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Inside...

Poultry produce - A Potential tool to Eradicate Malnutrition and Anaemia in India

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Highlight Points

- In India, 38 % of children under age five years are stunted, 21% are wasted, 36% are underweight and 59% of children are suffering from some degree of anaemia.
- About 53% of women and 23 % of men of age 15-49 years in India are anaemic and about 23% of women of age 15-49 years are thinner than normal.
- Chicken and eggs are cheapest and good sources of protein and other vital nutrients, which are important to maintain a healthy weight, help in anaemic condition and also recommended by experts to incorporate into our diets.
- Eggs have biological value of 93.79 % higher than milk (84.5 %) and fish (76 %) and this act as growth promoter in children and maintain good health to all.

Human resource is the most important factor for development of any country. A better nutritional status of women and children is an out most important among the population base of any country and that determines the productivity potential of human capital. Malnourished mother can never produce a healthy baby and a malnourished baby for longer time cannot be a healthy adult. Therefore, in the present article, it has been highlighted the nutritional and anaemic status of children and adult men & women in the country and role of poultry to mitigate the situation.

According to National Family Health Survey (2015-16), about 38 % of children under age five years are stunted (too short for their age) in India. This is a sign of chronic undernutrition. About 21% children under age five years are wasted (too thin for their height), which is a sign of acute undernutrition, while 36%of children under age five years are underweight. About 2% of children are overweight. Stunting is higher among children in rural areas (41%) than urban areas (31%). The prevalence of undernutrition is almost the same among girls and boys. The prevalence of stunting in children under age of five years is the highest in Bihar (48%), Uttar Pradesh (46%), Jharkhand (45%), and Meghalaya (44%), and lowest in Kerala (20%) and Goa (20%). Jharkhand has the highest levels of underweight (48%) and wasting (29%).

Anaemia is a condition that is characterized by low levels of hemoglobin in the blood. Iron is a key constituent of haemoglobin, and iron deficiency is estimated to be responsible for half of all anaemia globally. It is a serious concern for children, because, it can impair cognitive development, stunt growth and increase morbidity from infectious diseases. Overall, 59% of children in India had some degree of anaemia (haemoglobin levels below 11.0 g/dl) during the study period. About 28% of children had mild anaemia, 29% had moderate anaemia, and 2% had severe anaemia. The prevalence of anaemia among children at the age of 6-59 months is highest in Haryana (72%), followed by Jharkhand (70%) and Madhya Pradesh (69%). The states with the lowest prevalence of anaemia among children are Mizoram (19%), Manipur (24%) and Nagaland (26%).

About 23% of women of age 15-49 years are thinner than normal. The proportion of thin women is higher in rural areas (27%) than in urban areas (16%) and the reverse is observed for the prevalence of overweight or obesity (31% in urban areas and 15% in rural areas). The highest proportion of thin women is observed in Jharkhand (32%), followed by Bihar (31%). The highest proportion of overweight or obese women is observed in Goa (34%), several southern states (33% in Andhra Pradesh, 32% in Kerala, and 31% in Tamil Nadu and all of the union territories except Dadra & Nagar Have-

li).The proportion of thin men is higher in rural areas (23%) than in urban areas (16%), whereas 27 % of men are overweight or obese in urban areas, compared with 14% in rural areas.

About 53% of women and 23 % of men of age 15-49 years in India are anaemic. The overall prevalence of anaemia is consistently high, at more than 50%, in almost all of the subgroups of women. Women in urban areas are slightly less likely to be anaemic (51%) than those in rural areas (54%). The prevalence of anaemia among women is more than 60% or more in Jharkhand, Haryana, West Bengal, Bihar, and Andhra Pradesh, and the prevalence is less than one-third in Mizoram (25%), Manipur (26%), Nagaland (28%), and Goa (31%). The prevalence of anaemia is also very high in the union territories of Dadra & Nagar Haveli (80%), Chandigarh (76%), and the Andaman & Nicobar Islands (66%).

