

# Child nutrition

Nutrition plays an important role in proper Child growth and development. It is the basis for optimal growth, health and psychosocial development of the child. It is important to remember that for a child under two or three years of age, proper nutrition is an important factor for normal development. Poor nutrition in a child can lead to immune deficiency, Obesity, Malnutrition and withdrawal states or cardiovascular disease later on. The appropriate nutrition for children varies at different times.

## Nutrition of newborns and infants

 *For more information see Newborn nutrition.*

According to WHO recommendations, the mainstay of nutrition for premature newborns is breastfeeding, which is recommended to start in the first hours after birth. <sup>[1]</sup>

### Breastfeeding

 *For more information see Breastfeeding.*

Breastfeeding is the cornerstone of newborn nutrition and infant nutrition. Breast milk has an optimal composition that allows for easy digestion and absorption of nutrients. For premature newborns, it is recommended to start breastfeeding as soon as possible after birth. Exclusive breastfeeding is recommended until the end of the 6th month of age. A healthy breastfed infant does not need any additional fluids, foods or supplements during this period, except for vitamin D and K, which are deficient in breast milk (vitamin K is only given if given orally instead of intramuscularly after birth). Allergists recommend the introduction of non-dairy foods from the end of the 4th month, i.e. during the 'window of immunological tolerance' between the 4th and 6th month of age. The introduction of a complement before the 4th month or after the 6th month of age carries some health risks such as malnutrition, eating disorders, allergies, anaemia. If the child is thriving, it is recommended to continue breastfeeding with gradually introduced feeds for 2 years or more. Breastfeeding has many benefits for both mother and child and is contraindicated only in exceptional cases. <sup>[2][3][4]</sup>

'**Vitamin D**' is administered from the 3rd week to the end of the 1st year as drops (2 drops per day) or as a single deposit (after 3 months). Vitamin D acts as an antirachitic prophylaxis. '**Vitamin K**' is administered soon after birth i.m. or in drops at a dose of 1 mg. Vit. K is given as a prophylaxis against hemorrhagic disease.

### Artificial infant nutrition =

 *For more information see Infant formula.*

### Non-dairy infant formula

 *For more information see Non-dairy infant formula.*

From the end of the 6th month onwards, it is recommended to introduce complementary foods (complementary feeding) while continuing breastfeeding according to the baby's needs up to the age of two years or longer. As a rule, the feed is introduced in the order of vegetables (later with meat), fruit (with yoghurt) and cereal porridge. The introduction of complementary feeding is needed:

- breast milk does not sufficiently cover the body's energy needs,
- for the development of neuromuscular coordination. In the last months of the first year, the transition to a family diet begins.

## Nutrition for toddlers and preschoolers

 *For more information see Toddler Nutrition.*

The diet for children from 1 to 3 years of age begins to resemble that of adults, but should be easy to digest, easy to chew, not spicy, low in salt and, above all, varied. A complete diet still includes milk and dairy products, but also meat, eggs and fish. Meat is an important source of protein and iron. We prefer mainly veal, beef, poultry and fish.

Another important component is the fibre contained in wholemeal bread, oatmeal, pulses and potatoes. Adequate amounts of fibre affect the resorption of nutrients and antigens and accelerate passage through the intestine. Total daily fibre intake should be 5 g/day for infants up to two years of age. In older children, the amount of dietary fibre should increase according to the formula - age + 5 g/day. Of course, vegetables and fruit should not be absent from the daily diet of children. Conversely, we try to limit sweets and fried foods.

The child should drink at least 500 ml of milk (whole milk) per day and consume other dairy products to cover the daily intake of calcium.

During this period the child is also developing eating habits, so it is important to serve food regularly, preferably 5 times a day, and to set a good example for the child when eating (do not eat in a hurry, read while eating, do not eat breakfast, etc.). This period of age is also characterised by alternating periods of sufficient appetite and lack of appetite. We do not force the child to eat.

## Nutrition for school-age children

 For more information see *Nutrition of preschool, school children and young people*.

The diet should be mainly varied to avoid all sorts of carenations or excesses of certain nutrients. Children should learn to eat breakfast in peace, even if they are in a hurry to get to school in the morning.

## Adolescent nutrition

The period of puberty is associated with accelerated growth and changes in body composition - development of bone mass in both sexes, muscle mass in boys and body fat in girls. These body processes need sufficient energy, protein and minerals, especially calcium and iron. Poor diet can lead to disruption of natural growth and development.

## Risks of alternative diets

## Links

### Related articles

- Child nutrition: Newborn nutrition - Breastfeeding - Artificial infant nutrition - Non-dairy infant nutrition - Toddler nutrition - Nutrition of preschool, school children and youth - Infant nutrition recommendations 2011 - Recommended nutrient intake (pediatrics)
- Nutrition Recommendations: Dietary recommendations (1st UK Faculty of Medicine, NT) - Dietary recommendations for the adult population - Nutrition of pregnant and lactating women - Nutrition in old age - Factors affecting nutritional needs
- Special Nutrition
- Food composition: Dietary carbohydrates - Dietary protein - Dietary fat - Dietary minerals - Dietary trace elements - Vitamins - Dietary microorganisms - Food contaminants
- Malnutrition - Eating disorders - Nutrient excess or deficiency diseases - Food allergy - Food intolerance - Cow's milk protein allergy

### References

1. {WHO. *Breastfeeding* [online]. [cit. 2012-02-27]. <<http://www.who.int/topics/breastfeeding/en/>>.
2. Pracovní skupina dětské gastroenterologie a výživy. Doporučení pracovní skupiny gastroenterologie a výživy ČPS pro výživu kojenců a batolat. *Česko-slovenská pediatrie*. 2014, y. -, vol. duben, p. 7-13, ISSN 0069-2328.
3. {WHO. *Breastfeeding* [online]. [cit. 2012-02-27]. <<http://www.who.int/topics/breastfeeding/en/>>.
4. {{DORT,, et al. *Neonatologie : vybrané kapitoly pro studenty LF*. 1. edition. Karolinum, 2005. ISBN 80-246-0790-5.

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