The eating behaviours of toddlers become unpredictable. They may eat one meal willingly but not touch the meal at other time. Children between 2 and 5 years of age also become fussy eaters. Toddlers also show “food neophobia”, i.e., reluctance to try new food. They may also exhibit “food jag” i.e. repeatedly requesting for one food while the other foods are totally avoided. These eating patterns increase their risk of nutritional deficiencies.

Although the toddlers eat less and in smaller quantities, they need nutrient-dense foods. Children in the age group of 2–5 years need nutritionally complete foods throughout the day. The recommended daily allowances of energy, protein and fat for children aged 1–6 years of age are listed in Table 1. Apart from the macronutrients, toddlers need specific nutrients such as iron for preventing anaemia, calcium for bone and teeth development, vitamin A for eyes and skin and for immunity, vitamin C for wound healing and for absorption of iron and zinc for cell duplication and immune support.

Table 1: Recommended Dietary Allowances for energy, proteins and fats for children (1–6 years)

<table>
<thead>
<tr>
<th>Macronutrients</th>
<th>RDA* of Toddlers (1–3 years)</th>
<th>RDA* of Toddlers (4–6 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>1060 kcal/day</td>
<td>1350 kcal/day</td>
</tr>
<tr>
<td>Protein</td>
<td>16.7 g/day</td>
<td>20.1 g/day</td>
</tr>
<tr>
<td>Fat</td>
<td>27 g/day</td>
<td>25 g/day</td>
</tr>
</tbody>
</table>

Sugar Intake Among Toddlers and Risk of Obesity

Moshfegh et al. described current dietary intakes among toddlers between 1 and 2 years of age in the United States. The findings suggested that carbohydrates contributed 55% of the total daily energy intake. Out of which, 50% of the calories came from total sugars. An average of 10% of total sugar intake was contributed by added sugars. About 40% of the toddlers consumed more than the average 10% of added sugars.

Sweetened juices and drinks were the leading source of added sugars. Of the 26 g/day average intake of added sugars, 10.5 g were attributed to beverages. Sugar-sweetened beverages contain sugars such as fructose or sucrose, often in large amounts, which contribute to the overall energy density of diets. The calories provided by sugar-sweetened beverages have very little nutritional value and lead to unhealthy weight gain. In both adults and children, World Health Organization (WHO) recommends reducing the intake of free sugars to less than 10% of total energy intake.
High-energy, low-quality foods were commonly offered to toddlers between 6 and 24 months. For example, 1 in 3 toddlers consumed candy, 2 in 5 consumed dessert items, such as cakes, cookies, and pastries, while 1 in 10 consumed frozen dairy desserts. Snacking is an important way to meet the energy and nutrient requirements of the growing toddler. If snacks consumed by toddlers are unhealthy, nutritional deficiencies can occur.

The rising incidence of obesity in children is associated with increased consumption of sugar-sweetened beverages. High sugar consumption has been linked not only to obesity, but various other health problems, including dental caries, dyslipidemias, bone loss and fractures. Consumption of sugar-sweetened beverages was found to significantly deteriorate nutrient adequacy and overall diet quality. Higher sugar intake was also associated with inadequate micronutrient intake in children.

Growing-up milk (GUM) is intended for toddlers between age group of 1 and beyond 2 years of age to support the high and changing nutritional needs of toddlers and bridge any nutritional gap, if it exists.

A study on infants and toddlers in urban area of China suggested that growing-up milk was the source of energy, protein and many key nutrients like iron, zinc, calcium, vitamin A and vitamin C among toddlers especially in the age group of 12–23 months. Consumption of ≥250 mL/day GUM among children showed significant reduction in the risk of developing deficiencies of α-linolenic acid, iron, vitamin C and vitamin D.

Another study on Irish children showed that the consumption of GUM contributed to intakes of energy, macronutrients, and micronutrients especially iron and vitamin D.

Growing-up milk is a source of many key micronutrients. Deficiency of some of these key nutrients like iron, zinc and magnesium can result in anorexia and can thereby indirectly affect the intake of adequate energy and protein. Nutrients like vitamin A, iron and zinc are associated with improved immunity and iron is essential for the cognitive development.

Calcium is one of the key nutrients required for mineralisation of bones and teeth. Vitamin D plays an active role in calcium and bone metabolism. Children under 3 years of age are especially vulnerable to deficiency of vitamin D because of the rapid rate at which calcium is laid down in bones at this age.

Growing-up Milk (GUM) or Nutritious Milk for Growing-Up Kids

Conclusion

Toddlerhood is a time of rapid development. Poor mental test scores, attention deficits and behavioural problems are associated with nutritional deficiencies in early childhood. Higher sugar intake trends among toddlers may lead to risk of childhood obesity and can cause nutritional deficiencies in toddlers. Growing up milk support the high and changing nutritional needs of toddlers and may bridge the nutritional deficiencies among toddlers.
Nutritional Requirement for 2–5 years—Growing up Milk (GUM)

References