



NATIONAL NUTRITION COUNCIL



HEALTH AND JOY FROM FOOD

- meal recommendations for
early childhood education and care

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FOREWORD

This recommendation document is intended as a general guideline on promoting children's nutrition, serving nutritionally adequate and health-promoting food and providing food education in early childhood education and care. The recommendations given in this publication on children's meals and snacks concern both municipal early childhood education and care and private service providers. For the applicable parts, they should also be followed in other types of early childhood education and care (including club and playground activities).

The recommendations are targeted at municipalities and early childhood education and care providers, early childhood education and care units, suppliers of catering services for children and homes. They are also suitable for use as an information source for all professionals working with children's nutrition, health and wellbeing in health care, social welfare, NGOs, parishes and children's recreational activities. The National Nutrition Council recommends that these recommendations containing policies and guidelines on meals and food education in early childhood education and care should also be used as learning material in vocational education and training, higher education and continuing education.

The National Nutrition Council finds it crucial that these recommendations be applied in all municipalities when making decisions on meals and meal arrangements in early childhood education and care, tendering processes concerning catering activities and food procurements, and the practical implementation, monitoring and evaluation of the meals. The recommendations can be attached to catering service contracts and tender documents as a basic document that describes the activities.

From the societal perspective, public catering services also support food production in the local area, create employment and wellbeing, and play a key role in Finland's food security and sustainable development. The meals served in early childhood education and care as part of municipal mass catering are an investment in ensuring the residents' wellbeing and promoting their health, which will bring savings at a later date. Organising catering services in compliance with the recommendations is included in the municipalities' activities based on strategic decisions and regional development. Sufficient financial resources allocated by the early childhood education and care provider and competent staff will ensure that children are provided with adequate, balanced and appropriate meals and guidance.



The national nutrition recommendations issued by the National Nutrition Council seek to promote and support improvements in the nutrition and health of the population as a whole and to prevent the development of diet-related risk factors for chronic diseases. This document is based on the Finnish nutrition recommendations (Terveyttä ruoasta – suomalaiset ravitsemussuositukset 2014) and Eating together – food recommendations for families with children (2016). In addition to these national recommendations, the National Nutrition Council issues instructions for organising mass catering for specific target groups. This document belongs to a set of recommendations on mass catering for children and young people; previously, a recommendation on meals for higher education students (2016) and a recommendation on school meals (2017) have been published in this series. These recommendations covering all ages from early childhood education and care to adult students set out policies on providing catering services, comprehensive promotion of good nutrition, and food education as part of services for children and young people.

The contents of this publication are based on the National core curriculum for early childhood education and care. The recommendation will serve as a shared tool and policy instrument for implementing, developing, monitoring and evaluating children's meals and food education in early childhood education and care. Many good practices and tips picked up in practical work for implementing and developing children's meals and food education have been collected in this document.

In November 2016, the National Nutrition Council appointed a working group to prepare the meal recommendations for early childhood education and care. This is the first separate recommendation document in Finland to guide both meals and food education in early childhood education and care. The working group was chaired by Research Professor Suvi Virtanen, Vice Chair of the National Nutrition Council, from the National Institute for Health and Welfare, while Counsellor of Education Pia Kola-Torvinen from the Finnish National Agency for Education was its vice chairperson. Please refer to the list of experts for the other members of the working group.

During the preparation process of the recommendations, the working group consulted experts of early childhood education and care and children's nutrition, professionals of food education and catering services, authorities from different branches of administration, and researchers in the field. On 19 April 2017, the working group invited a group of experts to a round-table seminar. A particular focus in this seminar, which was attended by 28 experts, was the concepts, objectives, contents and implementation as well as the monitoring and evaluation of food education in early childhood education and care. The DAGIS research



group analysed and provided for the National Nutrition Council the latest scientific evidence on children's meals at day-care centres. The Finnish Heart Association's Heart Symbol expert group participated in preparing the recommendation by collecting information about practical arrangements for children's meals at day-care centres that serve the Better Choice Heart Symbol lunches. The National Nutrition Council would like to extend its warmest thanks to the expert working group and all persons and organisations that participated in preparing the recommendation in different ways. This recommendation is the joint achievement of a broad-based group.

An opportunity to comment on the draft recommendation was provided for the public in October 2017. Comments were supplied by a total of 201 private individuals, organisations and NGOs. The National Nutrition Council sincerely thanks all those who commented on the draft and contributed their time, knowledge and views to this vital document. The National Nutrition Council has approved this document as the national food-based dietary guidelines for early childhood education and care.

Let's eat for health and enjoyment – sharing the joy of food and food-related activities with children!

Helsinki 19 December 2017

INSTRUCTIONS FOR THE READER

The chapters of this publication have been written to allow them to be read individually as indicated by the reader's needs and interests. Some of the chapters also examine the same contents from the perspective of different professional groups and actors, and these topics are consequently revisited several times. If you wish to get a general idea of the recommendations, you would be advised to familiarise yourself with the entire publication.

Descriptions of good practices, tips for activities and core messages are brought up in fact boxes, tips, mottos and quotations. These tools can also be used by the readers diversely to support their own work, for example to spark discussion and to examine a group's activities.

The attachment tables contain numeric quantities and other detailed recommendations and forms.

We hope you will enjoy reading this publication!



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As the work on the recommendation was initiated, Sanna Talvia served as an expert between 7 and 20 December 2016 as well as 12 and 31 January 2017.



FOR THE READER

“Health and joy from food – meal recommendations for early childhood education and care” are the first nutrition recommendations in Finnish history prepared specifically for early childhood education and care. The Ministries would like to thank the National Nutrition Council and its expert group for preparing this unique and essential document.

Meals are part of early childhood education and care. Healthy and varied meals and snacks of a good quality promote children’s health and wellbeing – with effects that may continue to be felt throughout their lives. Eating together is also a learning experience. While sharing a meal, children learn about good table manners and taking others into consideration. Discussions at the table teach them to appreciate food and unhurried mealtimes. At best, eating together offers a pleasant and relaxing break for both the children and the staff.

The meals served to children in early childhood education and care are regulated by legislation. The recommendations concerning individual foods and nutrients in this document can be used as a basis for ensuring that meals are healthy and add up to a balanced diet. In addition to promoting the achievement of objectives related to children’s health and nutrition, the publication Health and joy from food – meal recommendations for early childhood education and care also addresses environmental education. Sustainable development can be promoted by favouring such Finnish produce as vegetables, cereals, potatoes and fish.

The municipalities should look at tasty, high-quality food as an investment in children. The meals and food education in early childhood education and care are part of the municipalities’ and counties’ wellbeing strategy. It is vital that municipalities and early childhood education and care providers across the country implement this recommendation together with the staff working in early childhood education and catering services.

Here’s to promoting the best interests of our children!

Helsinki 4 January 2018

Sanni Grahn-Laasonen
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and Social Services

Jari Leppä
Minister of Agriculture
and Forestry



ABSTRACT

HEALTH AND JOY FROM FOOD – meal recommendations for early childhood education and care



1

NUTRITION SUPPORTS CHILDREN'S HEALTHY GROWTH AND DEVELOPMENT

Meals and food education are part of pedagogically guided activities and holistic learning about wellbeing.



JOY OF FOOD

Happiness and good feelings that you get from food, making it, sharing it with others and eating together.

2



STATUTES, REGULATIONS AND RECOMMENDATIONS

The Early childhood education and care act contains provisions on meals. All children have a right to food that promotes their health and wellbeing and to positive mealtime experiences. Food education is implemented in line with the National core curriculum for early childhood education and care.

3



EATING FOR HEALTH

Tasty, colourful and inviting food is the foundation of menu planning. Foods for meals and snacks are chosen following the food-based dietary guidelines. A child-centred menu that supports food education is geared to helping children with learning to eat and also takes special diets into account.



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HEALTH AND JOY FROM FOOD

- meal recommendations for early childhood education and care

4



JOY FROM FOOD

Food education is about doing things together with the children, experimenting and eating; learning eating habits that promote health and wellbeing for the rest of their lives. A balanced and positive relationship with food is promoted and the children's eating habits are developed in cooperation with the families.

5



EVALUATION AND MONITORING

The nutritional quality of food as well as the implementation of food education and its impacts on children's diets, nutrition, growth and health are monitored through national studies and common indicators for municipalities and operating units.



1



NUTRITION SUPPORTS CHILDREN'S HEALTHY GROWTH AND DEVELOPMENT





Children develop their taste preferences and eating habits early and, to a great extent, hold on to them until adulthood, which makes childhood an important time for influencing nutrition. Rather than being exclusively based on their individual characteristics, children's relationship with food develops in interaction with their physical and social environment. The society's activities and the resources reserved for them create the frame of reference for this interaction.

Nutrition recommendations are research-based guidelines prepared for the entire population on how to put together a diet that promotes health and wellbeing. Vegetables, fruit and berries, potatoes and wholegrain cereals as well as vegetable oil are the foundation of a diet that supports children's growth, development and good health. Low-fat dairy products, legumes, fish and meat and a low salt intake complement the diet and ensure it is a nutritionally balanced whole.

The majority of Finnish families with children enjoy a good level of wellbeing, also in terms of nutrition, and the quality of children's diets has improved over the last few decades. While there are no comprehensive national follow-up studies on children's nutrition, individual studies indicate that the diet of under school-age children has improved: children eat more vegetables and fruit, and the share of saturated fats in their energy intake has decreased. The use of vitamin D supplements round the year and the consumption of foodstuffs fortified with vitamin D has improved children's vitamin D



status. Despite this positive development, the eating habits of school-age children continue to present challenges. This age group still only eats one half of the recommended five portions of vegetables and fruit a day on average. Children's diets deteriorate in quality after their first year of life as they start sharing the family meals. In particular, the content of added sugar and salt as well as saturated fat and animal protein in their diet goes up. The intake of polyunsaturated fatty acids, dietary fibre, iron and vitamin E may remain below the recommended level.

Ways of living that have a negative impact on health tend to accumulate on families with a low income, a low level of education and young parents. In Finland, meals served in early childhood education and care level out nutritional differences caused by children's family backgrounds and thus promote equality in terms of health. Research has shown that on weekdays, the diets of children who attend early childhood education and care outside the home are more varied and closer to the nutrition recommendations than the diets of children cared for at home. Challenges regarding the meals served in early childhood education and care include meagre financial resources as well as the individualisation of children's diets for health, ethical and ideological reasons.

Health challenges related to children's nutrition include overweight and obesity, allergies and dental caries. The risk factors of metabolic and cardiovascular diseases also



already start accumulating in childhood. There is a great tendency for childhood obesity and overweight to continue into adulthood, and general food education and guidance should thus be provided for all children and families with children. Rather than the child's weight, prevention of overweight in childhood should primarily focus on reinforcing ways of living and skills that promote healthy growth and development. To do so, the child's living environment must be addressed as a whole. The Finnish allergy programme prioritises children and allergy prevention. Exposure agents found in the environment and food should not be avoided without valid reasons. A diet containing vegetables, fruit and berries in line with the recommendations builds up tolerance.

Early childhood education and care plays a key role in developing the child's nutrition, eating habits and skills and routines related to eating. Meals and food education are part of the pedagogical activities and holistic learning about wellbeing in early childhood education and care. In addition to eating habits, this learning includes daily schedules, time use, sleep, rest, controlling screen time and exercise. Learning about wellbeing also comprises interaction skills, the environment in which the food is prepared, served and consumed, and observing, interpreting and expressing the messages sent by the body and the mind. All these can be learned and children can improve their skills, especially together with a peer group and in interactive situations supervised by adults (National Nutrition Council, 2016)¹. Meals and food education are also part of growing into a responsible environmental citizen.

1 National Nutrition Council and National Institute for Health and Welfare. Eating together – food recommendations for families with children. 2016. <http://urn.fi/URN:ISBN:978-952-302-626-1>

As children are learning to eat and developing health-promoting habits, the significance of adults' actions and the example set by adults cannot be stressed enough. It is the adults' responsibility to organise a mealtime environment that enables healthy choices, pleasant social interaction and learning that promotes wellbeing. By setting an example at mealtimes, adults can influence what children eat and what they learn to like, and what types of food-related beliefs and attitudes they adopt. The adults' guidance practices and techniques also have a significant impact on children's eating, food choices and learning about food. Children must feel unconditionally accepted and valued just as they are in different interactive situations related to meals. A guidance style that accounts for children's individuality and gives children space to influence their eating should be the aim at mealtimes. This does not mean that no boundaries are set or that anything goes; it means that the adults create the framework for the children's participation. While the adults are responsible for making the rules related to meals, they involve the children in reflecting on and justifying them. Over the long term, a guidance style that reinforces the children's possibilities of exerting personal influence builds up their ability to regulate their eating, also when no adults are present.

At mealtimes, children's food choices are influenced by a number of interacting factors: the available foods, the physical and social environment in which the children have their meals, and the children's personal characteristics, including their age, temperament and individual sensory experiences. An essential precondition for healthy food choices is that tasty and healthy food is available in adequate quantities. While children's food preferences are partly



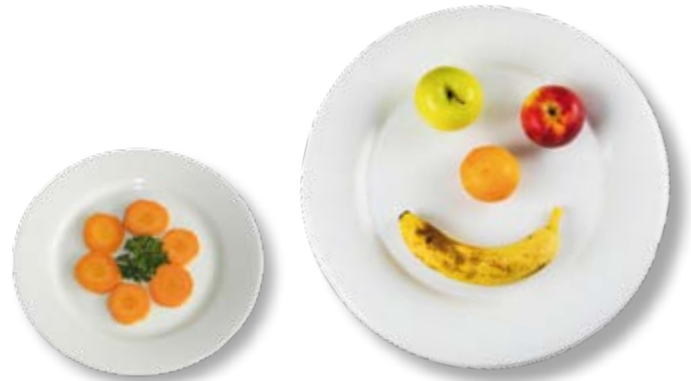


A safe approach to guiding children that enhances their possibilities of exerting influence is composed of the following factors:

- 1) In food-related interaction, children can always feel that they are unconditionally accepted and appreciated.
- 2) The adult sets the boundaries within which the children can make food-related choices as far as their level of development allows.
- 3) The rules and practices related to food are discussed with the children and justified.

congenital and inherited, they are not unchangeable characteristics. These preferences can develop positively through various food experiences and learning. It is natural for children to explore food using all the senses: look at, listen to, touch, smell and taste foods. This tendency is used in sensory food education through different exercises that tune in the senses.

It is important for pedagogical staff caring for children to be aware of the developmental phases related to eating (see The phases of learning to eat, Figure 1). The pedagogical staff observe the children's developmental phases, improving skills and any need for support and assistance, and on this basis, plan the required pedagogical and care-related support. Rather than developing automatically, many eating-related skills require a favourable eating environment and an opportunity for practising. An extensive vocabulary associated with food experiences, for instance, can only be learned by discussing such experiences.



★ JOY OF FOOD

Happiness and good feeling that you get from food, making it, sharing it with others and eating it together.



"Children eat what they like.
They like what they know.
They get to know foods
that are offered to them often."