Chicken meat and eggs are consumed across the caste, religions, customs with any taboo in the country. In India, people consume about 90 million broilers and 22.5 million eggs per week. Chicken and eggs are good sources of protein and other important nutrients, which are essential for body building. Eating a high-protein diet makes it easier to maintain a healthy weight by supporting the body's efforts to build muscle, active metabolism, and increasing feelings of satiety. Eggs are one of the cheapest sources of animal protein, which contains almost all essential amino acids and providing 18 vitamins and minerals.

The 100g boiled egg contains 74 g water, 12.1 g protein, 11.2 g fat and other vital nutrients. Eggs have biological value of 93.79 % higher than milk (84.5 %) and fish (76 %).The nutritionally balanced and high biological value of the egg act as growth promoter in children. These amino acids serve as a building blocks to repair and rebuild the body. Further, consumption of egg protein supports immune system and promotes healing. Eggs may play a useful role in the diets of those at risk of low-nutrient intakes such as the elderly, pregnant women and children.

In addition, chicken is a good source of protein, vitamins and other nutrients that are vital for metabolism and immune system. Relatively low sales prices of chicken meat, in comparison to other meat, increased its consumption among all section of the people. The 100 g of chicken meat contains 75g water, 22.8 g protein, 0.9g fat and 1.2 g ash. Chicken is a good source of iron and zinc, which are crucial for the production of healthy red blood cells. Now a days, poultry produce is available throughout the country, but price varies depending on supply and demand ratio.

Kadaknath, which is a native breed of chicken, is a good source of iron along with other nutrients, which helps in hemoglobin formation. As per the recommendation of Indian Council of Medical Research (ICMR) every person should consume 180 eggs/year and chicken meat 11kg/year. Presently, per capita egg and chicken consumption is 86and about 4.1 kg, respectively.

A study on household consumption pattern was conducted by National Sample Survey Office (NSSO, 2014) and result showed that only 29.2% of rural and 37.6% of urban households were consuming eggs; and 21.7% rural and 27% urban households were consuming chicken, in a week. However, the report also says that per-capita consumption (in 30 days) of chicken was 178 gm in rural and 239 gm in urban area whereas, the per-capita consumption of eggs was only 1.94 – in rural and 3.18 – in urban area. As par data available, 71% of Indian population take non-vegetarian diet. So, these population should be encouraged to take poultry products in their diet. Diet not only depends on an individual's food choices, but also on the availability and affordability of healthy foods and sociocultural factors. Chicken meat and eggs are highly nutritious and recommended by experts to incorporate into our diets. Therefore, in many of the Indian states eggs were offered to school going children during the mid-day meal to increase the nutritional status.

However, there is need to further promote poultry produce consumption in those states where malnutrition and anaemia is more prevalent specially, Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh and some parts of North-Eastern states. In these sates per capita consumption of poultry produces are comparatively lower, which may be due to lower availability. To increase the availability, we can promote backyard poultry production with improved birds for regular home consumption as well as sustainable source of income in rural area. In urban area, the price of chicken produce is comparatively lower, we can promote chicken produce consumption among them by creating awareness and other schemes.

Consumer demand of specific nutrient enriched chicken produce is high among the elite class population. Therefore, nutrient fortified (designer food products) many are available in the market like Selenium-enriched eggs, Iron-enriched, Zinc-enriched eggs etc. Processed and packed chicken produce such as Chicken and Egg White Protein Powder are also available in many flavors, this protein powder can be used to make delicious food and incorporated in many food items. These food items can also be promoted among consumers to get better nutritive items in their diet to eradicate the menace of malnutrition.

Conclusion:

Poultry produce (eggs and chicken meat) are high quality protein food items, easily available and affordable across the regions, religion, caste and creed etc. Eggs and chicken meat are rich source of protein and other vital nutrients like vitamins and minerals. If people consume poultry products regularly, the issue of malnutrition and anaemia, which are prevalent in many parts of the country can be reduced and even completely eradicated. The Govt agencies should create awareness and popularize the poultry products to reach out the last mile i.e., rural and tribal masses of India.