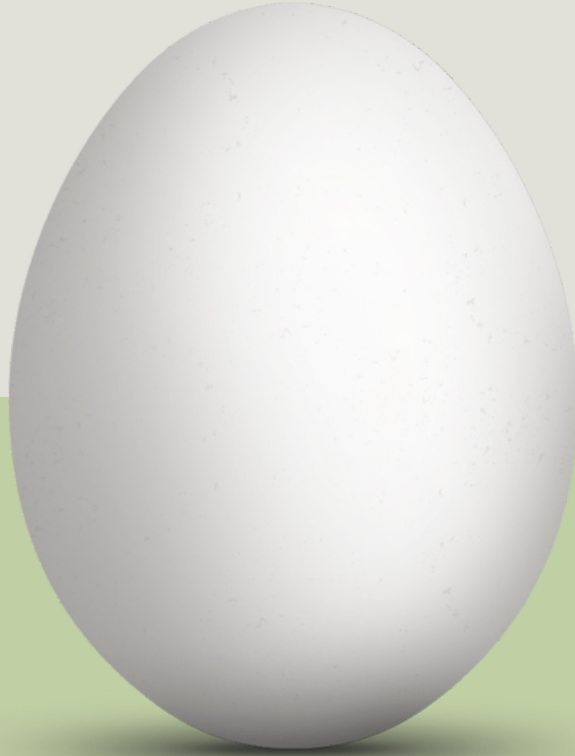




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Our nutrition, our right

Factsheet #1

EGGS



Note Compiled by

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INTRODUCTION

In Karnataka the struggle for eggs in the mid day meal scheme has been consistent and over a long period of time by a group of activists, nutritionists, paediatricians, doctors and marginalised communities who are part of Ahara Namma Hakku.

Eggs have numerous nutrition and health benefits. More importantly, eggs are seen as foods which make kids strong, help restore health when kids are sick and a treat for special days. The problem is not it's wide acceptance, it is with a total lack of scientific knowledge among decision makers, mixed with half baked knowledge as they look for substitutes...there is NO SUBSTITUTE for eggs.

Sadly, we have to deal with several misconceptions and lack of accurate information among the vegetarians about eggs. Here are some 'eggciting' facts about eggs.

Nutrient Content of Eggs

Eggs contain some of the most important nutrients like proteins, Vitamin A, Folic acid and Vitamin B12.

Eggs are easily digestible and they not only contain many of the nutrients and proteins that we need, but these are also better absorbed by the body (bioavailable).

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Table: Key Nutrients in Eggs

(Calculation for children 4-6 years of around 18 kg)

Nutrient	Recommended Dietary Allowance (RDA)	Amount derived from one Egg (60 gms)	Percentage of RDA obtained from one Egg
Protein	20 gm/day	8 gm	40%
Vitamin B12	1 µg/day	1.1 µg	110%
Vitamin A	400 µg/day	252 µg	63%
Folate	100 µg/day	47 µg	47%

Source: Gopalan C, BV Rama Sastri and SC Balasubramanian, 1989, Nutritive value of Indian Foods, National Institute of Nutrition, ICMR, Hyderabad Reprint 2016

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Egg protein is called the reference protein!! This means egg protein is considered to be a standard protein, with ideal amino acid composition against which all other protein foods are measured.

Eggs contain all nine essential amino acids, or the building blocks of protein.

Of the recommended 20 gm/day for children in the age group 4-6 years, eggs provide almost 40% (8 gm) of very good quality proteins.

So, giving children one egg a day in the anganwadi or school makes nutritional sense.

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Adequate levels of **folate (or folic acid)** are required for multiplying cells in our body.

Growing children and pregnant mothers need folic acid for the rapidly dividing cells which form muscle, bones and other tissues.

Red blood cell production in the bone marrow is also dependent on folic acid . Hence folate deficiency can cause anaemia or abnormal red blood cell synthesis. If the deficiency occurs during conception and pregnancy, it can lead to neural tube defects in the newborns.

Of the 100 µg/day of total folates recommended, eggs can provide almost 47% (47 µg/day).

Vitamin A is important for vision and for maintaining the respiratory mucosa.