SUSANNA ANGLÉ

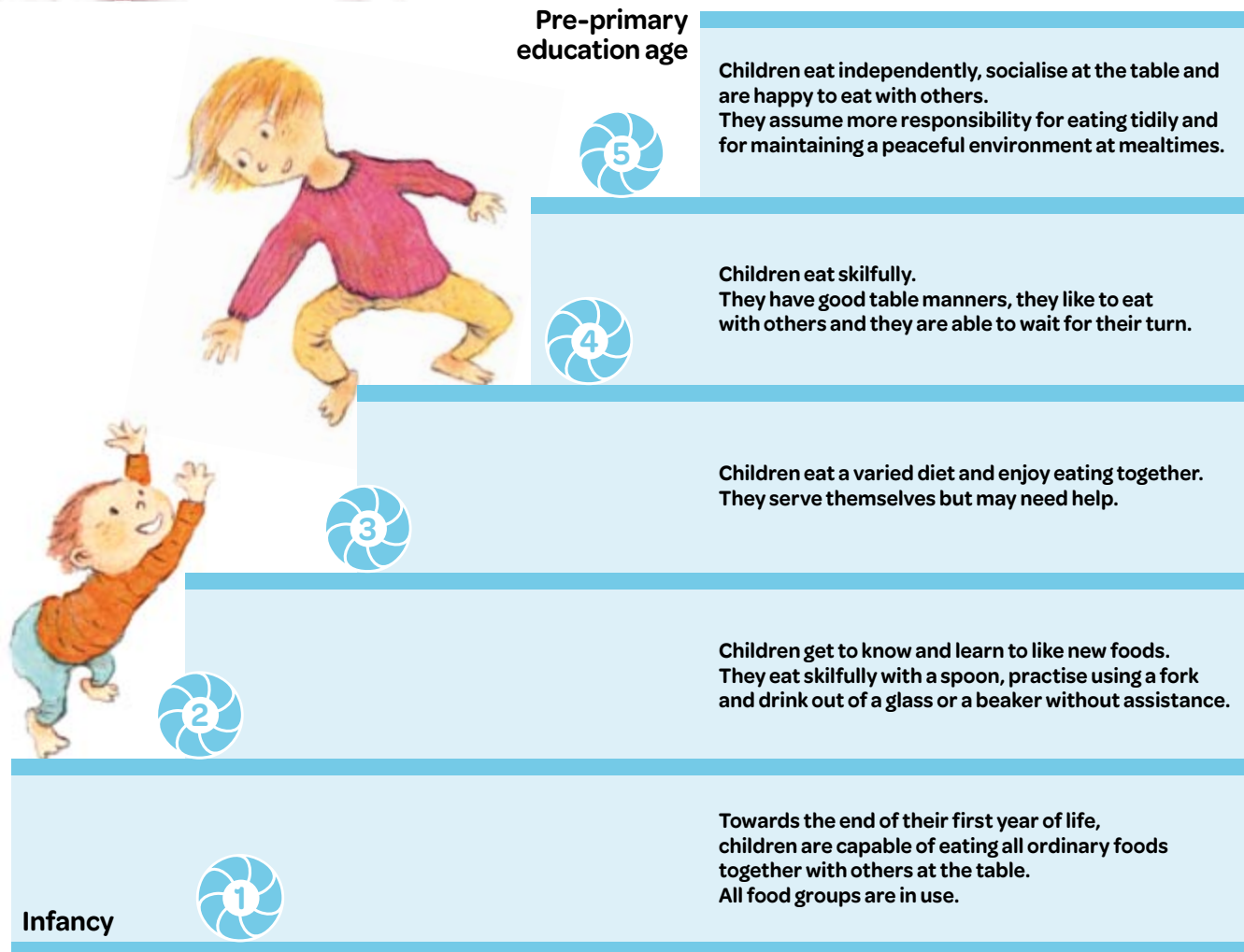


FIGURE 1. Food ladder: The phases of learning to eat and the development of eating habits from infancy to pre-primary education age.





Children are able to help themselves from a suitable service line. They can peel potatoes. Working together with other children, they are able to make food in a mini-kitchen under supervision, and help serve the meal and tidy up. Their ability to talk about food has advanced to a level where they can describe their sensations and explain why they like or do not like certain foods. They talk about their food-related activities and improving skills. They enjoy the new skills they have learned.



Children help themselves to food and are usually able to take portions that are the right size for them. They are able to butter bread, and they practise peeling potatoes. They like to participate increasingly in serving food, tidying up after a meal and small cooking tasks. They have several preferences as to food: they are curious and keen to experiment, and they know what they do and do not like. Their food talk diversifies: they name foods, are curious, ask questions and describe foods.



Children practise using cutlery and buttering bread. They can eat independently, except when tired. Mealtime routines and having their own place at meals are important. Children express their own will at meals, and need an adult's help for this. Children are happy to take part in small cooking tasks. Their food vocabulary expands. They are able to name foods, ask questions and use such expressions as "please" and "thank you".



A natural aversion to new foods that is part of the child's development becomes more common at the age of 2 and may continue until the child is 6. Children usually need to be introduced to new foods several times before they try them. Completing small food-related tasks together helps the child get familiar with new foods. Children are allowed to use different senses to explore food. Adults eat with children, talking and naming the foods that they eat together.



Children practise eating without help, using their hands, drinking from a mug and eating with a spoon. Children's fine and gross motor skills develop: they are offered finger foods and purees that are gradually made coarser. To develop food talk, foods are named and mealtimes are verbalised. Depending on their individual development, children are offered tasters of solid foods from the age of 4 to 6 months. All children should start having solid foods from the age of 6 months. Full breastfeeding on demand for 4 to 6 months and partial breastfeeding for 12 months or longer. The family's decision of breast-feeding is respected and supported.





STATUTES, REGULATIONS AND RECOMMENDATIONS GUIDING THE MEALS





Provisions on early childhood education and care organised by a municipality, a joint municipal authority or other service provider at a day-care centre, as family day-care or as some other type of early childhood education and care are contained in the Early childhood education and care act (section 1)². Under this act, early childhood education and care refers to a systematic and goal-oriented whole consisting of education, instruction and care with particular emphasis on pedagogy. These meal recommendations for early childhood education and care are intended for day-care centres and family day-care providers. Where applicable, the recommendations can also be applied to other types of early childhood education and care, including those implemented by NGOs, parishes and private service providers (clubs, playground activities etc.).

Under the Early childhood education and care act (section 2a), the purpose of early childhood education and care is to promote the holistic growth, health, and well-being of each child as determined by his or her age and development, support the child's prerequisites for learning, and implement diverse pedagogy (36/1973.) The aim of early childhood education and care is to act together with the child as well as the child's parent or other guardian to promote the child's balanced development and holistic well-being as

well as to support the parent or other guardian in educating the child. Under the act, the child must be respected and any individual needs for support must be identified in the activities.

The meal arrangements in early childhood education and care are underpinned by legislation on early childhood education and care and pre-primary education, the Finnish National Agency for Education's regulations, and nutrition recommendations for various age groups (see Fact box on page 20). In addition, regulations and recommendations on staff meals, supervision of mealtimes and setting an example as well as the calculation grounds and reimbursement of expenses are given in the following documents: the collective agreement for the municipal sector³, the collective agreement for the private social welfare sector⁴ and the Finnish Tax Administration's decision on the value of a meal benefit⁵. The Association of Finnish Local

² Early childhood education and care act 36/1973 (in Finnish). <https://www.finlex.fi/fi/laki/ajantasa/1973/19730036>

³ Collective agreement for the municipal sector KVTES 1 February 2017 – 31 January 2018. <https://www.kt.fi/sopimukset/kvtes> (in Finnish)

⁴ Collective agreement for the private social welfare sector 1 February 2017–31 December 2018. https://hyvinvointiala.fi/wp-content/uploads/2017/01/TES2017_2018002.pdf (in Finnish)

⁵ The value of the meal benefit received by day-care centre and school staff when supervising the children's/pupils' meals is EUR 3.90 per meal in 2018. (Finnish Tax Administration decision A227/200/2017, Article 12). <https://www.vero.fi/en/detailed-guidance/decisions/47380/in-kind-benefits-fringe-benefits-2018/>



and Regional Authorities' circular⁶ contains recommendations on the reimbursement of costs in municipal family day-care.

Under the Early childhood education and care act (section 2b, 36/1973), children at day-care centres and family day-care must be provided with healthy and sufficient food that meets their nutritional requirements. Meals must be appropriately organised and supervised. Government proposal (HE 341/2014) notes that the quality of the meals served in early childhood education and care must meet the general health and nutritional requirements, and that food must be offered in adequate quantities and frequently enough as indicated by the length of the day that children spend in care. In the future, more

detailed provisions on the healthiness and sufficiency of the food and the arrangements for meals in early childhood education and care can be issued by a government decree.

Under section 11 of the Decree on children's day care,⁷ the municipality shall ensure that a day-care unit and the care provided by it meet the health and other requirements set for children's day care (239/1973). Under the Early childhood education and care act (section 6), the early childhood education and care environment must promote development and learning and be healthy and safe considering the child's age and level of development. The facilities and equipment shall be appropriate and take accessibility into account. These general provisions also apply to the children's meals, the facilities in which the meals are served, the equipment, furniture and dishes, as well as the arrangements for mealtimes.

6 The Association of Finnish Local and Regional Authorities' recommendation on the reimbursement of costs in municipal family day-care 2017. Association of Finnish Local and Regional Authorities' circular 2/2017. <https://www.kuntaliitto.fi/yleiskirjeet/2017/suomen-kuntaliiton-suositus-kunnallisen-perhepaivahoidon-kustannuskorvauksista> (in Finnish)

7 Decree on children's day-care (239/1973). <https://www.finlex.fi/fi/laki/ajantasa/1973/19730239> (in Finnish)



Valid legislation, regulations and recommendations on meals in early childhood education and care

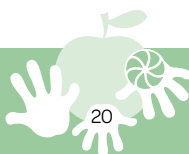
Sections 2b and 6 (580/2015) of the Act on Early Childhood Education and Care

- Section 2b Children must be provided with healthy food that meets their nutritional requirements. Meals must be appropriately organised and supervised.
- Section 6 The early childhood education and care environment must promote development and learning and be healthy and safe considering the child's age and level of development. The facilities and equipment used must be appropriate, and their accessibility must be provided for.

Section 11 of the Decree on Children's Day Care (239/1973). <https://www.finlex.fi/fi/laki/ajantasa/1973/19730239>

- The municipality shall ensure that a day care unit and the care provided in it meet the health and other requirements set for children's day care.

>>





Section 3 of the Basic Education Act (477/2003)

- Section 3 In addition to basic education, this act also applies to pre-primary education, instruction preparing immigrants for basic education and before- and after-school activities among other things.
- Education shall be provided according to the pupil's age and capabilities and so as to promote healthy growth and development in the pupil.
- Those providing education shall cooperate with the pupils' parents.
- Section 30 Right to teaching according to the curriculum and guidance counselling on school days.
- Section 31 Right to a balanced and appropriately organised and supervised meal on every school day.

Section 48d of the Basic Education Act (1136/2003)

- A child participating in before- and after-school activities must be offered a snack.

Section 3 of the Basic Education Decree (852/1998)

- The time reserved for teaching shall be divided into appropriate teaching periods.

Finnish National Board of Education Regulation, 2016: National core curriculum for early childhood education and care http://www.oph.fi/download/179349_varhaiskasvatussuunnitelman_perusteet_2016.pdf Available in English: <https://www.ellibs.com/fi/book/9789521363290/national-core-curriculum-for-early-childhood-education-and-care-2016>

- Meals and food education as part of early childhood education and care.
- 4.5 Learning area: I grow, move and develop/food education

Finnish National Board of Education Regulation, 2014. National core curriculum for pre-primary education http://www.oph.fi/download/163781_esiopetuksen_opetussuunnitelman_perusteet_2014.pdf

- Chapters 2.1, 2.5 and 4.3. The objectives and key principles of meal arrangements and food education in pre-primary education.

National Nutrition Council, 2014 [Finnish Nutrition Recommendations](#)

National Nutrition Council and National Institute for Health and Welfare, 2016 [Eating together – food recommendations for families with children](#)

National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2017 [Eating and learning together – recommendations for school meals](#)

National Nutrition Council, Finnish National Agency for Education and National Institute for Health and Welfare, 2018 [Health and joy from food – meal recommendations for early childhood education and care](#)





★ **Section 2b (8.5.2015/580):**

Children in early childhood education and care must be provided with healthy and sufficient food that meets their nutritional requirements, unless this is made unnecessary because of the nature of early childhood education and care provided outside a day care centre or family day care. Meals must be appropriately organised and supervised.

2.1 Practical implementation of legislation on meals

Decisions associated with nutrition are primarily guided by the perspectives of promoting and safeguarding the child's best interests and wellbeing as prescribed in the Early childhood education and care act.

Healthy nutrition that meets the nutritional requirements refers to meals with a high nutrient density⁸ that provide an adequate quantity of energy put together following the nutrition recommendations. For a more detailed discussion of these aspects, see Chapters 2.4 and 3. In full-time early childhood education and care, the child's **sufficient nutrition** consists of a breakfast, a hot main meal (lunch) and a snack. In shift, 24-hour, evening or weekend care, the children are offered the meals normally served at the relevant time of the day (see Table 1 on page 23). A child who spends four hours a day at the day-care centre has the right to the same meals and snacks as children in full-time care when they are present at the same time as the children in full-time care (Ministry of Education and Culture, 21 November 2016, bulletin⁹).

Meals are included in the client fees charged for early childhood education and care, and no

separate fees may be charged for them (Ministry of Education and Culture bulletin 21 November 2016⁹). This principle also applies to a child who attends morning and/or afternoon activities organised at the early childhood education and care unit and who is offered breakfast and/or a snack. However, the act states that this does not apply to clinical nutritional products or similar whose cost is reimbursed under the Health Insurance Act, nor the costs of nutritional products when early childhood education and care is provided for the children of the same family in their own home (Early childhood education and care act, section 2b).

Appropriately organised meals means that the day at the early childhood education and care as a whole, the nature of the activities and the needs indicated by the children's age are taken into account in the catering arrangements. Table 1 describes suitable times for serving the meals. Regular meals are the foundation of a healthy diet. A regular schedule of meals creates a feeling of security in the children, teaches them about the

⁸ Nutrient density means the quantity of nutrients contained in food-stuffs or a diet per energy unit, for example mg/MJ or mg/1,000 kcal.

⁹ Ministry of Education and Culture. 2016. Separate fees may not be charged for food in early childhood education and care. http://minedu.fi/artikkeli/-/asset_publisher/varhaiskasvatuksessa-ei-voi-peria-erillisia-maksuja-ravinnosta (in Finnish)



recommended meal intervals, helps them regulate their eating based on how hungry they feel, and promotes oral health. This is taken into consideration when planning the activities of a child group.

Regular meals should also be provided on excursions and during other special activities in the form of food that is sufficient for the children and suitable for the circumstances. Enough time to eat without rushing should be reserved for the children. It is also necessary to ensure that the

children do not get excessively hungry between meals, as this may cause them to become restless or irritable, or display other symptoms associated with a low blood sugar level. If necessary, a child who is feeling hungry should be offered such snacks as a piece of fruit or a sandwich. The intervals between meals should also not be excessively short. For details on appropriately arranged meals and the mealtime environment, see Chapter 4.



TABLE 1. Suitable timing of meals*

The proposed interval describes the time range within which the meal should be served, not the total duration of the meal.

Meal	Timing	NB
Breakfast	7.30–9.00	The time at which individual children arrive at the day-care centre should be taken into consideration
Lunch	10.30–12.00	Served at the latest four hours after the start of breakfast time
Snack	14.00–15.00	The time at which children leave the day-care centre and the total number of hours they spend in care should be taken into consideration
Dinner	17.00–18.00	At units providing shift and evening care
Bedtime snack	19.30–20.30	Attention should also be paid to the interval between the bedtime snack and breakfast as well as the child's age and individual needs

* The timings of the meals are arranged as appropriate for each unit, taking into account the children's best interests and the aim of promoting their wellbeing and securing sufficient nourishment.



Appropriate guidance means child-centred activities that take the children's age and capabilities into consideration, supporting the children in gaining positive mealtime experiences. A positive emotional atmosphere creates a good mealtime environment, making space for eating, social interaction and learning. Appropriate guidance supports the achievement of the food education objectives (for information on guidance, see also Chapter 4.1 on page 64). Forcing children to eat or taste foods or rewarding them with food (for example, only allowing them to have bread once they have finished the main dish) do not support positive development of eating. Guidance that respects the child's possibilities of exerting influence take into account the child's feelings of hunger and satisfaction and individual progress in developing taste preferences. By their guidance, the adults create a framework within which the children can participate in making food choices as indicated by their development level. Adults who set an example, positive food talk and introduction to diverse foods encourage the child to taste foods and gradually add variety to his or her diet.

