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Review Article

Egg- Its Various Facets & Homoeopathy

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Abstract: Rising food prices are the real headaches for the politicians. Poultry feeds getting costlier, the raging bird flu in the current & past made the egg reach out of the masses especially the lower socio-economic group in 2025. The article traverses through the initiation of eggs for the masses in India. Thereafter discusses the threats like the bird flu. Moving on, it touches upon the use & metabolism of eggs in the human body. Further, it relates egg production to climate change. As the National Rural Livelihood Mission focuses on rearing hens for eggs, the article touches upon the positive aspects of eggs to influence rural economy. In the final section, the article deals with the therapeutic uses of eggs through the homoeopathic system of medicine. Egg is an important source of homoeopathic materia medica. Hence, the article not only focuses on the nutrition, economy & livelihood aspects related to eggs but also the homoeopathic therapeutics related to eggs.

Keyword: Egg, TMAO, HCES, Homoeopathy, NECC, SPF.

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INTRODUCTION

Besides pulses, the only economical source of protein is the egg for masses in India. The poultry industry in India will always be obliged to Dr. Banda Vasudeva Rao (1935-1996) who is known as the Father of Indian poultry. He was awarded the Padmashri in 1990 & founded the Venketeswara Hatcheries (VH) group in 1971. He also established the National Egg Coordination Committee (NECC) & was also inducted into the International Poultry Hall of Fame (IPHF) in 2004. He also initiated the concept of Specific Pathogen Free (SPF) eggs [1].

Currently in 2025, the price of eggs has been on an increasing trend. In the end of 2024, there was severe maize shortage especially in southern India. Rising demand, increasing feed costs, significant egg exports to Bangladesh & Malayasia were the reasons for the cost escalation. The situation posed a significant challenge to consumers especially the low income families that depend on eggs as a low cost protein source [2].

Threat

The biggest threat to eggs is the bird flu. This is a virulent strain that attacks the birds. The flu is caused by an Avian Influenza Virus (AIV). It belongs to the family Orthomyxoviridae & the species is Influenza A.

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Influenza A causes flu in humans. The threat is maximum from the virulent species that decimate bird populations & have the capacity to infect humans & other species also. In fact, the influenza epidemics began in the past with an avian flu virus in 1918, 1957, 1968 & 2009 which was an epidemic of Swine Flu. Migratory birds help spread the disease but it is the densely packed poultry farms that are most vulnerable points of spread. As a nation, the trio strategy of surveillance, early response & transparency can contain the spread in India thus making the availability, accessibility & affordability of eggs for the masses throughout the year [3].

Body Needs

Eggs are considered the perfect protein because of the maximum bio availability. Eggs contain all the essential amino acids & are easy to digest. A large hen egg has 6.3 mg of protein out of which 3.6 gm is in the white & 2.7 gm in the yolk. The yolk is rich in cholesterol but has multi vitamins. Egg helps in weight loss also as it modulates hunger hormone levels. It is also a great source of 'Choline' which is a precursor of the neurotransmitter 'Acetylcholine' that is critical for brain & nerve function. The ability to produce 'Choline' by the body decreases with age thus making eggs a potential source [4-7].

Excess of egg consumption is linked to inflammation. In the human body, gut bacteria convert choline into TriMethylAmine (TMA). Thereafter, TMA is oxidized to TMA-N- Oxide (TMAO). High TMAO is an inflammatory marker related to gut health & is also associated with high stroke risk & cardiovascular death. Hence, the gut biome makeup & the rate at which the liver oxidizes TMA decide the risk for each individual. Vegetarians & especially vegans have lower levels of TMAO for the same amount of ingested choline. It is the fibre in the diet of vegetarians that decreases the TMAO levels in vegetarians & vegans [4-7].

Most Indians get their protein needs from cereals. Because of climate change, the ambient carbon dioxide increases in the atmosphere there by decreasing the protein content of cereals. The situations make the eggs a potential source for protein. In fact, eggs per gram of protein are far cheaper than chicken, beef, pea protein & rice [4-7].

The demand for eggs led to overuse of antibiotics in poultry farms as the farms were areas of infection. The antibiotics leach from the hens to eggs & than to human beings. On one hand, the industry helps to make eggs affordable to human beings, there is cruelty to hens on the other hand & an altered gut micro biome in human beings. From the period of 1960s to 2024, the production of eggs increased six times because of the demand & patronization of medical profession. The popular slogan of NECC in India in Hindi 'Sunday ho ya Monday, Roz khao Ande'(whether it is Sunday or Monday, eat eggs everyday). This slogan also helped in the surging demand. So from 1990s to 2024, the demand for eggs in India rose by five times [8].

Climate change

The production of eggs emits less CO_2 & uses less water & land than any other animal protein. Compared to that, pulses & rice use less land, emit less CO_2 for the same amount of protein as eggs, these two are water jugglers. Grain & Soy meal are the main poultry feeds. The carbon foot print here is associated with deforestation to cultivate the poultry feed. If done wisely, human beings can lessen the carbon print attributed to poultry feed [9].

Works on poultry feed have led to use of Black Soldier Fly Larvae (BFSL) on vegetable scraps to feed hens. Replacing Soy in poultry feed with BFSL will drastically reduce the carbon print related to eggs. Further, use of such waste will help reduce generation of methane from landfills [10].

As mentioned above, hens & eggs have the potential to improve the rural economy. Eggs laid by backyard hens are a good source of protein at low cost as these hens are reared on household scraps. Further, the birds can be bred & sold thus helping the house hold economy. At a large scale, Bird Flu free certifications of eggs will boost our export of eggs to United States, Sri Lanka & Oman [11].

Consumption

As per the Household Consumer Expenditure Survey (HCES), 2022-2023, spending on food & the items consumed supports the Engel curve hypothesis. The hypothesis is named after the 19th century German statistician Ernst Engel. It broadly states that as incomes grow, households spend a smaller proportion on food. Even within food, they would buy more of superior & less of inferior foods. HCES also showed that cereals, sugar & pulses are inferior while milk, egg, fish, meat, fruits, vegetables, beverages & processed foods are superior. This helps us to understand the production & demand of eggs in India [12].

Homoeopathic Egg

Egg is an important source of homoeopathic medicines. From the roasted egg cells, the drug 'Calcarea Ovi Testae' is prepared. The drug 'Ovi Gallinae Pellicula' is prepared from the egg shell membrane. From the yolk, the drug 'Lecithin' is prepared [13-17].

All these three medications have multiple uses as homoeopathic medicines. Through the National List of Essential Medicines (NLEM) & the National List of Essential AYUSH Medicines (NLEAM), masses can use homoeopathy for their health benefits. The therapeutic system has already proved its efficacy during the COVID 19 pandemic [18-20].

Summing Up

Protein needs of the body are complete only when the body receives the proteins from animal, plant & dairy sources. Among the animal protein, it is the egg which has the maximum bio availability of protein for the body.

Barring the vegetarians & vegans, large sections of population not only at the national level but at the global level consume eggs. Egg is not only a diet but also impacts economy, livelihood, nutrition, culture as it is a cuisine in many festivals & an important ingredient in culinary field.

The dimensions of egg do not conclude here. It is important in therapeutics also as evident in the homoeopathic system of medicine. Life begins with cell & egg being a cell impacts life in multiple ways.

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