

# Toddler nutrition

Proper nutrition is a basic prerequisite for optimal somatic and psychomotor development of the child . During this period, the body's metabolism is programmed and the child's relationship with nutrition and eating habits is created. The goal is to teach the child to eat with taste, in reasonable quantities, independently, at the table with the family. Toddlers are often afraid to taste new dishes and foods, they are picky eaters. You cannot force them to eat, it is better to repeatedly non-violently offer rejected foods. Inappropriate educational methods can cause a child's negative attitude towards food and eating habits (feeding while watching TV or while moving, overeating, serving sweet drinks and sweets).<sup>[1]</sup>

## Dining

Toddlers first drink from a bottle, are fed with a spoon and eat solid food independently with their hands. Later they independently drink from a cup and eat with a spoon. The diet of toddlers should be varied, balanced, with various physical modifications, different consistencies and an interesting diverse appearance. It should be served in at least 5 portions a day, due to the small capacity of the stomach. Small solid and hard-to-dissolve foods (nuts, lentils, candied fruit) are not given to toddlers because of the risk of aspiration. The recommended energy value of the diet is 100 kcal/kg/day, according to other recommendations it is lower.<sup>[1]</sup>

## Drinking regime

After the 1st year of life, 300-330 ml of milk per day is recommended, after the 2nd year at least 125 ml. Up to 2 years of age, whole milk, pasteurized, or special powdered milk for toddlers, enriched with vitamins, trace elements, etc. The recommended daily fluid volume is 80-120 ml/kg/day in the 2nd year and 80-100 ml/kg/day in the 3rd year. In addition to milk, water and unsweetened children's teas are suitable. Fruit juices and juices should not exceed 120-150 ml per day.<sup>[1]</sup>

## Nutrition of older infants and young children

**After the end of the 6th month** , when breast milk gradually ceases to be sufficient as the only source of food, **complementary foods** are introduced , that is, foods served with breast milk during continued breastfeeding as needed (or breast milk substitutes for a non-breastfed child). At first, it is a transitional diet specially designed for infants, later it is a family diet, i.e. foods that are also consumed by other family members.<sup>[2]</sup>

In the initial period of complementary feeding, the child needs **to breastfeed** as often and for as long as in the period of exclusive breastfeeding - the child is just learning to eat with a spoon and breast milk is the main source of fluids, nutrients and energy. Later, when the child receives complementary foods more often and in larger quantities, he may want to breastfeed less often and for a shorter time than with exclusive breastfeeding, but breast milk still remains an important part of the diet, even during the 2nd year of life. With average production (half a liter per day) during this period, it provides a third of the necessary energy and protein.<sup>[2]</sup>

In our country, it is **customary to start the serving of side dishes with vegetables** . It starts with one type of **vegetable** (e.g. boiled carrot, potato), and only after 3-4 days is another type added. If the child disliked a certain food, it is easier to recognize which one it is. **When the child gets used to vegetables, thoroughly cooked very finely chopped and chopped lean meat** (chicken, turkey, duck, goose, beef, lamb, rabbit) is added to it, at first about 1 tablespoon per serving. Meat is served 6 times a week and its amount is gradually increased to 2 tablespoons per dose, once a week a boiled egg **yolk** is served instead of meat . The egg white is not given until one year of age. The same procedure is followed when classifying **fruit** as a second type of side dish.

**Unsweetened white yogurt** can be added to the fruit puree . Cottage cheese is not suitable for infants because it has too much protein. **Cereal porridge** is served as a third type of side dish . After the 6th month is completed, it is no longer necessary to distinguish whether they contain **gluten** or not. Gluten can lead to the development of celiac disease in susceptible individuals. In young children, this manifests itself mainly in bulky stools 1-3 times a day, failure to thrive, loss of appetite and a noticeably distended abdomen. Changes in the child's behavior are also noticeable. All common cereals in our country contain gluten, except for rice and corn. It is advantageous to serve purchased instant porridges for children, as they are enriched with some minerals and vitamins(iron and zinc are especially important). Side dishes are not sweetened and not salted until the end of the 1st year. **Unadapted cow's milk** is not suitable for infants . Full-fat cow's milk **can be used in dishes (for example, the preparation of porridge) from the age of 10 months** , but in larger quantities from one year. Denser foods provide less water than milk, so **from around the 10th month it is necessary for a breastfed baby to add additional liquids to breast milk** . About 200 ml per day is enough. Bottled baby water is best. Fruit juices should not exceed the daily amount of 120-150 ml. Fruit juices should not contain more than 15 g/100 ml of carbohydrates. **Liquids other** than breast milk should be given **from a cup** , not from a baby bottle.<sup>[2]</sup>