2.2 Meals and food education in the National core curriculum for early childhood education and care

The National core curriculum for early childhood education and care (2016) is a regulation issued by the Finnish National Agency for Education that is based on the Early childhood education and care act and the objectives set in it. Activities at day-care centres and in family day-care are guided by the National core curriculum. Municipalities and other service providers have the obligation to prepare local curricula for early childhood education and care based on it. Table 2 (p. 26) describes the statutory objectives of early childhood education and care and gives examples of how these objectives can be attained as part of meals or food education.

The meals and food education are guided not only by these objectives but also the underlying values, conception of learning and areas of transversal competences in the early childhood education and care curriculum as well as the operating culture. The underlying values of the National core curriculum highlight the intrinsic value of childhood, the rights of the child (UN Convention on the Rights of the Child 1989¹⁰) and humanity, equity (the Non-discrimination Act 1325/2014¹¹), gender equality (the Act on Equality between Women and Men, 609/1986¹² and amendments to this Act 1329/2014¹³), diversity as well as a healthy and sustainable way of living.

10 <https://www.finlex.fi/fi/sopimukset/sopsteksti/1991/19910060#idp453238256>

11 <https://www.finlex.fi/fi/laki/alkup/2014/20141325>

12 <https://www.finlex.fi/fi/laki/ajantasa/1986/19860609>

13 <https://www.finlex.fi/fi/laki/alkup/2014/20141329>



The conception of learning adopted in the National core curriculum for early childhood education and care is based on a view that a child is an active agent. Children grow, develop and learn in interaction with other people and the immediate environment. In early childhood education and care, children's previous experiences and their interests and competences are the starting point for learning. Each child is entitled to gain experiences of success and joy in his or her actions and of himself or herself as a learner.

The task of early childhood education and care is to build a foundation for children's way of living which values health and well-being and promotes physical activity together with the parents/guardians. The learning area "I grow, move and develop" supports transversal competences related to taking care of oneself and managing daily life. The objectives of food education are also discussed in detail in connection with this transversal competence area (see Chapter 4.1 on page 64). In addition to learning eating skills and reflecting on the significance of nutrition that promotes wellbeing, this learning area includes respecting the child's own and others' bodies. Getting to know about the origin of food – "Where does the food come from?" – is also an important part of environmental education. In the worldview education of early childhood education and care, daily meals offer natural ways of becoming acquainted with different worldviews and the food traditions and customs associated with them. Responsible behaviour related to meals, saving energy and reducing food losses are practised as part of environmental education and adopting a sustainable way of living, and the children are guided to pay attention to the consequences of their actions.



TABLE 2. Objectives of early childhood education and care and their links to meals and food education

Objectives stated in section 2a of the Early childhood education and care act	Links of early childhood education and care objectives to meals and food education, examples
1) Promoting the holistic growth, health, and well-being of each child as determined by his or her age and development.	The objective of the meals and food education is to promote holistic growth, health and wellbeing.
2) Supporting the child's prerequisites for learning, and promoting his or her lifelong learning and implementation of equality in education.	Sufficient and health-promoting nutrition in early childhood education and care supports the children's preconditions for learning. Food education in early childhood education and care promotes life-long learning about food.
3) Carrying out versatile pedagogical activities based on play, physical activity, arts and cultural heritage and enabling positive learning experiences.	Food-related learning becomes a natural part of play (for example, playing at houses or keeping a shop or a restaurant), arts and activities based on cultural heritage (including different food cultures). Positive learning experiences related to food gained at mealtimes are important.
4) Ascertaining that the children's early childhood education and care environment promotes development and learning and is healthy and safe.	The starting point is ensuring that the environment in which the children eat is healthy and safe. Meals and other food-related activities enable many types of learning about food.
5) Safeguarding an approach that respects children and stable interaction relationships between the children and the early childhood education and care personnel as far as possible.	Respect is shown for the children in meal-related interactions. The children have their meals at their own familiar places and with their own group.
6) Providing all children with equal opportunities for early childhood education and care, promoting gender equality as well as helping the children develop their capacity to understand and respect the general cultural heritage and each child's linguistic, cultural, religious, and ideological background.	The children learn to understand and respect their own and other children's food culture as part of being introduced to different cultures.
7) Recognising the child's need for individual support and providing him or her with appropriate support in early childhood education and care if the need arises, in cross-sectoral cooperation when necessary.	It is important to identify any needs for individual support related to eating and to plan and carry out the support measures indicated by the child's needs, including providing assistant with eating (feeding), setting aside additional time for eating, and using accessible facilities solutions and assistive devices that support eating.



Objectives stated in section 2a of the Early childhood education and care act	Links of early childhood education and care objectives to meals and food education, examples
8) Developing the child's team work and interaction skills, promoting the child's ability to act in a peer group as well as guiding him or her towards acting responsibly and sustainably, respecting other people and becoming a member of the society.	Eating together offers a good opportunity for practising cooperation and interaction skills and acting in a peer group. At mealtimes, the children learn food talk: how to verbalise their food-related experiences and preferences to another person. At the same time, they learn to respect other people's different experiences and opinions. Food and meals are associated with ethically responsible and sustainable activities.
9) Ensuring that the children get an opportunity to participate and influence matters concerning them.	The children should have an opportunity to participate in and influence the mealtime practices. The children's autonomy is respected at mealtimes (for example, helping themselves to food, possibility of making choices during the meal).
10) Acting together with the child as well as the child's parent or other guardian to promote the child's balanced development and holistic well-being as well as to support the parent or other guardian in educating the children.	A balanced and positive relationship with food and making progress in how and what the children eat is promoted in cooperation with the guardians. Discussions/messages concerning food are a natural part of daily interaction. Themes associated with meals are discussed with the guardians in the context of early childhood education plans.

2.2.1 Meals and food education as part of the operating culture

The practices associated with meals and food education are part of the operating culture in the early childhood education and care community. Among other things, the operating culture consists of the community's values and principles, the interpretation of the objectives guiding the work as well as the learning environments and working methods. The operating culture defined in plans and the practical-level operating culture are not always consistent. The activities may also be guided by values, ideas and beliefs about food and eating of which the actors are not fully conscious. It is important for the personnel to acknowledge that the ways in which they act and interact with

others at meals and in other situations relevant to food education are communicated as a model to the children, who adopt values, attitudes and customs prevalent in their early childhood education community. A professional, open and respectful attitude towards the children and families creates preconditions for good educational cooperation.

It is the duty of the early childhood education and care provider and the persons directing the activities to create prerequisites for developing and evaluating the operating culture. The aim is that the shared operational concept and the goals of the activities are apparent in the practices. The director is in charge of ensuring that shared working practices are made visible and regularly examined and assessed. The starting point of all development efforts is the child's best interests.



In line with the principles of the operating culture in early childhood education and care, a learning community in which the children and the staff learn together and from each other is at the core of the meals and food education. There is room for different opinions and emotions related to food in the learning community. The community engages in a constructive discussion about different mentalities and practices related to food and meals.

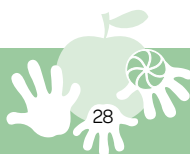
Children and staff are encouraged to share their thoughts and experiment with different working approaches confidently. An operating

culture that encourages children to play recognises the significance of play for a child's well-being and learning. Working approaches and learning environments that promote play are also suited for food education.

In the operating culture of early childhood education and care, meals and food education are linked to the extensive goal-oriented and functional entity of health and wellbeing promotion, education, instruction and care. See Figure 2 for a compilation of the factors that make up successful meals and food education.



FIGURE 2. Successful meals and food education.



WHAT IS FOOD EDUCATION?

The key aim of food education in early childhood education and care is to promote positive attitudes towards food and eating and support versatile and healthy eating habits. Food education is implemented both at the daily meals and as part of other early childhood education and care activities.

The goals of food education can be diverse: for example, they may be associated with food culture competence, promoting a sustainable way of living, knowledge of the food system or health promotion (Janhonen et al. 2015¹⁴). At the practical level, food education supports the achievement of many types of goals at the same time. For instance, getting to know different vegetables by growing them, exploring them through different senses or preparing them for food can simultaneously promote health-related objectives (e.g. liking vegetables) and other food education goals (e.g. knowledge of where vegetables come from).

*When the emphasis is on the health-related objectives of food education, **the concept of nutrition education can be used**¹⁵. This means pedagogical activities carried out with the goal of developing individuals' and communities' food-related values, attitudes, knowledge, skills and practices in a direction that improves their health. In the context of nutrition edu-*

cation, health should be understood in the wide sense as physical, psychological and social health and wellbeing. In addition to developing healthy eating habits, it is important to build up skills in such areas as self-regulation, a positive self-image and positive ideas of the child's own and other people's bodies.

***Sensory food education based on the Sapere method** is apt to support the food education objectives cited in the National core curriculum. It approaches food from a child-centred perspective: children learn about food together by sensing, exploring, experimenting, wondering and playing (Ojansivu et al. 2014¹⁶). The main emphasis is on children's active participation through having personal sensory experiences and expressing them. Regardless of their age, everyone is given an opportunity to gain personal experiences; there is no right or wrong way of making observations on food. Everyone also has the right not to experiment with or taste a food. In addition to sensory exercises, food is present in games and planned activities in many forms. By completing mathematical and linguistic tasks and expressing themselves through music, visual arts, crafts and verbal and physical expression, the children also gain practical knowledge about foods, ingredients, their origin, their preparation and food culture.*

14 Janhonen K, Mäkelä J and Palojoki P. 2015. Perusopetuksen ruokakasvatus ravintotiedosta ruokatajuun. In Janhonen-Abuquah H and P.Palojoki (eds). Luova ja vastuullinen kotitalousopetus. Käsityö- ja kotitaloustieteiden julkaisuja. 38. University of Helsinki. <https://helda.helsinki.fi/handle/10138/157591>.

15 Lakka T, Talvia S, Sääkslahti A and Haapala E. 2018. Fyysinen aktiivisuus ja ravitsemus lasten terveyden edistämässä – tavoitteena lihavuuden, tyyppin 2 diabeteksen ja valtimotautien ehkäisy. In Pietilä A-M. and Terkamo-Moisio A (eds.) Näkökulmia terveyteen ja terveyden edistämiseen. Publications of the University of Eastern Finland.

16 Ojansivu P, Sandell M, Lagström H and Lyytikäinen A. 2014. Lasten ruokakasvatus varhaiskasvatuksessa – ruokailoa ja terveyttä lapsille. Turun lapsi- ja nuorisotutkimuskeskuksen julkaisuja 8/2014. University of Turku. <https://apps.utu.fi/media/liite/sapere-koko.pdf>



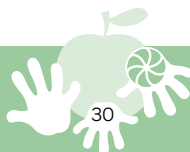
2.2.2 A child's personal early childhood education plan and individual objectives

A personal early childhood education and care plan is drawn up for every child at day-care centres and in family day-care (Act on early childhood education and care 580/2015, section 7a) together with the child and the child's guardians. In the personal plan, shared objectives are set and decisions are made together on how each child's individual development, learning and wellbeing are systematically promoted in early childhood education and care.

The objectives and measures supporting the child's development, learning and wellbeing are recorded in the child's personal early childhood education plan. The pedagogical objectives concerning the child's progress with meals and eating and, if necessary, the goals of providing support for growth and learning, individual needs associated with the meals, and information on any special diet are also included in the plan. The child's cultural and ideological background, including a diet indicated by the family's ethnic background, religion or ethical ideology, are also taken into consideration in the preparation of the plan. The plan may describe the child's general progress with eating and his or her strengths, interests and individual needs (for example, issues to do with the texture of the food, coarse and fine motor capabilities needed for eating, development of mastication, the drink the child has with the meals at home, picky eating and any other eating problems). The significance of cooperation with the parents/guardians is highlighted when planning and providing support for children's development and learning. In a trusting atmosphere, cooperation between the parents/guardians and the staff

can also succeed in challenging situations, for example when concerns emerge over the child's wellbeing or unbalanced or insufficient diet. In eating-related problems, the pedagogical staff can consult specialist professionals together with the parents/guardians or by their consent.

It is important that the observations and views of the child's parent/guardian and the staff concerning the child's phases of development and learning and ability to act in a group are combined in the child's personal early childhood education plan. Issues related to eating are also always part of an annual or needs-based review of a child's early childhood education plan. It is also important for the family to be informed of how the child copes with having meals with the group and what general objectives are set for eating in each phase of development. The parents/guardians are interested in how the child develops in eating skills and wish to hear about the child's daily experiences of success.



2.3 Meals and food education in other types of early childhood education and care

Clubs and playground activities are usually attended by children who do not go to a day-care centre or family day-care. The model of sufficient and nutritious meals and food education provided at clubs may help promote good nutrition in all families with children.

In different types of club activities, the children usually bring a packed lunch from home. It is always a good idea to discuss this packed lunch with the parents/guardians and support health-promoting choices. Food education activities should also be included in

club activities, for example being introduced to vegetables and preparing snacks together. Such simple dishes as soups and porridges can be cooked and eaten together with the children, or children and their families, in clubs.

A hot meal can also be served at the playground. This is more common during such times as the summer when schoolchildren also participate in playground activities. At the discretion of the municipality, this meal can be free or subject to a fee.



2.4 Compliance with the national nutrition recommendations in catering arrangements

The decisions on the practical catering arrangements in early childhood education and care are made independently by each municipality and, in some cases, each day-care centre. The planning and offer of the meals and snacks to be served to the children are guided by the valid National Nutrition Council recommendations on nutrient intake and foods issued at the population level and for different age groups (see Chapter 3).

The food pyramid (Figure 3) and plate models (Figure 4) published by the National Nutrition Council illustrate a health-promoting diet as a whole. Daily meals are based on ingredients found at the lowest levels of the food pyramid: vegetable products, potato and wholegrain cereal side dishes, wholegrain bread and porridges, fat-free and low-fat dairy products and edible fats. The meals are complemented with a variety of the foods found at levels 4 and 5 of the pyramid (fish, poultry, eggs, processed meat products or red meat). The daily use of foods found at the top of the pyramid (e.g. dairy products with a high fat content, low-fibre cereal products, sweets, sweet baked goods, ice cream, salty snacks, sugary drinks, sausages) has no place in a health-promoting diet. However, the balanced and varied diet of a day-care centre can also contain treats, such as those served around special days when learning about food traditions (e.g. gingerbread at Christmas, cream-filled buns on Shrove Tuesday).

The diverse, varied and moderate diet described by the food pyramid is also the best

way of avoiding the impacts of harmful substances possibly contained in foods (e.g. heavy metals or environmental contaminants). Those following a diet compliant with the food-based dietary guidelines need also not worry about an excessive intake of additives used in food manufacturing (see the Fact box What are food additives? on page 35).





FIGURE 3. The food pyramid illustrates a health-promoting diet. Source: National Nutrition Council. 2016. Eating together – food recommendations for families with children.

A health-promoting diet can also consist of various vegetarian diets. The easiest way of putting together a nutritionally adequate and balanced diet is following a semi-vegetarian (containing fish and/or white meat) or a lacto-ovo-vegetarian (containing dairy products and egg) diet. If a vegan diet is followed, it must include products that complement the food choices of the basic menu, including plant-based drinks, and specific recipes are required. For separate instructions concerning a vegan diet, see page 46. As a rule, diverse vegetarian foods are also suitable for diets based on religious or ethical ideologies.

The plate model (Figure 4) describes a balanced meal, helping to plan and put together meals. In the plate model, the distribution of the meal components is the same for both children and adults, while the portion size naturally is individually determined. The plate model can be implemented in many different ways. The basic principle is that one half of the portion consists of vegetables (fresh and/or cooked), one quarter of potato, brown pasta or a wholegrain cereal side dish, and the remaining quarter of a dish containing fish, legumes, poultry, red meat or egg. It is recommended that the plate model is always shown as an entire model meal that includes a drink, bread, vegetable margarine and oil or salad dressing (for more information about using model meals in planning and guidance, see Chapter 3.2.1 on page 39).



★ The plate model guides us to put together a healthy meal that meets our nutritional needs.