One egg provides 252 µg (63%) of the recommended 400 µg/day of Vitamin A.

It prevents respiratory infections in children.

Eggs also contain choline and essential fatty acids which are important for the development of the brain and for cell functioning.

Eating eggs helps adults maintain body weight, optimize bone health and lower blood pressure. Eggs are also found to reduce the incidence and prevalence of non-communicable diseases such as diabetes, heart disease and depression.

Despite being the third largest producer of eggs, only one-third Indian households reportedly consume eggs due to economic reasons.

Rural household have a very low per capita consumption of eggs of less than 2 eggs a month compared to urban areas which consumed a little more than 3 eggs a month.

Vitamin B12 or cyanocobalamine is useful for immunity, formation of genetic material like DNA and brain/nervous/blood system development and functioning.

Deficiency of B12 may lead to a rare kind of anaemia, weakness, fatigue, loss of appetite, constipation, and weight loss. The neurological symptoms of B12 deficiency are many.

Of the 1 µg/day RDA of B12, one 60 gm egg can provide 1.1 µg (110%)

Vitamin B12 or cyanocobalamine is found only in animal source foods.

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WHY ARE EGGS GOOD FOR CHILDREN?

1.

A study done in 2021-22 by the Department of Public Instruction, Government of Karnataka found that 98% children consumed eggs where they were given as part of the mid-day meal scheme.

Providing eggs on alternate days showed an overall increase in weights of children.

3.

Randomized controlled trials have showed that giving one egg per day for 6 months shows an increase in both height for age as well as weight for age compared to control group of children who did not consume eggs but were similar in other respects.

The earlier scare about cholesterol in eggs being responsible for heart disease has been disproved and cholesterol is no longer labelled as a nutrient of concern.

2.

Apart from all the nutritional benefits of eggs, each egg has small volume which means it can be eaten whole by children, either boiled or as omelette, with or without salt. Egg can be prepared in any way that is tasty for the child.

So even if children eat small portions, as they often do, a large part of their nutritional needs are met if eggs are added to their diet.

4.

Eggs are eaten by a majority of children in government schools in India, therefore it is a very well accepted food culturally. Parents and grandparents are aware of the benefits of eggs and since they may not be able to afford eggs everyday, they strongly value distribution of eggs as part of the mid-day meal.

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WHY ARE EGGS GOOD FOR CHILDREN?

5. Providing a nutrient dense food like eggs can address several deficiencies that children are vulnerable to and which are likely to have aggravated due to the Covid pandemic and lockdown.

6. Eggs are also easy to store, transport, less prone to adulteration/pilferage and corruption and can be produced locally in the communities that the schools are located.

Pediatricians advise that children between 6-12 months be given only the egg yolk as the whites can cause allergy upto one year of age.

In India, cultural acceptance of egg is also high and many people don't have any cultural or religious objections to consumption of eggs.

There is also evidence that attendance in schools improves and children enjoy their food and eat larger portions of food when eggs are provided as part of the mid-day meal in schools.

Egg has been found to have two newly-recognized nutrients - lutein and zeaxanthin, which can significantly lower risk of age-related macular degeneration (AMD), a leading cause of blindness affecting people over the age of 65. In addition, these reduce the likelihood of cataracts.

Raw eggs contain a protein called avidin which can reduce absorption of biotin or Vitamin B1. Hence it is better to consume eggs in a cooked form.

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RECOMMENDED QUANTITY OF EGGS FOR MID-DAY MEALS?



Children require more protein per unit body weight than do adults because of new tissues like muscle and bone which are being laid down during growth are largely built from amino acids drawn from the dietary proteins. Additionally, many children in government and government aided schools are malnourished and have many nutrient deficiencies, so they may require additional nutrition support apart from one egg a day.

There is a need to promote, at the very least daily consumption of one or two full egg by a child. The National Institute of Nutrition also recommends 'egg as a complete food for children'.

Along with eggs, if the child also receives pulses (as thick preparations in the ratio of 1:3 with cereals/millet), milk/dairy, meat, fish, poultry, ghee/butter/oil, sprouted legumes, , vegetables, it can go a long way in addressing many of the nutritional deficiencies.

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Year of Publication: 2023



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