Kellogg's®

NUTRINEWS

The current issue is focused on essentials of child nutrition.

In the first part of the newsletter, we look at the nutritional considerations for school-going children (aged 7-12 years) i.e. nutrients that are specifically needed by this group. Eating pattern and lifestyle habits are established early in life. Children are likely to adopt the same eating patterns as their parents, therefore it is important that the whole family adopts a healthy lifestyle. Hence, the importance of eating balanced diet with portion control is emphasized in the latter part of the newsletter.

We hope you find this issue interesting to read and look forward to your valuable feedback and comments.

Happy reading!

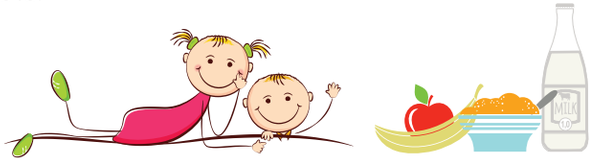
Regards,
Kellogg's® India Nutrition Team.

Importance of good nutrition for kids

Childhood and adolescence are periods of continuous growth and development. Growth is an important indicator of overall health and well-being.[1]

A nutritionally adequate and balanced diet is vital for children to supply them with energy and nutrients they require for growth and development. Further, proper diet and physical activity during childhood is essential for optimum body composition, BMI and to reduce the risk of diet-related chronic diseases in later life and prevent vitamin deficiencies.[2]

Nutrient needs of a child correspond with the changes in the growth rates. Hence, an inadequate supply of essential nutrients at any stage of growth can affect physical, mental and behavioural development of children which are often irreversible.[1,3]



Some nutritional considerations for school going kids:[2,4]

1. **Energy:** Adequate supply of energy is required to support rapid growth and development of children. It is also essential for protein- sparing function as protein utilization and deposition are dependent on intake of adequate energy. If adequate dietary energy is not available, dietary protein is inefficiently utilized in the body.

   Sources of energy rich food: Carbohydrate and fat containing foods like whole grain cereals, millets, nuts and oilseeds, vegetable oils, ghee, butter etc.

2. **Protein:** It is essential for growth and maintenance of body tissues. Adequate intakes of energy and essential amino acids are necessary for optimal deposition of lean body mass and normal growth in young children.

   Sources: Animal foods like milk, meat, fish and eggs and plant foods such as pulses and legumes; nuts and combination of cereals, millets and pulses provides most of the amino acids, which complement each other to provide better quality proteins.

3. **Fats**: Provide energy, essential fatty acids and promote absorption of fat-soluble vitamins. Quality and quantity of fat consumed is important. Total fat intake should be restricted to 25% of total energy intake in children. Recommendation is to increase 'good fats' i.e. MUFA and PUFA consumption and limit SFAs and trans fat consumption.

   Sources of MUFA and PUFA: Nuts like walnuts, almonds; seeds like flaxseed, sunflower; fatty fish like tuna, mackeral etc.; vegetable oils like canola, olive, peanut, safflower, sesame

4. **Vitamin A:** It is necessary for clear vision in dim light, maintaining the integrity of epithelial tissues and resistance of the body to common infections.

   Sources: Carotenoids are plentiful in fruits and vegetables that are green or deep yellow/orange in colour, such as green leafy vegetables, carrots, tomatoes, sweet potatoes, papaya, mango etc.

5. **Calcium:** It is essential for normal growth, development and maintenance of the skeleton, where it provides strength and structure. Childhood is a critical period for skeletal mineralization. Inadequate dietary calcium intake can impair bone development.

   Sources: Milk, curds and nuts are rich sources of bio-available calcium. Ragi, green leafy vegetables, sesame (til) are also good dietary sources of calcium. Exposure to sunlight maintains vitamin D status which helps in calcium absorption.

6. **Iron:** It serves as carrier of oxygen to the tissues from the lungs by RBCs. Iron is also needed for adequate development of the brain and other tissues such as muscles, which are finally differentiated early in life.

   Sources: Liver, red meat, chicken, sardine; green leafy vegetables, legumes and cooked beans; dried prunes, apricots, raisins; iron fortified breakfast cereals. Intake of vitamin C rich foods along with iron rich foods helps to improve iron absorption.

Table no 1 : Recommended dietary allowances for Children (7- 12 years) as per ICMR, 2010.