While the menu and the meals have been planned to be balanced and compliant with recommendations, food is only nutritious if it gets eaten. It is important to respect children's individual pace of development in learning to eat and accepting new foods.

In addition to the food recommendations described above, this document also contains recommendations for the energy and nutrient contents of food at an average weekly level for the purposes of menu planning in early childhood education and care (Chapter 3.5). Compliance with the nutrition recommendations can be

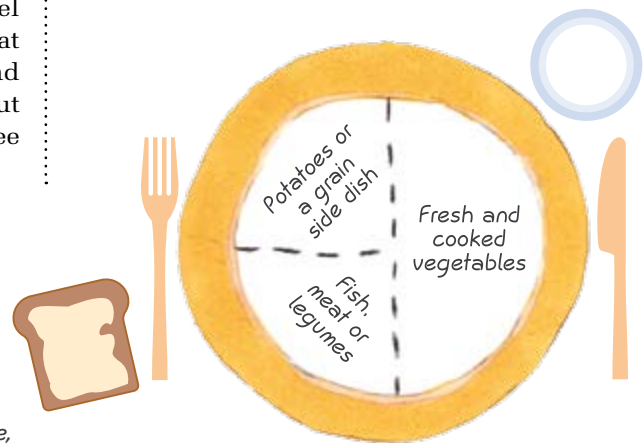


FIGURE 4. The basic plate model is the same for everyone, but the portion size is determined by individual energy needs.

★ Guidance, encouragement and the good example of adults have an essential impact on children learning to eat a varied diet.

ensured by observing the recommended food choices for breakfast, lunch, dinner and snacks (tables in Appendices 2 and 3) as well as the criteria given for the nutritional quality of meal components (Appendix 4, tables 1–3). Once the nutritional criteria for the meal components are met and the meal has been put together following the plate model, the menu-level recommendations on energy nutrients will also be complied with.



WHAT ARE FOOD ADDITIVES?

- *Food additives are substances added to foods for a certain purpose, for example to preserve them, to add colour or sweetness, or to improve the texture.*
- *In order to protect human health and guarantee a high level of consumer protection, additives must be used in compliance with EU legislation. Only EU-approved additives compliant with the requirements applicable to each substance and food group may be used in foods.*
- *Most additives occur naturally, such as nitrates in many leaf vegetables and benzoic acid in acidic berries. For example, wild blueberries contain 11 and wild lingonberries 5 substances used as additives, and all margarine additives are substances that are also found in food with no additives.*
- *The lowest food additive contents are found in unprocessed basic foodstuffs, including fresh fish and meat, eggs, milk, fresh vegetables, berries and fruit. Very few additives may be used in their production, if any.*
- *Food labelling shows if the product contains additives and what additives have been used to produce it.*

More information about additives and a mobile service for E numbers:

<https://www.evira.fi/elintarvikkeet/tietoa-elintarvikkeista/koostumus/elintarvikkeparanteet/lisaaaineet/> (in Finnish)



EATING FOR HEALTH



3.1 Menu planning

A high nutritional value in the diet is guaranteed by quality ingredients, selected recipes and careful menu planning.

At the practical level, the catering service is responsible for ensuring that the menu is compliant with nutrition recommendations, varied and balanced. However, it is the responsibility of those making decisions on and procuring catering services to make sure that sufficient resources are allocated to providing high-quality and balanced meals, making it possible to comply with the criteria stated in the nutrition recommendations (National Nutrition Council, 2014. Finnish nutrition recommendations, version 4). The quality requirements should be recorded in catering service contracts and tender documents for food procurements as minimum requirements (see tendering, Chapter 3.7.1). The service contract concluded between the contracting entity and the supplier specifies the contents and appropriate composition of the menu.

Menus for early childhood education and care are planned with a rotation of soups, main meals consisting of meat in a sauce, oven dishes, stews and itemised foods as suggested in the recommendations. Menus, dishes and meal components should be varied and modified, allowing the children to get to know new ingredients and dishes. Seasonal Finnish dishes typical of the local area are valued



and included on the menu, while also taking eating habits in a changing world into account.

The recommendations on ingredient choices and the frequency at which they should be served given in Appendices 2 and 3 are used as the basis of menu planning. (NB. For foods that should be avoided in the diet of infants and young children, see Evira's instructions on safe use of foodstuffs).

A sufficient period of rotation is a precondition for a varied and versatile menu. A five-week rotation is adequate to guarantee a diverse diet for children at the age of attending a day-care centre. The entire year should be taken into consideration when planning the menu rotation. Seasons, themes and special days punctuate the year, offer variety and provide natural opportunities for guidance related to food culture and traditional customs. Thematic and festive menus should be planned together with the core menu to avoid overlaps and errors in its implementation. In meals served on theme and festive days, the minimum requirements of nutritional quality may be compromised on.

In terms of oral health, it is important that foods requiring mastication are regularly served at the daily meals, including raw root vegetables, fruit and crisp bread. Mastication develops the children's oral motor skills and supports speech development as well as increases the secretion of saliva, helping to break down the food. After meals and snacks, the children are offered xylitol



products, such as pastilles (or chewing gum or tablets). The use of pastilles has proven an easy practice. The regular use of xylitol prevents tooth decay. (For more information on xylitol products, see page 54.)

3.1.1 Diversity of food cultures

Food is an important way of expressing identity in all cultures. Our food culture directs our choices of basic foods and side dishes. The foods and eating routines in a child's home may be different from the food and mealtime practices at the day-care centre, which represents traditional or local Finnish food culture. There are also differences in customs and ideas related to what foods can be given to a child at a specific age and how food should be eaten (for example by hand, off a plate and using cutlery).

Children at the early childhood education age already watch their peers eating and wish to identify with and be integrated with their age group and its customs. New foods may be fascinating to a child, and the group's support makes him or her more willing to try them. On the other hand, the child's natural aversion to new things and a tendency for picky eating may be reinforced if the meals at the day-care centre are very different from the food eaten at home.

It is important to recognise that a healthy diet can be equally well put together in many different ways. For example, if the child's family only eats cooked vegetables, the intake of nutrients that are only found in great quantities in fresh products can be secured by serving fresh fruit as meal accompaniments and snacks.

When the food cultures in the children's homes are taken into account in menu planning and development, new taste experiences can be found for all those sitting around the table. New dishes

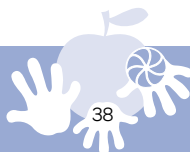
and eating-related customs may offer wonderful joint experiences that teach the children to appreciate food and its diversity. Cooperation with families is essential when making use of different food cultures. Good ways of introducing children to the richness of different food culture backgrounds include having weekly themes, organising ethnic food theme days, or arranging events jointly with the families.

3.2 Meals and snacks served in early childhood education and care

The meals served at the day-care centre and at home are mutually supportive and combine to form a healthy and balanced whole. On average, three meals are served to a child who attends full time care during the day, covering some two thirds of his or her daily energy and nutrient needs. A regular meal schedule is followed in early childhood education and care (see page 14).

In special situations including excursions, celebrations and theme days, the sufficiency of food must be secured, ensuring that enough suitable food is also available for those on special diets. Particular attention should be paid to having a sufficient quantity of food when a meal is replaced by a packed lunch. The minimum requirements for nutritional quality may be compromised on in packed lunches (for more information on packed lunches, see Appendix 9).

The day-care centre's menus are published electronically on different communication channels and posted in a visible location at the centre. This makes it easier for the guardians




to coordinate meals cooked at home with those served at the day-care centre and observe instructions related to the frequency of using certain foods, including sausage and cold meats.

3.2.1 Model meals – a tool for planning and food education

The model meal is a tool that the catering service provider can use for all stages of meal planning from food purchases to the serving of meals. The model meal pictures create a shared understanding between the catering service and pedagogical staff of the components of a nutritionally adequate meal. It should be noted, however, that the model meal does not represent a quantity that a child is required to eat at one meal.

The model meal also serves as a tool for food education, both at mealtimes and in other contexts. Model meal pictures can be used as a basis for discussing the contents and ingredients of a meal with the children. For example, the children can look at food pictures in a food circle before a meal and use them to put together meals, wondering, having insights and learning together. The model meal also helps a child understand how a balanced lunch is composed.

In the model meal, one half of a child's portion consists of vegetables, for example grated vegetables, a salad, chopped vegetables and/or hot vegetables served as a side dish. The share of potato, brown pasta or some other wholegrain cereal side dish is approximately one quarter of the portion, while the remaining quarter is for a dish containing legumes, fish, poultry, egg or red meat. A portion of soup or porridge can similarly be shown in a

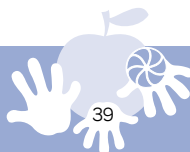


★ The adults decide what foods are offered and when
– the children themselves know how much they are able to eat.

bowl, with vegetables, berries, fruit and other side dishes served beside it as components of the meal. The model meal also includes a drink, brown bread and vegetable margarine.

The model meal shows in concrete terms how a nutritious meal always includes a drink, bread, a spread and, if salad is being served, rapeseed or olive oil or an oil-based salad dressing of a high nutritional quality. When model meals are used to describe young children's meals, it should be remembered that the child's energy needs vary depending on his or her age and size. The relative shares of different foods remain the same in model meals intended for children of different ages, even if the portion size changes. The children should be allowed to help themselves to food, as this supports the development of self-regulation in eating. The portions children eat are also influenced by individual differences in learning to eat and developing taste preferences. From the guidance perspective, it is important to note that children's appetites may vary considerably from day to day, and sufficient energy intake can only be assessed over a longer term.

It is recommended that photos taken of portions found on the unit's own menu are used as model meal pictures. Several different techniques can be used to view them (printed pictures, digital pictures, an electronic picture archive). Food pictures can also be made together with the children. Information and communication technology can be used for such purposes as the children's own photography projects. The



pictures can be used to illustrate the weekly menus (for example on the day-care centre's notice board) or shared electronically. The model meal pictures also bring an important message to the guardians about the composition of the meals served in day-care and encourage dialogue about the children's meals between the home and the day-care centre.

3.2.2 Breakfast

A good breakfast always contains wholegrain cereal, fresh vegetables, fruit or berries, fat-free or low-fat dairy products and soft fats, for example a variety of the following:

- high-fibre and low-salt porridges and gruels
- high-fibre and low-salt bread or baked goods (e.g. a rice-filled pie made from a rye dough)
- vegetable margarine or oil (on bread and/or in porridge)
- fresh vegetables (on bread or as finger foods)
- berries or fruit (to be eaten with porridge or yoghurt, as fresh fruit/berry puree or as finger foods)
- fat-free milk or a milk drink fortified with vitamin D, or low-fat plain yoghurt.

For criteria and tips for breakfast foods, see Appendix 3.





*Breakfast 1:
Oatmeal porridge, brown bread with
margarine, a slice of turkey,
root vegetable sticks,
fat-free milk*



*Breakfast 2:
Rye porridge with a dollop of margarine,
potato flatbread, pea hummus,
root vegetable sticks,
fat-free milk*



*Breakfast 3:
A brown bread roll with margarine,
vegetable spread, plain yoghurt,
fresh redcurrant and apple puree,
fat-free milk*



See the sample weekly menu, Appendix 5, pp. 98–99.

3.2.3 Lunch and dinner

The meal components are served separately. Salads are mainly served as components (each ingredient separately) and hot cooked vegetables preferably separately rather than mixed in with sauces or oven dishes. Children will eat more vegetables and new foods when they are involved in preparing some meal component together. The Sapere method and the pedagogical menu¹⁷ are good techniques for children's food education. These methods include familiarising the children with the menu ingredients by allowing them to explore, peel, cut and grate them. (See Chapter 4.1.)

A balanced meal contains the following every day:

- a hot meal in which the main ingredient is fish, legumes, white meat, egg or red meat
- a side dish containing fresh vegetables or fruit as a salad, grated or chopped
- rapeseed or olive oil on its own or a salad dressing
- depending on the main dish, potato, pasta or some other wholegrain cereal or vegetables as a hot side dish
- a fat-free drink fortified with vitamin D (milk/milk-based drink/buttermilk)
- low-salt brown bread and vegetable margarine.

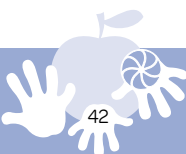
A meal consisting of porridge or vegetable soup should be complemented with sides and/or a dessert:

¹⁷ A pedagogical menu = a menu that supports food education. See page 64.

- cottage cheese or other low-fat cheese, spreads or dressings containing yoghurt or fromage frais
- or**
- an egg, egg and vegetable margarine spreads, home-made fish spreads
- or**
- low-salt vegetable, bean and seed spreads, marinated beans and lentils
- and**
- fruit and Finnish berries on their own, crushed berries, fruit purees, and fruit and berry desserts.

Meals at the day-care centre provide a good opportunity and model for getting used to vegetarian food. Vegetarian food supports both health-promoting and environmentally responsible eating. Serving more vegetarian dishes also helps to comply with the recommendation on the intake of red meats. It is recommended that all children are offered vegetarian dishes at least once a week on average. Porridge is also a vegetarian option. If porridge is served for lunch, this should be taken into consideration in the planning of the days' other meals (to avoid serving two meals consisting of porridge on the same day).

At dinnertime (see Table 1, page 23) dinner is served to those children who are present. The same principles should be followed regarding its planning, composition and contents as for lunches. The aim should be planning a balanced and varied menu in which the dinner and the lunch complement each other. Dinners served in shift care should be equally varied and diverse as the lunches.





*Lunch 1:
Turkey and vegetable soup, blueberry and
rye pudding with milk,
rye bread with margarine,
fat-free milk*



*Lunch 2:
Vegetarian croquettes, sour cream dressing,
boiled potatoes, vegetables,
crisp bread with margarine,
fat-free milk*



*Lunch 3:
Salmon and potato bake,
grated red cabbage and apple,
oil/salad dressing,
crisp bread with margarine,
fat-free milk*



See the sample weekly menu, Appendix 5, pp. 98–99.

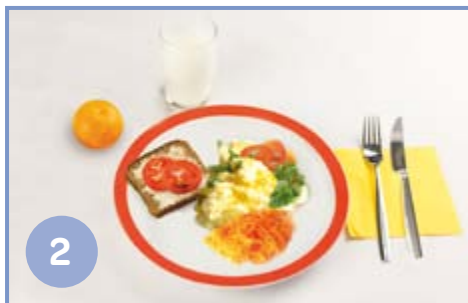
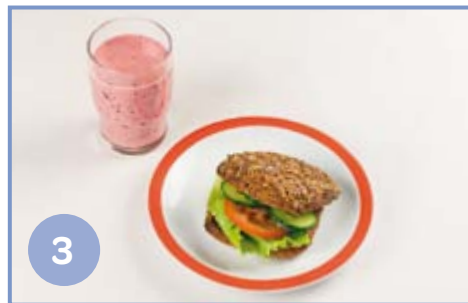
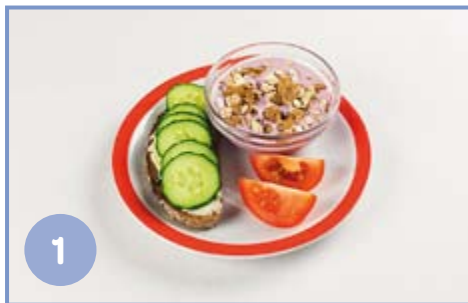
3.2.4 Snacks

The diversity and variety of snacks should be taken into account in menu planning, ensuring that the day's meals complement each other. Versatile and healthy snacks include vegetables; fruit and berries on their own or in a fruit salad, in a dessert or mixed with fromage frais; high-fibre wholegrain porridges and baked goods that contain berries or fruit and moderate amounts of sugar; bread; as well as fat-free and low-fat dairy products. Tasty and versatile snacks based on berries, fruit and vegetables that meet the nutritional criteria should be developed for children.

For criteria and tips for snacks, see Appendix 3.

3.2.5 Bedtime snack

The principles of putting together breakfasts and snacks should be followed in the contents of the bedtime snack. It is important to look at the day's menu as a whole and plan the bedtime snack accordingly. While the bedtime snack generally is lighter and more simple than the breakfast, its quantity and contents should be guided by how hungry the child is.



