consumption of food. The movement for food sovereignty allows the workers, farmers, consumers and even the activists to come together and fight for a cause. The principle of food sovereignty, seed saving, and soil health becomes extremely important in current situation. The future of food, health and humanity may be seen as a civilization dialogue between the mechanical mind and ecological mind [2]. The mechanical mind is depicted by business approaches driven by commerce, patents, profits, monopoly markets on one side; and the ecological mind depicted by humane approaches aligned to people, culture, natural biodiversity, integrative health on the other. This may be a right step to move in the direction towards enhancing sovereignty in an inclusive, sustainable and humane manner and promote good food practices.

In the current challenging environment, integration of Ayurveda into, nutrition science can provide deeper insights and enrich holistic understanding about food, nutrition and diet for health, wellness and eventually benefit the global community.

References

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