Nutrients	7-9 years (Body weight -25.1 kg)	10-12 years (Boys) (Body weight – 34.3 kg)	10-12 years (Girls) (Body weight – 35.0 kg)
Net energy (kcal/day)	1690	2190	2010
Protein (g/day)	29.5	39.9	40.4
Visible fat (g/day)	30	35	35
Calcium (mg/day)	600	800	800
Iron (mg/day)	16	21	27
Vitamin A (mcg/day)	600 RE	600 RE	600 RE
Thiamine (mg/day)	0.8	1.1	1.0
Riboflavin (mg/day)	1.0	1.3	1.2
Niacin (mg/day)	13	15	13
Pyridoxine (mg/day)	1.6	1.6	1.6
Ascorbic acid (mg/day)	40	40	40
Dietary folate (mcg/ day)	120	140	140
Vitamin B12 (mcg/day)	0.2 -1.0	0.2 -1.0	0.2 -1.0
Magnesium (mg/day)	100	120	160
Zinc (mg/day)	8	9	9

Breakfast: Vital for growing kids

Breakfast is an important meal for growing children. The nutritional benefits of breakfast for school-aged children are well known, and numerous studies have documented that breakfast eaters eat a healthier overall diet compared to breakfast skippers. Those that consume breakfast tend to have improved nutrient intakes - higher intakes of carbohydrates and fibre and lower intakes of fat; are more likely to achieve recommended intakes of vitamins and minerals; tend to be slimmer and have lower levels of blood cholesterol. [5-8]

Apart from improved nutritional status, studies show that breakfast consumption may improve cognitive function related to memory, test grades, and school attendance in children.[9] It is also linked to better problem solving skills,[10] less tardiness and significantly higher full scale, verbal and performance IQ test scores in children who eat breakfast regularly vs. those who rarely have breakfast.[11]

Children who eat a healthy and balanced breakfast are also less likely to snack on foods that are high in fat and/or sugar later on and tend to have a better nutrient intake across the day.[12]

Recent research conducted by H.Sampasa-Kanyinga and Hamilton HA (2017) suggests that regular breakfast consumption is associated to higher school connectedness and academic performance. High levels of school connectedness were in turn linked to positive school performance.[13]

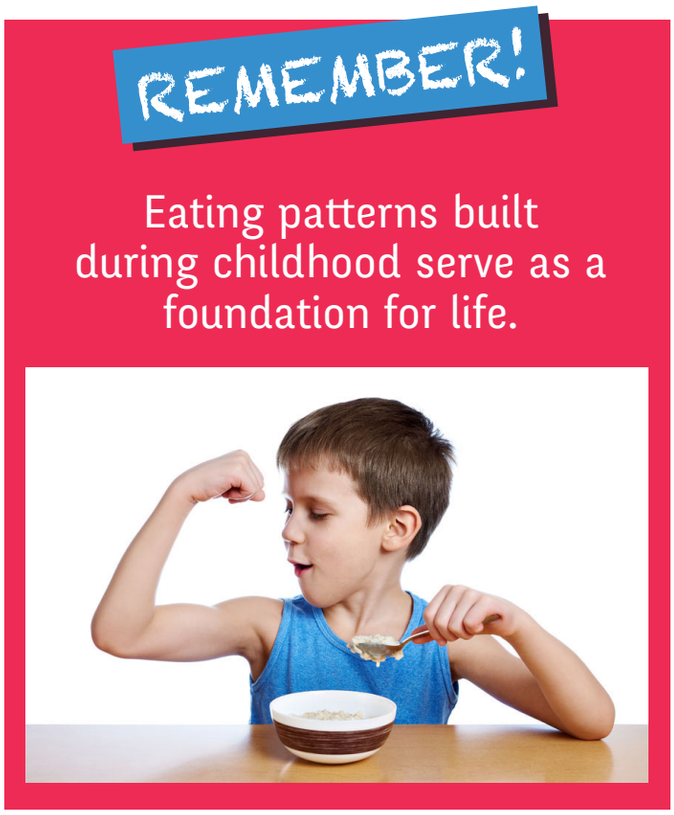
Cereal as a popular breakfast choice

Cereals are made with grains and grain-based foods help to supply you with the fuel you need so you can make the most of every day. A breakfast of cereal and milk provides grains to help recharge and protein to help rebuild. Protein is an essential building block for the body and grains have carbohydrates that can help provide energy.

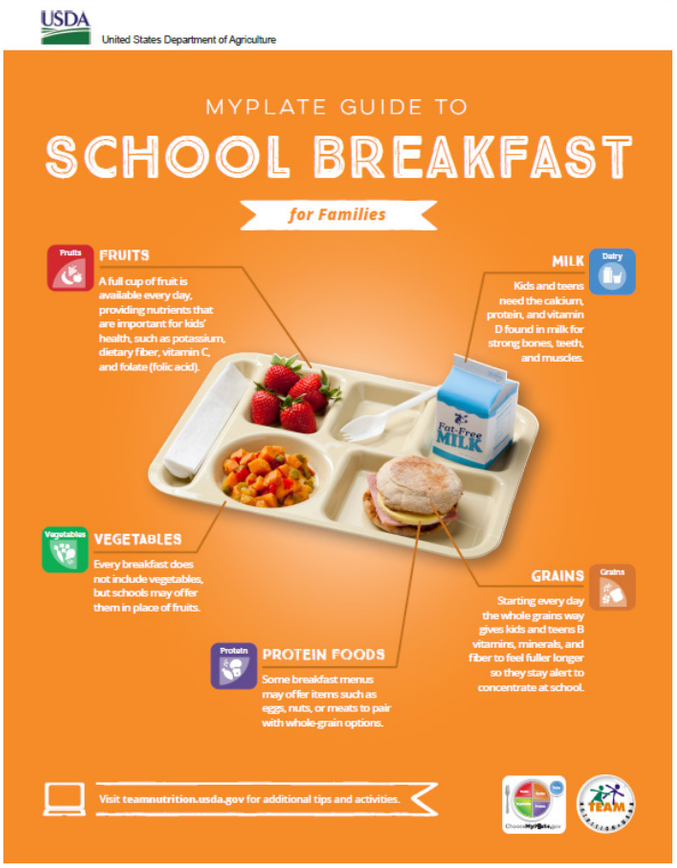
Cereals are relatively lower in calories and yet nutrient dense. It is also one of the simplest way to get more fibre in your diet, if consumed regularly. Plus, cereals are typically low in fat, naturally cholesterol free which fits into healthy eating recommendations.