*Snack during the day or at bedtime 1:
Fromage frais with berries and muesli,
rye bread with margarine, vegetables*

*Snack during the day or at bedtime 2:
Vegetarian omelette, a mandarin,
brown bread with margarine, fat-free milk*

*Snack during the day or at bedtime 3:
Smoothie or buttermilk drink with berries/fruit,
wholemeal bread and margarine, vegetables*

See the sample weekly menu, Appendix 5, pp. 98–99.



3.3 Special diets and other special needs

3.3.1 Special diets for treating an illness

Food that is suitable and safe for him or her is served at the day-care centre to a child who follows a special diet for health reason or has special needs. A medical certificate issued by the physician treating the child need to be submitted concerning special diets if the diet is part of the child's care. The unit only needs to be notified once of illnesses that require permanent dietary treatment, include diabetes and coeliac disease. However, a new notification should always be submitted when the child changes units. When the child's need for a special diet has been appropriately diagnosed, the diet will be implemented following the care recommendations for the illness in question. The practical implementation of the diet is supported by individual instructions prepared by a nutritional therapist if necessary. Rather than needing a special diet, a child with diabetes can eat the ordinary meals served at the day-care centre (Appendix 6).

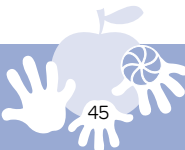
For a child who follows a special diet for health reasons, meals that are as similar as possible to the food served to the other children are provided, ensuring that the child does not stand out unnecessarily in the group. Demanding special diets, in particular, may have an adverse effect on the quality of the child's social life. Rather than joy of food, a child in whom food triggers serious symptoms may develop a fear of food. At mealtimes, the focus should be on being together and happy things, without drawing attention to the child's different diet.

The pedagogical staff should decide how special diets, especially allergies and coeliac disease, are

taken into account in meal arrangements and, for instance, when the children bake together. When organising excursions, it must be ensured that enough food is also reserved for children who are on a special diet, and that additional drinks or snacks with a high carbohydrate content is brought for a child with diabetes to treat any hypoglycaemia.

The diet of children with coeliac disease may not contain any wheat, barley or rye. As no cereals containing gluten may end up in the food of a child with coeliac disease, particular care should be taken when preparing, serving and storing food, ensuring that the food containing gluten is not in contact with gluten-free foods and that the same serving implements are not used for both. Gluten-free bread, for instance, is kept separate and protected, and it must have its own serving dish. The child is given a single-serving margarine pack or his or her own margarine tub, from which the margarine is taken using a clean knife.

The most common food allergies in young children are to milk, cereals and egg. In most cases, these allergies disappear before the child reaches school age. If the child has food allergies that trigger serious or life-threatening symptoms, a medical certificate is needed, which is always valid for a fixed term. The causes and symptoms of the food allergy are discussed with the parents, as well as the level of care needed in avoiding each food. Detailed instructions for different situations are also agreed on: can the child help himself or herself on the service line, what should be done if the child is exposed to or has an allergic reaction (for information on using an adrenaline



injector, see Appendix 7) and what the procedure is for excursions. A decision should also be made about informing the other children at the day-care centre and their families to ensure that the children know what to do at meals and that any foods that families may bring in are safe for all children. If a child has a severe or life-threatening food allergy, it is recommended that a portion with his or her name on it is set aside for the child in the kitchen or on the serving trolley. The catering and pedagogical staff should go through together the special diet meals served each day. If special products are used in the child's diet, including infant formula/a weaning product suitable for an allergic child or clinical nutrition products, the guardian will deliver the required products to the kitchen.

Under the Food Information to Consumers Regulation¹⁸ (EU No 1169/2011), customers must be provided with adequate information about the ingredients used in a food. The catering staff must always have information about all the ingredients used and their suitability for different diets. Especially when the children have a meal anywhere outside the regular facilities, it must be possible to provide correct information. When information on a child's special diet has been provided in advance in writing and the food is served with the child's name on it, a specific declaration of how information on the composition of the products can be accessed is no longer needed at the mealtime.

For more information: see Appendices 6, 7, 8a and 8b (Diabetes, Food allergies, Notification of special diets)

¹⁸ Regulation (EU) No 1169/2011 of the European Parliament and of the Council on the provision of food information to consumers. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R1169&from=FI>

More information on food allergies (in Finnish):

<https://www.thl.fi/fi/web/lastenneuvola-kasikirja/tietopaketti/allergiat>

www.allergia.fi/allergiat/lasten-ruoka-allergia

<https://www.evira.fi/elintarvikkeet/tietoa-elintarvikkeista/ruoka-allergeenit/>

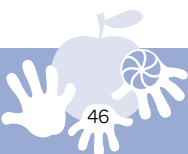
<http://www.erimenu.fi/>

3.3.2 Other special needs

A child may also need meals that differ from the dishes on the basic menu for religious or ethical reasons. Special needs associated with religions or ethical ideologies that differ significantly from a diet consistent with the eating habits of the mainstream Finnish population are taken into account according to the municipality's or early childhood education and care provider's policies. As a rule, diversely implemented vegetarian options are also suitable for diets based on religious or ethical beliefs.

Vegan diet

Decisions on serving vegan meals are made according to the municipality's or early childhood education and care provider's policies. The recommendation Eating together – food recommendations for families with children (National Nutrition Council, 2016) notes that a carefully composed vegan diet is also suitable for young children and that the preconditions for this include using nutrition supplements and enriched foodstuffs as well as a wide variety of plant-based protein products. Due to a lack of research in vegan diets for children, it is currently impossible to make evidence-based conclusions on the impacts of a vegan diet on children's health



and growth¹⁹. The responsibility for implementing the diet of a child attending a day-care centre is shared between the centre and the family. The quality of a vegan diet must be in line with the nutrition recommendations. In the planning of vegan menus, such factors as the availability of foods suitable for a vegan diet and recipes for meals that are suitable for children and of a high nutritional quality must be taken into account.

Developing and implementing varied and tasty vegan meals and ensuring that they contain sufficient quantities of energy and nutrients for a growing child require a dedicated planning process. The breakfasts and snacks must be varied, contain enough energy and combine to form a balanced whole together with the lunch. It is recommended that the family of a child on a vegan diet sees a nutritional therapist for guidance and support with planning the child's diet. The child's guardians are responsible for complementing his or her diet with the required nutritional supplements (at minimum vitamins D and B₁₂ and iodine). The early childhood education and care and catering service staff may also need the guidance and support of a nutrition expert (a registered dietitian or a Master of Arts having majored in nutrition science).

When following a vegan diet, vegetable products that are adequate and versatile sources of plant-based protein must be selected and used. Nutritionally balanced protein sources include wholegrain cereals; legumes, or beans, peas, lentils and soya in different forms (ground, crushed, sliced, tofu, tempeh etc.); and nuts, almonds and seeds. In addition to securing an adequate protein intake, it must be ensured that the meal has a sufficient energy content. At

19 Schürmann S, Kersting M & Alexy U. Vegetarian diets in children: a systematic review. *Eur J Nutr* 2017;56:1797-1817. doi: 10.1007/s00394-017-1416-0

meals, vegetable margarine is spread on bread, and vegetable oil (preferably rapeseed oil that is high on n-3 fatty acids) is added to salads. When choosing plant-based drinks, the great variations in the nutrient contents of different drinks should be noted (protein content and added vitamins and minerals). The most highly recommended choices are plant-based drinks diversely enriched with vitamins and minerals (calcium, vitamin B₁₂, riboflavin and vitamin D), however not rice-based drinks (<https://www.evira.fi/yhteiset/vierasaineet/tietoa-vierasaineista/arseeni-ja-riisi/>) (in Finnish). The most highly recommended breads and ready-made meals are products with iodised salt. The vegan plate model helps to plan the meals and supports guidance (Figure 5). (For more information see: Eating together –food recommendations for families with children. <http://urn.fi/URN:ISBN:978-952-302-626-1>

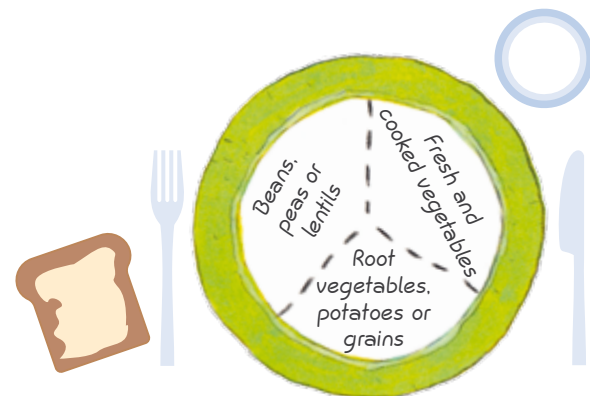


FIGURE 5. A vegan meal has three components: a side dish made from root vegetables, potato or cereals; fresh and cooked vegetables; and legumes or other high-protein vegetarian foods. The meal always contains fresh vegetables or fruit, oil/oil-based salad dressing, bread, vegan margarine and an enriched plant-based drink. Foods with berries, fruit, nuts and almonds are suitable complements for snacks.

3.3.3 Practices for giving notification of special diets and other special needs

The need for a special diet associated with treating an illness is always determined by the child health clinic or the health care unit caring for the child. The notification practices for special diets are subject to local agreements between early childhood education and care and the child health clinic. The parents/guardians are informed of the practices for giving notification of a special diet (forms in use, notifications to be given by the parent/guardian, required medical certificates, individual dietary advice). The information and any modifications related to the child's diet are communicated to the catering service by the pedagogical staff or the director of family day-care. In the interest of good information flows, the day-care centre should appoint a specific person to assume responsibility for special diets. This person usually is the director or vice-director of the day-care centre. He or she is responsible for timely exchanges of information between the families and the pedagogical and catering service staff and ensures that any substitute workers are aware of the child's diet. He or she also provides instructions for emergencies. An appropriate and clear notification practice has been found to reduce the number of unnecessary special diets. It is recommended that the notifications are submitted to the day-care centre and the catering service using the notification form for special diets based on the Finnish Allergy Programme and research findings (Appendices 8a and 8b).

The details of catering for a child's special diet or other special needs are decided at a joint meeting before the child starts attending the day-care

centre. It is important for the pedagogical staff to discuss the child's meals with the family every year and record any agreements and diet-related aims together in the child's personal early childhood education plan. In this context, it should also be ensured that the family is in possession of sufficient and correct information about how a special diet or the serving of separate meals are carried out at the day-care centre and where the family can find additional information if necessary.

3.4 Improving the nutritional quality of food by ingredient choices

The meals served in early childhood education and care are balanced, varied, tasty and inviting. While the children are offered choices, it is vital that the nutritional quality of the meals is based on the nutrition recommendations. The quality of special diets must also be in line with the nutrition recommendations.

When choosing ingredients, the recommendations on developing children's diets should be observed (Table 3).

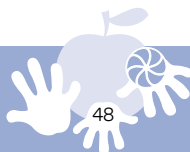


TABLE 3. Promotion of health through food choices.

Source: Eating together – food recommendations for families with children, 2016.

Add	Replace	Cut back on
Vegetables, including vegetables, roots, berries, fruit, mushrooms	Low-fibre grains with whole grains	Sugar
Oil, nuts, almonds, seeds	Butter and butter-based spreads with vegetable margarine or oil. High-fat dairy products with fat-free or low-fat products.	Coconut oil and palm oil
Fish Peas, beans, lentils	Red meat partly with poultry. Animal protein partly with plant protein.	Red meat, deli meats and sausages
	High-salt products with lower-salt products: bread, cheese, deli meats. Non-iodised salt with iodised salt.	Salt



Vegetables, fruit and berries

A large variety of vegetables, berries and fruit are served at the meals in different forms to familiarise the children with their varying flavours and textures. The idea of handful-sized portions is a good tool for daily guidance on eating vegetables, fruit and berries. A handful is a clear measure that is always available and

helps to illustrate the targeted amount in a fun way even for a young child. This measure works for breakfasts and snacks and as part of the plate model at lunch and dinner. Handfuls can be used to guide the children individually in the use of fruit and vegetables towards eating the recommended quantity.



FIGURE 6. A handful of vegetables, fruit or berries at each meal – the portion increases as the child's hand grows.

Vegetables are served on their own or chopped, grated, added to salads and/or cooked, used as ingredients for dishes, or eaten on bread or in bread rolls. Fruit are served whole or sliced. Variety is added by serving crushed berries, grated fruit and milk or yoghurt drinks with berries or fruit. Seasonal produce and Finnish options are selected as far as possible.

Vegetables, fruit and berries with different colours make the food more inviting. Children eat more fruit and vegetables when a wide variety of them is offered, when the different components of a salad are served separately, or when they are cut into finger foods, for example at snack times. Pickled vegetables containing vinegar and salt, including beetroot or cucumber, should not be regularly on the menu in early childhood education and care.

Cereal products and cereal-based side dishes

High-fibre and low-salt bread should be served at the day-care centre. (See Appendices 2 and 3.) It is recommended that soft options are also served in addition to crisp bread. Cereal products are an important source of protein, especially in a vegetarian diet.

Dairy products

Low-fat milk/a milk-based drink and buttermilk fortified with vitamin D are served with the meals. Other liquid dairy products and cultured milk products should be either fat-free or have a maximum fat content of 1%.

Cheeses containing at most 17% of fat and 1.2% of salt are selected. In a vegetarian diet, a sufficient protein intake can be safeguarded by eating a diverse range of foods containing plant-based protein and complementing the diet with low-fat milk products. (See Appendices 2 to 4).

The School Milk Scheme, which has operated in Finland for an extended period, has now been combined with the School Fruit and Vegetables Scheme (autumn 2017)²⁰. Under this EU-funded distribution scheme for schools, day-care centres can apply for aid for purchasing fat-free milk and buttermilk fortified with vitamin D. The target groups for the School Milk Scheme are children in early childhood education and care, in pre-primary education and at school.

²⁰ EU school fruit, vegetables and milk scheme. Agency for Rural Affairs guide: Koulumaitotuki ja kouluhedelmätuki (in Finnish). <http://www.mavi.fi/fi/oppaat-ja-lomakkeet/kunta-koulu-paivakoti/Documents/Koulumaitotuki/Koulujakelutuen%20hakuopas%202017-2018.pdf>
https://ec.europa.eu/agriculture/school-scheme_en





Why should children drink fat-free milk?

- The only way in which the nutritional content of fat-free milk and buttermilk differs from other milk qualities is the amount of fat.
- Fat-free milk contains all the natural milk nutrients, including proteins, iodine, calcium, zinc, and vitamins B₂, B₁₂ and D.
- Milk contains nutrients that are necessary for growth in an easily absorbed and natural form.
- Almost 70% of the fat contained in light or full milk is saturated or trans fat.
- Such studies as STRIP (Special Turku Coronary Risk Factor Intervention Project) on Finnish children have shown that using fat-free milk and vegetable fat promote cardiovascular health from early childhood on.
- The naturally saturated fat in milk does not meet any nutritional needs. It is only a source of energy in the diet and also has a scientifically proven link to cardiovascular diseases.



Vegetable oils and margarines, nuts and seeds

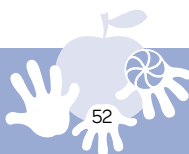
Vegetable oils and margarines contain plenty of soft fat and should thus be used as sources of visible fat. Vegetable margarine with a minimum fat content of 60% should be used on bread. At maximum 30% of this amount should be saturated fat. Serving vegetable oil or an oil-based dressing with salads is recommended. Vegetable oil, a liquid vegetable oil product or a vegetable margarine with a minimum fat content of 60% should be used for cooking. Rapeseed oil and olive oil are particularly good choices because of the healthy fatty acids they contain and their good cooking properties.

Nuts, almonds and seeds served to the children should be unsalted, uncoated and with no added sugar. A suitable quantity according to the food recommendations is approximately 15 g/day, including all products in this group.

