

# Poultry For Better Health

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Bangladesh is an overpopulated country, development is increasing in all sectors including health. Average life span is now 72.8 years. But there is a great challenge to maintain food security. Though food crisis is not so much, but still under nutrition is a great burden for some people. Main challenge is to overcome this and our effort is to ensure the affordability of balanced diet. Internationally, standard daily calorie intake should be 2,828 Cal, whereas in Bangladesh it is about 2,486 Cal. This shortage is due to dietary deficiency of 12%.

Out of total energy intake, 70% comes from cereals like rice, wheat (standard 55%) and 5.6% from animal source like egg, meat, fish (standard 15%). Thus balanced nutrition is not maintained as 70% of our energy and 50% of our protein comes from cereals. Thus, malnutrition is mostly due to protein deficiency of animal origin. Ideally 15 to 25% of total energy intake per day should be obtained from protein sources.

Interesting fact is human body cannot store protein and if excess protein is taken, it is excreted from body. So to maintain daily requirement, protein should be taken at every major meal. Dietary intake of protein should be 0.75 gm/kg for adult women, 0.84 gm/kg for adult men, 1 gm/kg for pregnant and breastfeeding women, also for men and women over 70 years. Thus daily requirement of a 60 kg adult male is 45 gm protein. So he should eat average 15 gm protein at 3 meals daily.

Protein is necessary for (1) strengthening and building of muscles and tissues (2) development of brain (3) important source of energy (4) production of important enzymes and hormones (5) forms antibodies that help to prevent infection, illness and disease.

Protein deficiency results in wasting and shrinkage of muscle, anaemia, slow growth, loss with lusterless hair, oedema, white and brittle nail, prone to repeated infection etc.

Sources of protein are fish, egg, pulse, meat, like chicken, beef, mutton, pork and milk. Chicken and egg are the main product of poultry industry, which are the cheapest among all animal protein sources. Meats are of two types, such as white meat (chicken) and red meat (beef, mutton, pork, buffalo etc).

- **Benefits of white meat (chicken):** (1) Low in total fat and cholesterol, thus no risk of hypertension, stroke, heart disease (2) People of any age can consume it (3) Chicken soup can be made for ill people (4) Different types of food items can be made from chicken (fried chicken, roast, broast, sausage, nuggets etc.) (5) Easily digestible, rich in vitamins and minerals. (6) Reduces risk of colon cancer.
- **Risk of red meat:** (1) Contains high fat and cholesterol. So, more risk of stroke, high BP, heart disease. (2) Causes weight gain. (3) Not suitable for consumption in all age. (4) Risk factor for colon cancer.

Many people are confused about which meat is best, whether domestic (country) or broiler (farm) chicken. Some prefer domestic or country chicken and some prefer broiler or farm chicken. In reality, nutrients and calorie value are same in both cases. However, farm chicken is more fleshy, relatively cheaper.

Another poultry product and a good source of protein is egg. There is an old debate, "Which came first on earth, chicken or egg?" However, my concern is "What is better for us, egg white or egg yolk or both?".

Main component of egg white is protein, whereas egg yolk is nutritious, contains less protein but all other essential nutrients like polyunsaturated fat and high calorie. Nutrition value of a 50 gm whole egg is 6.17 gm of protein, 0.505 gm of carbohydrate, 4.98 gm of fat and 0.46 gm of vitamins and minerals. It also contains 13 essential vitamins & minerals, anti-oxidants, 70 calories in a large egg. So, entire egg gives complete balanced nutrition.

- **Egg for everybody:** It is natural, affordable and a versatile source of high quality protein, can be taken in any age including pregnancy.
- **Fat and cholesterol in egg:** Major type of fat in an egg is unsaturated and is regarded to be the best. As eggs are low in saturated fat, their effect on blood cholesterol is insignificant. Eggs are also rich in omega-3 fatty acid, which helps to maintain brain function, especially in pregnancy and infants. It also helps to maintain normal vision and reduces TG Level.

Our daily cholesterol requirement is 300 mg while one egg contribute only 200 mg. HDL is good cholesterol and LDL is bad cholesterol. People who have higher HDL, have a lower risk of heart disease, stroke and peripheral vascular disease. Whereas high level of LDL is linked to increased risk of above disease. Eating egg is the easiest way to increase HDL. Research proved that, 2 eggs per day for 6 weeks increase HDL level by 10%. In fact, regular consumption of eggs, even two per day may improve lipid profile.

#### **Egg is essential for all:**

- **Pregnancy:** Choline is important for foetal growth and brain development during pregnancy. So, eggs are essential during this period.
- **Infant and children:** Eggs are nutrient dense and very useful for infants and toddlers. A single egg provides half of the daily proteins for a 2 to 3 year old children.
- **Aging:** Lutein, zeaxanthin and carotinoid reduce risk of eye problem like cataract and macular degeneration. So, helpful in improving vision, also preventing blindness. Vitamin K helps to produce constituent of blood, prevents osteoporosis, so reduces fracture of bones, reduces aortic calcification, also improves memory. Egg contains anti-oxidant, HDL, omega -3 fatty acid, all of which prevents brain atrophy, Alzheimer's disease and stroke.

### **Some superstitions:**

**Q:** Does eating egg increase cholesterol? Should we avoid egg in heart disease, high BP and stroke ?

**A:** Egg doesn't increase cholesterol, rather increase HDL and omega-3, which help to reduce the risk of high BP, heart disease and stroke.

**Q:** Can elderly eat egg?

**A:** Egg can be taken in elderly people.

**Q:** Can any patient with diabetes, high blood pressure, ischemic heart disease, high cholesterol etc, eat eggs?

**A:** Yes, in these conditions, eggs can be taken.

**Q:** Some people think, only egg white should be taken, not egg yolk. Even some doctors also advice to avoid either whole egg or egg yolk especially those with heart disease or stroke or high BP or high cholesterol. Is it true?

**A:** Whole egg including white and yolk can be taken without any hesitation.

**Q:** Does consuming egg cause weight gain ?

**A:** If an egg is taken at breakfast, it fulfils satiety, stomach remains full, thus less desire of taking other foods. So, no weight gain, rather helps to reduce weight.

**Q:** Can egg yolk be taken by obese and diabetic patient?

**A:** Yes, egg yolk supplies lots of calories, thus helps to control carbohydrate intake. So, does not cause any problem in obese patient. Also, to some extent, it prevents type-2 diabetes.

**Q:** Can more than one egg be taken daily?

**A:** One egg can be taken daily, even two is advisable in special cases like body builder, day laborer, pregnancy or any serious illness.

**Q:** Which egg is preferable, duck's, hen's, koel's or white or red egg?

**A:** All are of same food value. There is no difference.

**Q:** Which form is better for eating, boiled, poach or fry?

**A:** Whatever satisfies your tongue.

To conclude, chicken and egg are perfect, cheap, easily available and complete food, irrespective of age, sex and religion. It can fulfill protein demand for any ages. Moreover, from religious point of view, pork is forbidden for Muslims and beef for Hindus. But eating chicken and egg are beyond the religious debate.