Kellogg's cereals can help your family start the morning with energy by delivering a number of vital, take-on-the-day nutrients like protein, fibre, essential vitamins and minerals.

So with a serving of delicious Kellogg's cereal as part of a balanced breakfast, you can provide your family with a nourishing and happy start to the day.



USDA guideline for school breakfast:



Importance of mindful snacking:

Snacking can be a helpful way to improve nutrition, satisfy hunger or simply enjoy a treat. However, when people are busy it can be difficult to pay attention to what – and how much– they're eating, or what's known as mindful eating.

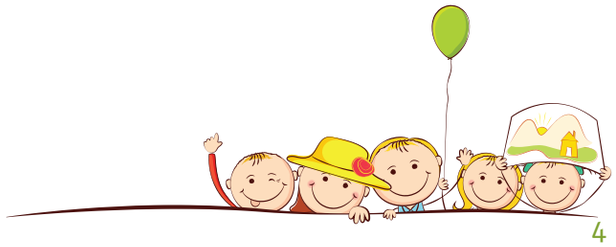
Why is snacking important for kids?

- Kids need to "refuel" and healthy snacks can boost energy between meals[14]
- Kids who have healthy eating patterns are more likely to perform better academically[15]
- Snacks contribute significantly to total daily intake (37%) of children (NHANES 2009-10)[16]
- Snacks help fill in missing food groups and close the gap for "nutrients of concern" (calcium, vitamin D, potassium, fibre)[15]
- After school snacks are especially important when students have a long wait between early lunch and the evening meal[15]

Cereal is a smart snack

Cereal isn't just for breakfast. Snacking on a bowl of cereal and milk can provide key nutrients. One can top it up with fresh fruit pieces or chopped nuts of their choice.

Grains are a great source of complex carbohydrates which provide energy to the body, especially brain and muscles. They also provide vitamins, fibre, B vitamins, fibre, phytonutrients and minerals – all are part of a well- balanced diet. When paired with milk, the combination provides protein, a nutrient that is considered to be building blocks of all cells. This combination provides protein of cereal and milk and makes it the perfect snack for recharging.



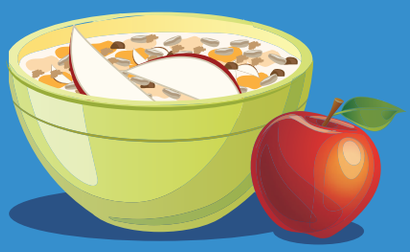
Quick ideas for smart snacking:

Add ¼ cup strawberries to a bowl of Kellogg's Chocos (25-30 g) with low fat milk

Nutrition bonus!
Fibre, B vitamins, iron, potassium

Add handful of dates, 1 medium sized banana with low fat milk. Top it up with Kellogg's Ragi Chocos

Nutrition bonus!
Fibre, B vitamins, iron, potassium



Take ½ cup low fat whipped yoghurt, some sliced fresh apples and Kellogg's Muesli Nut Delight. Create layers with each of the ingredients above in a parfait glass

Nutrition bonus!
Goodness of multigrain, protein, fibre, good fats

Snacking Tips

Some snacking tips to help your child get the most out of the snack time:

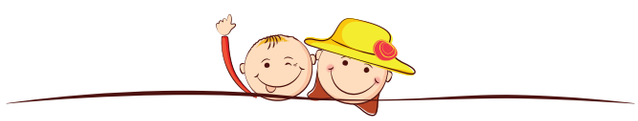
1. **Set a snack routine.** Set specific snack times so that snacking is a conscious activity built into your family's routine.

2. **Portion control the snacks.** Keep snacks small and simple so that your children are still hungry at meal time.

3. **Turn off the TV.** Evidence suggest that people tend to overeat while watching TV. Hence, it's a good idea to turn off the TV if your children are sitting down to have a snack.

4. **Keep snack foods out of sight.** Even healthy snack food should be out of plain sight to help keep children from munching at times when they aren't actually hungry.

5. **Encourage your children to eat slowly and chew their food thoroughly.** This will help them feel satisfied with their snack.



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