A variety of seeds, including flax, pine, chia, hemp, sesame, pumpkin, poppy and sunflower seeds, can be served with food or as an addition to salads. No seeds should be given to infants. For children aged 1 to 6 years, the maximum amount should be 1 tbs (6 to 8 g) a day, with a variety of different seeds. (See Evira's up-to-date instructions on safe use of foodstuffs²¹).

Any food allergies to nuts and almonds should be taken into consideration in communications, children's guidance, the presentation and serving foods, and in product information.

²¹ <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/>



Legumes

Legumes, including peas, broad beans, other bean species and lentils, and products made from them are rich sources of protein. Choosing plant-based protein sources is recommended, as they are a sustainable option in terms of both human health and the environment. The use of different types of legumes as a protein source in main meals and/or side dishes on a weekly basis is recommended.

Fish, meat and eggs

A variety of fish, chicken, turkey, red meats²², game and liver²³ as well as eggs are used in the main dishes. Attention should be paid to the quantity and quality of fat in animal products. Fish fat is the healthiest option. The fat in skinless chicken and turkey is of a better quality better than the fat in beef, pork or lamb.

The use of sausage as well as ham, beef, turkey and chicken based cold cuts, strips and kebab meats in dishes and as cold meats should be limited (see guidelines for the safe use of sausage²⁴). Guidelines have also been issued for the safe use of liver and liver sausage²³. If liver sausage and pate are used, their volumes should be included in the recommended quantities of cold meats. A variety of meat and processed meat products should be served, and they should be accompanied by or substituted with fish, poultry, eggs and legumes. Hot cooked vegetables or vegetable side dishes should be served with meat dishes. Low-fat

and low-salt processed meat products should be selected. Choosing cold meat products that meet the minimum nutrition recommendations is recommended. (See Appendices 2 and 3).

Red meat, sausage and cold meats should not be served daily. As a young child's energy needs grow, the recommended maximum intake of red meat and processed meat products can be increased, approaching the recommended adult intake. However, the recommended frequency of use for meat and processed meat products should be observed, and the guidelines on safe use of foodstuffs should be complied with²⁵. The recommended amount of cooked red meats for adults is 500 g a week at maximum (corresponding to 700–750 g in uncooked weight). The weekly portion for under school-age children and children of early childhood education and care age should not exceed one half of the quantity recommended for adults. These quantities apply to the child's diet as a whole, including the meals the child has at home.

22 Red meats means beef, pork and lamb.

23 <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/consumption-of-liver-and-liver-based-foods/>

24 <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/>

25 <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/>



Drinks

Fresh tap water should always be available at meals to quench thirst and as an additional drink. Water should be available all day for anyone who is thirsty.

Xylitol products

Xylitol products, either pastilles, tablets or chewing gum, are offered to the children after a meal and a snack. They should be used regularly every day following at least three meals. The recommended total intake is ≥ 5 g/day. This intake is obtained from 6 to 10 pieces of xylitol chewing gum or pastilles. The use of xylitol products at the day-care centre should be supervised.²⁶

Environmental considerations in food choices

The perspective of sustainable development should be taken into consideration in food choices. A mainly vegetarian diet composed according to the recommendations reduces the environmental loading caused by food production. An environmentally friendly diet favours a wide range of seasonal Finnish vegetables and legumes and does not exceed the recommended quantity of red meats. Choices that support sustainable development also include substituting rice with Finnish cereals, cereal side dishes or potatoes, fish (especially freshwater fishes)²⁷, rapeseed oil, vegetable margarine and tap water to quench thirst.

26 Ministry of Social Affairs and Health bulletin N5-63337, 2013. Brushing of teeth and xylitol use for children at the day-care age (in Swedish). http://stm.fi/artikkeli/-/asset_publisher/borstning-av-tanderna-och-anvandning-av-xylitol-hos-barn-i-dagvardssalern

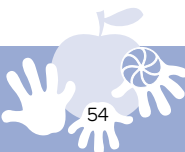
27 Evira's guidelines on choices and frequency of use of different fish species for children, those in a fertile age as well as pregnant and breastfeeding women should be observed. <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/>

In addition to food choices, cutting down on food losses is a significant measure for reducing the environmental loading of food. Children are guided to help themselves to a portion of food that corresponds to how hungry they feel. The possibility of having second helpings is a way of reducing the volume of food losses on the plate. In food preparation, losses can be reduced by preparing a shared plan for the unit, having a good order and logistics system, and taking into account excursions and the absence of larger groups in the quantities of food prepared. Losses can also be reduced by selling any unwanted lunches.

3.5 Energy and nutrient content of meals

The nutrient contents of the main meal served at the day-care centre should be guided by the National Nutrition Council's Finnish nutrition recommendations (2014) and Eating together – food recommendations for families with children (2016). In particular, it is important to ensure that in all meals served in early childhood education and care the proportions of energy yielding nutrients and the quantity of saturated fat, salt and sugar comply with the recommendations at weekly level.

As there can be significant variations in the length of the day children spend in care, the meals should be timed appropriately following the recommended schedule (recommended interval between meals approx. 3 to 4 hours) and suitable portion sizes should be served.



Energy

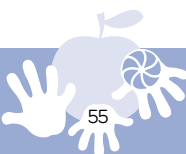
The daily meals are planned to **provide approximately one third of the daily energy requirements of children in part-time care and approximately two thirds of the daily energy requirements of children in full-time care**. The meals and snacks indicated in the recommended meal schedule are served to children in early childhood education and care (see page 20). It is important to note that there are major variations in children's energy expenditure, which means individual portion sizes. The recommendations are only fulfilled when the child eats all the meals with their accompaniments. For reference energy values to be used as the basis of meal planning, see Table 4.

The energy requirements of girls and boys are relatively similar until the approximate age of 5 years. Children's energy requirements fluctuate on a daily basis and periodically, affected by growth spurts and the children's level of activity among other things. Many factors in children's lives affect their appetites, including daily rhythms, moods and state of health. Sufficient time should be reserved for meals to allow the children to eat according to their needs.

When planning food education in early childhood education and care, it should be noted that at the beginning of the operating year in the autumn, the groups are only starting to practise many recurring every-day situations. The children gradually get used to eating outside their homes. Some children may miss their parents greatly, which may affect their appetites. Enough time should be set aside for getting used to new things. The children also grow during the operating year, which affects the volume of food they eat. This volume also grows as the children get used to the dishes on the menu. On days when the group takes a lot of exercise and is active, the children are also likely to eat more.

TABLE 4. Reference energy content of meals served in early childhood education and care (full-time care, part-time care for different age groups for weekly planning). (Based on reference values of energy intake for children. Source: National Nutrition Council, Finnish nutrition recommendations 2014).

Age group	FULL-TIME CARE Energy kcal (MJ)/day 2/3 of the daily requirement	PART-TIME CARE Energy kcal (MJ)/day 1/3 of the daily requirement
6 to 12 months	550 (2.3)	270 (1.1)
12 to 23 months	640 (2.6)	320 (1.3)
2 to 5 years	800 (3.3)	400 (1.7)
Pre-primary education and schoolchildren (6 to 9 years)	1,100 (4.6)	550 (2.3)



Energy-yielding nutrients

Fats

At minimum two thirds of the fats should be unsaturated, or so-called soft fats. Unsaturated fats contain fat-soluble vitamins and essential fatty acids, which are vital for growth, the nervous system, and cardiovascular health among other things. Soft fats affect favourably the blood lipid levels, preventing such illnesses as cardiovascular diseases.

The share of saturated fats in a meal should be less than 10% of the total energy content (E-%). Saturated fats should be avoided as they are harmful for brain and cardiovascular health among other things. For recommended fat sources, see Chapter 3.4. on page 52. Replacing food products containing saturated hard fats with products containing unsaturated soft fats, is key to improving the quality of fats in the diet²⁸.

Carbohydrates

Carbohydrates are the main energy source in the diet. High-fibre and low-salt foods should be favoured as carbohydrate sources.

The intake of added sugar in the diet should be less than 10 E-%. Soft drinks, juices, sweets, dairy products with added sugar as well as biscuits and other sweetened baked goods contain high quantities of sugar. A diet with a high quantity of sugar provides plenty of energy but is low on vitamins and minerals. A nutrient-poor diet that contains high amounts of fat and sugar but is low on vitamins and minerals in childhood is linked to obesity, tooth decay as well as

28 Source: Te Morenga L & Montez JM. (2017) Health effects of saturated and trans fatty acid intake in children and adolescents: Systematic review and meta-analysis. PLoS ONE12(11): e0186672. PLoS <https://doi.org/10.1371/journal.pone.0186672>

the risk factors of cardiovascular diseases, high blood pressure and certain cancers throughout the individual's lifetime²⁹.

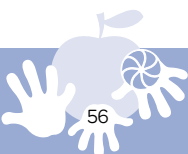
Use of sugar

Small amounts of added sugar can be used, for example to tone down acidity or bitterness in berries (e.g. foods containing lingonberries and currants), berries served with porridges and cultured milk products, and in traditional festive dishes. The Better Choice Heart Symbol criteria are applied when choosing snack products (see Appendix 3). There is no need to avoid the natural sugars contained in milk, fruit, berries and vegetables.

Proteins

Protein sources at meals include milk/buttermilk, other dairy products, legumes, fish, meat and eggs. Cereals also contain protein. In vegetarian diets, a sufficient protein intake can be secured by eating a diverse selection of legumes, cereals and dairy products.

29 Source: A Scientific Statement from the American Heart Association: Added Sugars and Cardiovascular Disease Risk in Children. *Circulation*, 2016;134:00-00. <http://dx.doi.org/10.1161/CIR.0000000000000439>



Relative proportions of energy-yielding nutrients in meals served to children

For the recommended shares of energy-yielding nutrients, see Table 5. The recommendations on the shares of energy nutrients concern children's diet as a whole: all the meals served in both full-time care (including breakfast, lunch and snack) and part-time care (main meal and breakfast/snack). When planning the menu, it should be verified that its weekly average of nutrient content is within the recommended limits. The fat content in main meals may be higher than the recommendation applicable to the diet as a whole, as long as its quality is appropriate (saturated fat content less than 10 E-%). The proportion of soft fat should be at minimum two thirds of the total fat quantity. This will secure the intake of fatty acids that are essential for growth and vital functions.

The recommendations for energy nutrients are fulfilled if the minimum requirements for nutrient quality given in the following chapter are complied with when preparing meals and choosing ingredients. While the contents of individual meals may differ from the table values, the average shares of energy nutrients must be complied with at the weekly level.

TABLE 5. The recommended range of energy-yielding nutrients in meals served to children at weekly level.

Nutrient	% of energy (E-%)
Fat Saturated fat	30–40 less than 10
Proteins	10–15
Carbohydrates	45–60
Added sugars*	less than 10

* Sucrose, fructose, starch-based sweeteners (glucose syrup, glucose-fructose syrups) and other similar sugary products used as such or in food preparation, or added to the dish on the plate.



★ The Smart Family (Neuvokas Perhe in Finnish) material contains pictures with comparisons of the energy and added sugar contents in different products.

<https://neuvokasperhe.fi/en/articles>



A low quantity of salt

The children's preferences and salt intake can be influenced by paying attention to the salt content of meals. As almost all foodstuffs naturally contain sodium, a healthy child and adult receive sufficient quantities of it without any added salt in the food³⁰. The recommended salt intake for adults is at maximum one teaspoonful (5 g) a day. No salt or foods containing salt should be used in meals intended for children aged under 12 months. The maximum salt intake of children aged under 2 is 2 g/day (about 0.5 tsp), while the salt intake of children aged 2 to 10 years is at maximum 3 to 4 g/day. There is a direct link between salt intake and high blood pressure. Salt puts a child's body under strain and exposes him or her to increased blood pressure from early childhood on.

Children aged under and over 2 years may have their meals together in early childhood education and care, and in meals served to the age group attending day-care centres, minimising the salt intake should be aimed for.

³⁰ Table salt consists of sodium chloride, 40% of which is sodium. To calculate the salt content of a foodstuff, the volume of sodium contained in it should be multiplied by 2.54 (the rounded coefficient of 2.5 is used in legislation and labelling).

In practice, this means that unsalted porridge or other soft foods with no salt can be offered to the youngest children for a snack instead of bread.

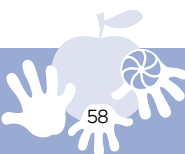
The volume of salt is always specified in the recipes, and the recipe should be followed and the quantity of salt used measured when preparing food. The salt content of meals can be reduced by choosing unsalted or low-salt ingredients and by minimising salt use when preparing food, only adding the quantity indicated in the recipe. (For the minimum requirements for nutritional quality of meal components, see Appendix tables 4a–c).

Meals served in early childhood education and care as a good iodine source

Studies indicate that the iodine intake of Finnish people is too low. The content of iodine, a mineral essential for humans and animals, is naturally very low in Finnish soil. Significant iodine insufficiency can result in thyroid enlargement and interfere with children's growth and development. The best iodine sources are dairy products, fish, eggs and iodised salt. In order to secure children's sufficient iodine intake, iodised salt should be used in food preparation. Food industry products made

TABLE 6. Recommended total salt intake in meals served in full-time and part-time care by age group (National Nutrition Council, 2016).

Age group	Maximum daily salt intake	Maximum total salt content in meals for children in full-time care	Maximum total salt content in meals for children in part-time care
Infants	No added salt	No added salt	No added salt
Children aged under 2	0.5 g/MJ	<1.3 g	<0.7 g
Children aged 2 to 5 years	3 to 4 g/day	2 to 2.6 g	1 to 1.3 g



with iodised salt should also be selected. A diet compliant with the recommendations contains a sufficient quantity of iodine.



3.6 Minimum requirements for the nutritional quality of different meal components

The criteria for meals provided by catering services specified in the Finnish nutrition recommendation (2014) form the basis of the minimum nutritional quality requirements in this document. If only one meal option is provided every day, it is acceptable that most of these meals (at minimum 80%) comply with the criteria. Several meals are served at the day-care centre (breakfast, lunch, dinner, snacks), and the day's meals should be taken into consideration as a whole when planning menus.

The minimum requirements for the nutritional quality of the main lunch and dinner dishes, side dishes made from potato and cereals as well as other meal components are shown in the tables (Appendix 4). In addition to observing the minimum requirements applicable to individual meal components, all products compliant with the Better Choice Heart Symbol criteria can be used as recommended meal components, even if the product's nutritional content did not correspond to the figures given in the attachment table. Always preparing side dishes for lunch

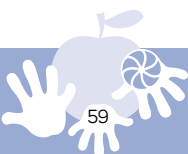
and dinner made from potato and cereal without added salt is recommended.

3.7 Provision of catering services, nutritional quality and competitive tendering

Catering services for early childhood education and care can be produced by a municipality itself or outsourced to a catering service supplier. The catering services should be provided in compliance with the document Eating together – food recommendations for families with children (National Nutrition Council, 2016) as well as these meal recommendations for early childhood education and care (National Nutrition Council, 2018).

All aspects of the meal recommendations for early childhood education and care should be complied with in the provision of catering services and any competitive tendering that concerns them. The recommended food choices and minimum requirements for the nutritional quality of meal components in this publication should be followed in food procurements (see Nutritional quality, Chapter 3.6).

By complying with the recommended policies on improving children's diets given in this document (see Table 3, Healthy food choices) and the composition of a health-promoting diet (see Chapter 3), balanced and sufficient meals and a model for health-promoting eating, and thus the best possibilities for healthy growth and development in terms of nutrition, can be provided for all children in early childhood education and care. At the same time, risk factors for obesity and



malnutrition as well as chronic diseases can be prevented and a foundation for a lifetime good nutrition can be laid.

3.7.1 Competitive tendering

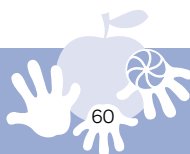
Catering services may be provided by the early childhood education and care provider, such as a municipality or a day-care centre itself, or the service may be outsourced to a catering service provider, which may be a company owned by the municipality or a private company. Meals for early childhood education and care may be put out to tender as a single large package or, for example, separately for different customer groups or operating units. The catering service provider, on the other hand, will put the required foodstuffs out to tender. When a municipality organises a tendering process for procuring foodstuffs, it must comply with the Public Procurement Act, whereas this act does not apply to private service providers.