**Around the age of 1, the child can start eating what the family does** and no longer need specially prepared meals. However, the composition and adjustment of the family diet should take into account the needs of the child, which means that the diet should be soft, unsalted and unspiced. Adults can only taste it at the table. **Cold meats are not suitable, with the exception of lean stewed ham, fatty meat, pasties, mayonnaise.** Three main meals are served, with snacks in between if the child needs them. If the child is not breastfed, he needs about half a liter of milk and milk products. Follow-on milks (intended for children up to 36 months) are preferred, although

not necessary, because they are enriched with some minerals and vitamins. **Reduced-fat milk is not suitable for children under two years of age, just like other low-fat foods**, because young children need food with a higher energy density (kJ/g) to get enough of it in the volume of food they are able to eat. [2]

The first foods are served in the form of **a smooth, thinner porridge with a spoon** - never from a baby bottle. As soon as the child learns to swallow the food from a spoon, the consistency will increase to a thick porridge. It is better **to mash food than to mix it** . **Around the 9th month , soft chunky food** is gradually introduced . At the end of the first year, the child can already eat food **of the same consistency as the rest of the family** . With the development of fine motor functions of the hand and teething, infants begin to be able to grasp **food**, put them in your mouth and chew. In order for the child to learn to chew, it is very important to offer him suitable foods, for example a piece of roll. As soon as the child shows an interest in it, it is advisable to let them **try to feed themselves with a spoon**. This will allow him to develop dexterity and coordinate muscle movements. At fifteen months, the child should be able to feed himself. [2]

A child should **determine the amount of food he eats**. The child should be encouraged to eat , **but not forced**. Forcing larger doses often leads to refusal of food or even vomiting . A child does not like a food that made him sick or was forced into it. In addition, encouraging a child to eat everything on his plate leads to the habit that the amount of food to eat is determined by what is on his plate rather than his internal feelings of hunger and fullness. Between the 1st and 2nd year, it is typical that **the amount of food eaten varies from day to day**. There are large individual differences in the amount of food eaten by individual children. An important guide to judging the adequacy of food intake is thriving - growth and weight gain - not the amount of food eaten.[2]

## Terms related to infant and young child nutrition

**Infants** - children up to the end of the twelfth month of age, (Declaration No. 54/2004 Coll. § 4).

**Small children** - children from the completed one year to the completed third year of age (Proclamation 54/2004 Coll. § 4).

**Breastfeeding** - the baby receives breast milk directly from the breast or expressed (WHO 1991).

**Exclusive breastfeeding** - the infant receives only the mother's or donor's breast milk or expressed breast milk and no other fluids or foods except for vitamins, minerals or medicines (WHO 1991).

**Predominant breastfeeding** - breast milk is the predominant source of nutrition, the infant may also receive water, teas, sugar water, fruit juices, oral rehydration solution if needed but not other nutrient containing fluids or foods. (WHO 1991).

**Full breastfeeding** - this category consists of exclusive and predominant breastfeeding (WHO 1991).

**Breast milk substitute** - any food marketed or otherwise represented as a partial or total substitute for breast milk, whether or not it is suitable for that purpose (International Code of Marketing of Breast Milk Substitutes, 1992).

**Initial milk infant formula** - formula intended for foods intended for the special nutrition of infants from birth to six months of age, which correspond to the nutritional requirements of this group of infants. It is commonly called initial milk. (*see chapter 6.17 Food intended for special nutrition* ). It is commonly called initial milk.

**Continuing milk infant formula** - formula intended for the special nutrition of infants older than six months, which form the basic liquid portion of a gradually expanding mixed diet for infants (see chapter 6.17 Food intended for special nutrition ). It is commonly called follow-on milk.

**Baby food, complementary food, complementary food** - any food, industrially produced or prepared at home, suitable as a supplement to breast milk or as a breast milk substitute, if this or that ceases to be sufficient to satisfy the nutritional needs of the infant (International Code of Marketing of Breast Milk Substitutes, 1992 ).

**Complementary feeding** - is a process that begins at a time when mother's milk alone is no longer enough to fully cover the infant's nutritional needs and therefore another, "supplementary" food - complementary food - is needed. The usual time range for complementary feeding is 6-24 months, although breastfeeding may continue for more than two years (WHO 2002).

**Dokrm** - breast milk substitute given to a breastfed child.

## Links

### Related Articles

- Child nutrition : Newborn nutrition • Breastfeeding • Infant formula • Infant non-dairy diet • Toddler nutrition • Pre-school, school-age and youth nutrition • Recommendations for infant nutrition 2011 • Recommended nutrient intake ( pediatrics)
- Nutritional recommendations : Nutritional recommendations (1. LF UK, NT) • Nutritional recommendations for the adult population • Nutrition of pregnant and lactating women • Nutrition in old age • Factors influencing nutritional needs
- Special nutrition
- Food composition: Carbohydrates in food • Proteins in food • Fats in food • Mineral substances in food • Trace

- elements in food • Vitamins • Microorganisms in food • Foreign substances in food
- Failure to thrive • Eating disorders • Nutrient excess or deficiency disease • Food allergy • Food intolerance • Cow's milk protein allergy

## references

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- KUDLOVÁ, Eva. *Nutritional requirements and recommendations at different stages of life [online]* [online] . 3. edition. 2012. vol. 1. Available from <<https://el.lf1.cuni.cz/p86338602/>>. ISBN 0.

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