The tender documents must describe how ***healthy and sufficient food as well as appropriately arranged mealtimes and guidance related to the meals*** required under the legislation will be provided. In addition, the contracting entity should specify the objectives of the service procurement and describe the requirements set for the service, the contents of the service (including measures that support food education, the time allocated to planning food education, whether or not the catering staff can attend excursions, parents' evenings, providing for special diets when assessing the workload), the expected quality, the monitoring and reporting practices related to quality, the division of responsibilities, and cooperation between the parties. The factors determining the

nutritional quality of the food, as well as issues associated with catering service implementation and cooperation, are particularly important in a tendering process that concerns catering services. For example, the manner in which a pedagogical menu is to be implemented must be specified in the description of activities, and the necessary resources must be set aside for it. Contracts and service descriptions will later be prepared on the basis of the tender documents, and thus a draft contract should be attached to the call for tenders, or the key contract terms should be specified. A carefully prepared call for tenders is the precondition for a successful tendering process.

When procuring catering services for early childhood education and care, the recommended energy and nutrient contents (see Chapter 3.5.), minimum requirements for nutritional quality (see Appendix 4) and recommended food choices (see Tables in Appendices 2 and 3) given in this publication should be complied with. These requirements apply to all meals served in early childhood education and care. The meals served to the children should be compliant with the recommendations when examined at the weekly level. The service provider must ensure that a model meal is available for the children and adults, showing them how to put together a nutritionally balanced meal. A description of how the service provider intends to implement this guidance in practice should be requested in the call for tenders.

During the tendering process is organised, a description of the environmental, societal and social aspects of the service should also be requested in addition to information about factors affecting the nutritional quality of the food. These aspects may include using seasonal ingredients. Procurements are also guided by the strategies and policies of individual municipalities and early childhood education and care providers. The



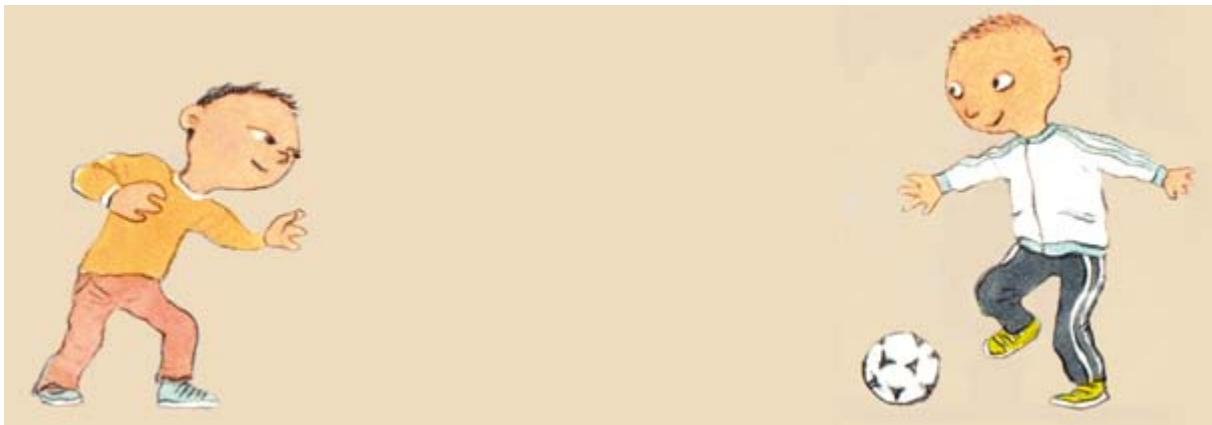
organisation responsible for procurements ensures that these issues are taken into consideration.

The quality factors of the catering service are assessed using a sample menu (a rotation of five or at most six weeks is recommended, repeating the dishes often enough to familiarise the children with them). To the sample menu should be attached descriptions of the recipes used by the service provider and the related nutrient content calculations, a description of the ingredients to be used and their purchasing channels, as well as an indication of how food themes and festive days will be taken into account. If the contracting entity requires that meal components and foodstuffs compliant with the Better Choice Heart Symbol criteria be used, this will make it easy to verify that the lunch and dinner dishes are compliant with the recommendations. The quality of the activities can be assessed by requesting information on the number of staff the service provider has, their competence and any development plans.

The contracting entity/customer of the catering service should also monitor the services to verify that the agreed quality is realised and that the food is tasty. In the call for tenders

phase, a description is requested of how the catering service provider will monitor and ensure that the selection criteria are complied with. An indication of how the customer will monitor this in practice should also be provided. Quality can be monitored by systematically collecting customer feedback and examining the actual menus and their nutrient content in proportion to what was agreed, and by observing the children at mealtimes. Additionally, the appropriateness of the activities, feedback received on the taste of the food, adequacy of the food in terms of quantity, implementation of self-checks, the number of deviations found and corrective actions taken, and whether or not the service provider actively engages in cooperation with the customer can be evaluated.

The contracting entity must have the required competence and qualifications for directing a catering service and monitoring its actual quality. Guidance is a statutory duty and obliges the contracting entity to organise appropriate and professional guidance activities and develop them (see Appendix 1. Description of tendering documents).





JOY FROM FOOD – FOOD EDUCATION IN PRACTICE





In food education, food and eating are broadly connected with physical, psychological and social wellbeing. The aim of food education in early childhood education and care is to promote positive attitudes towards food and eating and support versatile and healthy eating habits. To achieve these aims, learning by doing is used, which is a natural choice in early childhood education and care. Versatile food education is manifested in daily activities, the operating culture and learning environments.

This recommendation encourages early childhood education and care actors to implement conscious, systematic and goal-oriented food education, in which creating and fostering joy

of food is in key role. The jointly agreed food education objectives, practices and assessment policies should be based on the values and objectives of the early childhood education and care curriculum. Verbalising the concepts, objectives and practices used in food education together and internalising the assessment criteria promote food education that is conscious, goal-oriented and compliant with the selected policies. Reflection, or regularly evaluating your own and your work community's activities with reference to the objectives, is a key part of evaluating food education. Reflection is essential for learning, both at the level of the individual and the organisation.



Key objectives of food education contained in the National core curriculum for early childhood education and care:

- a positive attitude to food and eating
- varied diet and eating habits that promote good health
- eating without assistance and diverse and adequate meals
- unhurried mealtimes
- learning about good table manners and the culture of eating together
- getting familiar with foods, their origin, their appearance, consistency and taste, exploring them with different senses
- building up food vocabulary by talking about food and through stories and songs.



4.1 Food education is implemented at mealtimes and in other daily activities

Food education is both delivered at mealtimes and included in other daily activities. In addition to the meals, a diverse selection of different learning environments can be used in food education: a nearby forest, supermarket or marketplace, the unit's own kitchen, or digital learning environments. To support food education delivered by the pedagogical and catering service staff in cooperation, a so-called pedagogical menu can be prepared³¹. Its purpose is to give the children opportunities for familiarising themselves with different foods and food preparation and gradually getting used to different tastes and food textures.

³¹ Pedagogical menu in Lasten ruokakasvatus varhaiskasvatuksessa, pp. 189-196. <http://urn.fi/URN:ISBN:978-951-29-5660-9> (in Finnish)



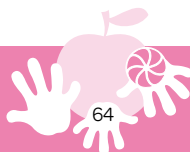
★ The pedagogical staff eat together with the children to set an example.

The arrangements for the mealtime and the mealtime environment as well as suitable practices can significantly promote the children's wellbeing and healthy lifestyles. The attitudes and practices of the early childhood education and care staff to a great extent determine what type of learning opportunities the mealtimes become for the children. At best, the mealtime is a happy time during which they can eat at their leisure, get used to new flavours, and gain taste experiences together with other children and the pedagogical staff. The mealtime is also a learning opportunity where each person working in early childhood education and care sets an example and serves as a role model by discussing various topics, interacting and eating with the children.



A pedagogical menu

- planned in cooperation between the early childhood education and care provider and the catering service supplier
- accounts for the children's age and developmental level
- contains at least some ingredients that the children themselves can process and take part in preparing, for example by making a salad, cutting up vegetables and fruit or preparing a snack
- during the operating year, gradually familiarises the children with different foodstuffs by regularly including them in the menu in different forms
- enables the children to participate in planning and assessing the menu



The goal of food education in early childhood education and care is to reinforce and support children in recognising the internal feelings of their bodies (feeling hungry or full) and eating according to these feelings (intuitive eating), eating flexibly and having a positive attitude towards eating (joy of food). During mealtimes, an effort is made to diversify the children's diet by encouraging them to try new foods, especially health-promoting foods including fish, vegetables, berries and fruit. The children may need to try vegetables, berries and fruit several times to get used to their acidic or bitter flavours. Tasting foods at their own pace is particularly important for children who have been on a special diet (e.g. because of allergies) for a long time. It may take them longer to get used to new tastes and textures. Recognising the feelings of being hungry and full guides the children to help themselves to portions that correspond to their appetites and teaches a responsible approach to plate leftover. In early childhood education and care, children can learn about scheduling their eating around meals and snacks and focusing on eating at mealtimes.

Food education delivered at mealtimes is complemented by other early childhood education and care activities. For instance, food education can be provided

- in a food circle (joint discussions between the children, pedagogical staff and catering staff about a food-related theme)
- while baking and preparing food
- at harvest festival events by setting up a vegetable bar
- by keeping a small vegetable garden in the day-care centre's yard (children's own vegetable plots/beds, potatoes grown in a bucket, potted plants, berry bushes, fruit trees) or by growing herbs or shoots on the windowsill



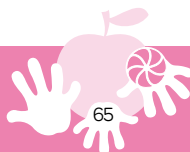
★ If you were afraid to try it yesterday, could you be braver today?

- at seasonal celebrations or on festive and theme days by familiarising the children with both Finnish and other food cultures.

Food education can be supported by different methods, including sensory food education (Tastelessons/clubs/clubs and Sapere food education for early childhood education and care^{32,33}), in which the children familiarise themselves with foods, exploring their origin, appearance, consistency and taste properties through different senses. A methodically and regularly used food education method can bring many types of benefits. It is a natural way of introducing food talk in the children's daily activities, it may increase their interest in food, their preferences diversify, and they eat more, especially vegetables. Sensory methods that draw on children's participation and personal experiences can also help find solutions to different eating problems. When carrying out food education activities, it is important to also take children who are on special diets into account and offer them opportunities for participating in exploring and preparing food and familiarising themselves with the food culture, safely and together with the others.

32 See www.makukoulu.fi or <https://peda.net/hankkeet/sapere> (in Finnish)

33 A Sapere food education report and workbook are available in the following publication: <http://urn.fi/URN:ISBN:978-951-29-5660-9> (In Finnish)



4.2 Children's participation in food education

Children's participation in all activities, including at mealtimes, should be embedded in the operating culture of early childhood education and care. Through participation children can develop their understanding of the community, rights, responsibilities and the consequences of their choices. An ability to think for yourself, express your opinions and be active plays a key role in participation. Participation is reinforced when a child acts together with the other children and pedagogical staff and he or she is encountered sensitively and respectfully, giving the child a positive experience of being heard and seen. While this experience has a crucial impact on children's wellbeing here and now, they also carry it with them well into the future.

At daily mealtimes, the pedagogical staff's practices and attitudes either allow or prevent children's participation. The staff must give the children an opportunity to participate, whatever their abilities, but the children must also be given support in knowing what to do at mealtimes and regulating their reactions. Assisted by guidance and encouraging support, the child learns how to behave at shared meals and how to take others into consideration. Rather than fulfilling the wishes of individual children, this is about taking the views of all group members into account and negotiating to find a solution that satisfies everyone. Through joint negotiations, the children practise stating their opinions, listening to the views of others, putting themselves in other people's position, being contented with joint decisions and compromising. In line with the principles of participation, should he or she wish, a child also has a right not to participate. A precondition for increasing participation is



★ Experiences of inclusion are created in activities where everyone is taken into consideration.



★ Ask the children:
"What does the food taste, smell, feel and look like?"

that the entire community commits to following common practices promoting children's participation and evaluating these practices with reference to the National core curriculum.

At mealtimes, the goal in early childhood education and care is set at activities which are as child-oriented as possible, where the "child's voice" is heard and which enable the children to learn about food. The children are taken into consideration as active agents who gradually expand their autonomy at mealtimes. The children's views, opinions and initiatives concerning food and the mealtimes are appreciated and taken notice of fairly. The children's active participation and joint activities related to food help them develop an unprejudiced attitude towards food. When children participate in planning, making and assessing meals, they learn interaction skills and understand the significance of common rules, agreements and trust.





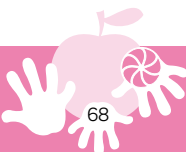
Speech bubble texts modified from Tiina Maaranen, City of Joensuu/Early childhood education and care.





TIPS FOR REINFORCING CHILDREN'S INCLUSION IN FOOD EDUCATION

- As indicated by their age, the children select their food and help themselves while the staff encourage them to try different foods.
- The children are encouraged to express themselves when they feel hungry or full, and these feelings are respected.
- The children and staff monitor and reduce food losses together.
- As indicated by their age, the children participate in making food, setting the table, buttering bread and tidying up after the meal.
- The children participate in making common rules for mealtimes (for example, trying new foods, leaving food uneaten).
- The children are given an opportunity to express their opinions about the food and mealtimes.
- The children take part in evaluating menus, and they may suggest foods to be included in them or plan their own menus.
- The children are allowed to decide how to celebrate their birthdays following rules jointly agreed on with their families: for example, they can select their favourite song or some other performance, joint activity or game. More tips for celebrating birthdays (in Finnish): <https://neuvokasperhe.fi/ammattilaiset/5-vinkki%C3%A4-herkuttomien-syntt%C3%A4rien-viettoon-p%C3%A4iv%C3%A4kodeissa-ja-kouluissa>
- Menus for seasonal festivities are planned together with the children.
- Food talk is encouraged by sparking the children's curiosity about foods and their origin and the way food affects their bodies.
- The children are asked to list their favourite foods (with the aim of also naming savoury dishes) and distinguish between every-day and festive foods.
- Children are encouraged to ask what their friends think about food and also state their own opinions.
- Enough time is reserved for mealtimes and unhurried discussions.
- Children are encouraged to adopt friendly table manners that are considerate for others, share treats and be patient.
- The children are asked to share food memories that are important for them (for example a picnic lunch, meals eaten on trips or food at granny's house).
- Foods are prepared together at parents' events (parent/guardian and the child).
- The children visit food producers, a supermarket and the kitchen as far as possible.



4.3 Pedagogical and catering service staff as food educators

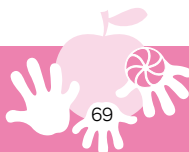
The pedagogical and catering service staff in early childhood education and care play a key role in developing a child's relationship with food, as they are repeatedly present at mealtimes during the early childhood. The actions of the pedagogical staff can influence the children's health behaviour well into adulthood. To provide pedagogical and catering service staff with competence and skills relevant to food education, food education themes need to be included in their vocational basic, further and continuing education and training.

While the principal responsibility for food education rests with the pedagogical staff, the main task of the catering service staff is to ensure that the food is nutritionally balanced and safe (including special diets and hygiene). The catering service staff support the pedagogical staff and help them succeed in their educational task by ensuring that the contents of the meals and the activities are as agreed. The catering service staff also serve as experts in issues relevant to the catering service in early childhood education and care as necessary.



TIPS FOR COOPERATION BETWEEN THE PEDAGOGICAL AND CATERING SERVICE STAFF

- Planning suitable packed lunches for different excursions together.
- A representative of the catering service staff may visit a food circle, bring back ingredients (or pictures of them), tell the children about them and let the children explore and taste them. The two staff groups get together to talk about where and how the food has been prepared and by whom.
- The staff groups can jointly prepare a pedagogical menu that supports the goals of food education.
- They plan food activities together in which the children can participate: baking, or preparing and serving a snack or a meal component.
- They agree on how to ask the children about their opinions and take into account the children's ideas and preferences concerning both the food to be served and mealtimes.
- They jointly agree on how the availability of drinking water should be organised, especially on hot days or in connection with longer-lasting or intensive exercise: should a water bottle, containers or a jug be used, and how should they be kept clean.
- Operating methods and feedback practices are agreed on together.





★ A mealtime is time spent together.

Each unit should prepare common rules for its meals and food education. Every meal is an education opportunity where the staff sets an example for the children. In these situations, the pedagogical and catering service staff's professional approach may be tinted by their personal attitudes and relationship with food. The meals provided in early childhood education and care are a public activity guided by official guidelines. The staff should take notice of this when supervising the children at mealtimes. Professional ethics also includes respecting the children's individuality at meals and adjusting the staff's food talk in line with the unit's pedagogical aims. An understanding attitude should be adopted towards any eating problems that the children may have, and a solution should be sought together with the work team and with the parents/guardians if necessary. These problems include dawdling at mealtimes, difficulty of focusing on eating, clumsiness when using cutlery, sensory defensiveness or undersensitivity at mealtimes, or picky eating.

The example set by staff members who are present at mealtimes and eat with the children and the other children of healthy and varied eating shape children's diets more efficiently than stringent restrictions, putting pressure on a child to eat, or using food as a reward. Sensitive interaction (skills in listening to and talking with children) and a guidance technique that reinforces the children's opportunities for exerting influence have a crucial impact on the quality of food education. Rather than congenital properties, they are aspects of professional competence that can and should be improved.





Speech bubble texts modified from Tiina Maaranen, City of Joensuu/Early childhood education and care.



House rules

– questions that support specifying common practices in early childhood education and care:

- How do we manage different mealtime situations? How do we start and end them?
- How do we serve out the food? When can children help themselves?
- What are good table manners and how can we practise them?
- How do the staff guide the children at mealtimes? How do we speak to the children?
- How do the staff talk about food and what they eat themselves?
- How do they talk about what and how the children eat?
- How and where do we talk about any problems related to mealtimes?



For the staff

The staff are responsible for creating a positive mood at mealtimes.

Praise and thank each child – each one has strengths or skills displayed at mealtimes.

Bring the joy of food to everyone – make sure that children with special diets, problems with eating or needs for special support also have possibilities for feeling successful.

Encourage the children to learn and experiment – make agreements with the children on the skills that they are practising.

Materials to support food education:

- Smart family <https://neuvokasperhe.fi/en>
- Ruukku Centre for Food Culture <http://ruukku.org/en/> (mainly in Finnish)
- Makuakokset diploma <http://www.makuakoksetdiplomi.fi/flavour-alphabet-diploma/>
- Lasten ruokakasvatus varhaiskasvatuksessa – ruokailoa ja terveyttä lapsille (Food education in early childhood education and care, in Finnish) <https://apps.utu.fi/media/liite/sapere-koko.pdf>
- <https://peda.net/hankkeet/sapere> and www.makukoulu.fi (in Finnish)
- Finfood - Finnish Food Information <https://www.ruokatieto.fi/briefly-english> (mainly in Finnish)
- Tack för maten http://www.marthaforbundet.fi/sv/start/projekt/tack_for_maten/ (in Swedish)
- Syö hyvää materials <http://syohyvaa.fi/> (in Finnish)
- <https://www.maajakotitalousnaiset.fi/teemat/ruokarohkea-salapoliisi-ja-kasvisaarten-arvoitus> (in Finnish)
- Finnish Bread Information materials <http://www.leipatiedotus.fi/in-english.html> (mainly in Finnish)



4.4 Multidisciplinary co-operation and collaboration with parents/guardians

Under the Early childhood education and care act, the municipality shall organise early childhood education and care in multidisciplinary cooperation and create the necessary structures for it (sections 9 and 11e of the Early childhood education and care act). Early childhood education and care providers and supervisors are responsible for initiating, implementing and planning this cooperation. They must also ensure that the cooperation is multidisciplinary. Effective food education is delivered in cooperation, in which the common goal is ensuring that the meals and food education respond to the children's needs and are a communal and positive experience. Key partners for early childhood education and care in supporting children's wellbeing, growth and development are the parents/guardians, the catering service staff, the child health clinic, the school and NGOs.

The extensive health examination carried out on 4-year-olds at the child health clinic may include, with the written consent of the child's guardian, an assessment produced by early childhood education and care staff on the coping and well-being of a child of under school age. This assessment plays an important part in assessing a child's holistic growth, development and health as well as early recognition of his or her needs for support provided in multidisciplinary cooperation.³⁴ An assessment related to what and how the child eats may, for instance, concern the

child's special diet or need for special support associated with mealtimes. For more detailed information on this assessment, see Chapter 5.

The parents/guardians are interested in the children's meals and issues associated with it. In the course of daily contacts and communication, at family meetings and at parents' events, talking about food and mealtimes comes naturally. It is important to talk about the mealtimes in a positive spirit, for example in "how did the day go" discussions and messages exchanged between the staff and the parents on electronic and other channels. What the parents/guardians expect from the pedagogical staff is information about how the child's eating habits are developing and how the child manages at mealtimes, as well as support and practical instructions, especially when a child has problems with eating. Cooperation with the parents/guardians includes agreeing on mealtime practices and providing information about the catering service provider and the implementation methods of the service. For example, common practices can be agreed upon when discussing the child's early childhood education plan or at parents' events, involving both the children and the parents/guardians. As the day-care centre caters for the children of a number of families, the unit must take into account the staff, the children and the families when discussing the practices and agreeing upon them. Common policies related to eating, for example foods served at birthday parties, should be written down for easy reference when needed.

Cooperation plays a particularly important role in transition phases, such as when children

³⁴ Government decree on child health clinic activities, pupil and student health care and preventive oral health care for children and young people (380/2009) and its amendment (338/2011), section 7 <https://www.finlex.fi/fi/laki/alkup/2011/20110338>





TIPS FOR COOPERATION WITH PARENTS/GUARDIANS

- The staff can plan and organise different types of events together with the parents/guardians.
- Rules can be agreed upon together with the parents/guardians: for example, rules on trying new foods, behaviour at mealtimes and how to talk about food.
- The values and goals that underpin food education are discussed with and explained to the parents/guardians, for example at parents' events.
- The rules for celebrating special days are agreed upon together (for example, the children's birthdays): the staff and parents can decide that instead of passing around sweets, the birthday child can be celebrated by playing certain games, giving him or her a card or singing a song.
- The parents/guardians are actively informed about the daily routines and mealtime practices of the day-care centre.
- The weekly menu is posted at the operating unit for parents/guardians to see and on the websites of the municipality and the catering service supplier. This allows the parents/guardians to keep up to date on what children eat at the day-care centre and adjust the meals they provide at home accordingly.
- The catering service staff can be invited to come and introduce their activities at parents' events.
- Where possible, an annual opportunity for parents/guardians to familiarise themselves with the meals and food at the day-care centre should be organised by sharing a breakfast or a snack with the children.
- The parents/guardians are also informed about the catering service supplier when a care agreement for the child is concluded.
- Parents/guardians are asked to give feedback on the meals, and their feedback is responded to.
- Families are supported in obtaining information about the timing of meals and health-promoting food choices for children at the age for attending a day-care centre as well as help for any problems with eating.
- Any eating problems are discussed when the child is not present, or a message book or digital channels are used for communication.



start attending early childhood education and care, change day-care centres or begin pre-primary education. The mealtime may have a significant impact on how soon the child feels at home in a new place. When the mealtime is safe and inviting for the child, he or she is more likely to stay at the day-care centre happily. When a child comes to early childhood education and care, the staff's friendly and encouraging attitude towards continued breastfeeding according to the families' preferences is important. (For more information about breastfeeding, see the National Action Programme for Breastfeeding Promotion³⁵)

4.5 Mealtime arrangements

The meals served in early childhood education and care are not only part of care that safeguards the child's coping and wellbeing but also education and instruction that promote the implementation of the early childhood education plan. At the meals the children get to know new foods, discover tastes and textures, and learn basic eating skills, being and acting together with others and talking about food and food experiences. The mealtimes should be regularly evaluated and developed to meet the children's changing needs.

The meals are arranged to meet the children's needs, taking the available facilities into account. If possible, the mealtimes can also be staggered. Before the meal, the children are helped prepare for it, for example by describing the food that will

be served to them and its origin in a manner that sparks their interest. The children are guided to put together a portion following the plate model and help themselves to food. They learn to ask for food, say thank-you and hand things to other children. At the meal, the children can practise talking together, for example about some topical subject that is of interest to them. This will also teach them good table manners, taking others into consideration and talking calmly. During and after the meal, the group can talk about their sensations and other experiences related to food.

As indicated by their age and skills, the children actively participate in the mealtime arrangements, for example by setting the table and tidying the lunch room before and after the meal. The children can act as assistants at the meal. After the meal, each child can tidy up his or her own place.

4.5.1 Mealtime environment

An appropriate mealtime environment has an essential impact on creating inviting mealtimes and promoting good appetites. The environment comprises the physical (facilities, furniture, sounds) and social (people, interaction, rules) setting and the agreed practices. Positive mealtimes, participation and experiencing joy of food promote the favourable development of the child's eating habits. The children need encouragement and positive feedback, as habits, routines, taste preferences, values, attitudes and self-esteem related to eating are built on early experiences.

35 National Institute for Health and Welfare, 2017. Kansallinen imetyksen edistämisen toimintaohjelma vuosille 2018–2022 (National Action Programme for Breastfeeding Promotion for 2018–2022, in Finnish). <http://urn.fi/URN:ISBN:978-952-302-949-1>





Signs of a good mealtime environment

- The mealtime is peaceful and safe, its mood is positive, and sufficient time is reserved for it.
- The furniture and serving counter or trolley are correctly sized and appropriately designed, taking into account the children's age and capabilities (tables, chairs, serving counters etc.).
- If the lunch room is shared with a school, the needs of under school-age children are addressed in the arrangements for the meal, supporting their independence.
- The environment is aesthetically pleasing and invites the children to enjoy their food (for example, pictures of where the food comes from can be used).
The room in which the meals are taken can be decorated beautifully, and folded napkins and table cloths can be used to set the mood. The decorative elements must be made of safe materials and easy to clean.
- Children with special needs are supported in acting independently.
- The pedagogical staff set an example by eating with the children.
- The food is displayed invitingly (colours, presentation).
- The acoustic environment in the room is pleasant.
- Tidiness and ease of cleaning up: the children can take part in tidying up, including wiping the tables.
- A clearly defined space with structures that guide the activities: the equipment used at mealtimes have their agreed places. Pictures are used to illustrate instructions.





A well-organised mealtime from a child's perspective

- Having their own places (always the same if possible) calms children down and gives them a feeling of security.
- The dishes are in good condition and the cutlery is designed for a child's hand and mouth.
- The plate is large enough and different foods can be dished out separately on it (if necessary, without touching each other).
- Information about the food to be served is available (for instance pictures).
- The children can participate and be independent as far as allowed by their skills.
- Nicely presented and colourful foods, dishes, serviettes, decorations and food pictures make the meal more inviting.
- Everyone knows what to do with their dishes and where to put them.
- The atmosphere at mealtimes is positive and encouraging.
- The children have company at the table.
- The children receive positive feedback.
- Food is discussed with the children every day.
This way, they get to know new concepts and learn about stating their opinions and listening to other people's ideas.

The meals can be served in the room used by the group, in a separate area set aside for meals (lunch room) or in some other facilities intended for shared use. Meals can also be eaten outside. Meals served in shared facilities can be staggered as required by the activities and the facilities, provided that the timing of the meals supports the children's meal schedule.

Washing hands with water and soap before eating prevents the spread of pathogens. The best way of establishing hand-washing as a normal routine before meals is providing a well-functioning and appropriately located place

for it. A hand disinfectant is not a sufficient replacement for washing hands with soap.

A meal served in a peaceful, tidy, inviting and positive environment offers a moment of refreshment and communal time for all those sharing the meal. The staff can work together with the children to turn mealtimes into an attractive and encouraging learning environment that enables healthy choices. The goal is that the children learn to understand the significance of food and togetherness for promoting their wellbeing and are able to enjoy them.



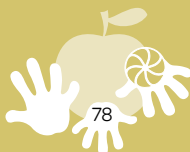


THANK YOU
FOR A NICE
MEAL!

THANK
YOU.



MONITORING AND EVALUATING FOOD AND FOOD EDUCATION





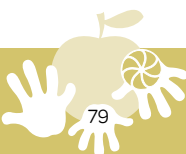
Pursuant to the Early childhood education and care act, the early childhood education and care provider shall evaluate the early childhood education and care it provides and take part in external evaluations of its operations (section 9b of the Early childhood education and care act (580/2015)). The activities must be evaluated methodically and regularly. The evaluation of the food and food education is based on compliance with the provisions applicable to meals in early childhood education and care (section 2b of the Early childhood education and care act), the National core curriculum for early childhood education and care (2016) and the meal recommendations. Evaluation and monitoring also include evaluating multidisciplinary cooperation and collaboration with the homes. The evaluation helps promote the quality of meals and food education, recognise the strengths of the activities, highlight development needs and improve the activities. The meals provided in early childhood education and care are monitored and evaluated nationally, in municipalities by the early childhood education and care provider, as well as locally at the operating units. The National core curriculum for early childhood education and care contains a detailed description of the monitoring and evaluation activities applicable to the early childhood education and care provider³⁶.

36 See http://www.oph.fi/download/179349_varhaiskasvatussuunnitelman_perusteet_2016.pdf (in Finnish)

National monitoring and evaluation

The meals and snacks served and the food education delivered in early childhood education and care will have an enduring impact for a number of years on children in a sensitive phase of growth and development. The monitoring and evaluation should focus not only on the meal arrangements, practices and compliance with recommendations but also on the children themselves. Monitoring data and evidence-based information are required to evaluate the impacts on the children. Aspects to be monitored include the children's food use and nutrient intake, development of eating habits, the children's personal mealtime experiences, preferences and growth, the quality and number of special diets, the occurrence of risk factors for national diseases including overweight, and the possible accumulation of risk factors on certain children.

A precondition for comprehensive evaluation is that monitoring data on children's meals is available, covering the entire day both in care and at home. To enable population level evaluations, information is needed on how the meals and food education provided in early childhood education and care target different population groups and children of different ages. Data on how the nutrition of children attending early childhood education and care differs from the nutrition of children cared for at home is also needed. In the national context, monitoring the nutrition of children at the early childhood education and care age should be



integrated as a permanent part in population-level monitoring of nutrition and health. It is also necessary to address children's nutrition in the local and regional authorities' wellbeing reports, bringing information on children's nutrition to bear on municipal and regional decision-making.

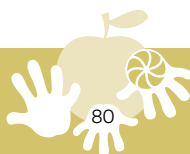
To boost national monitoring, indicators and metrics that describe how meals are organized and how food education is implemented in early childhood education and care (for example of possible indicators, see the Fact box) should be prepared for the National Institute for Health and Welfare's TEAviisari online service for health promotion and the wellbeing and health promotion module that is being developed for the municipalities' service classification (JHS service classification). As the knowledge base develops, it will be necessary to examine if data on children's nutrition could be used to provide municipalities with financial incentives for promoting wellbeing and health (so-called health and wellbeing coefficient in the increment to the central government transfers to local governments).

Promoting children's nutrition is part of extensive efforts to promote health and wellbeing, for which the municipalities assume responsibility. The counties' task will be to offer municipalities expert support in fulfilling this duty. In the context of children's nutrition this may, for instance, in practice mean that nutrition experts will assist the municipalities with the preparation of their wellbeing reports and advance evaluations, training provision, implementation of national programmes and policies, and procurement of food services.

Monitoring and evaluation at the level of municipalities/early childhood education and care providers and units

At the municipal level, the meals and food education in early childhood education and care should be included in the strategy for promoting wellbeing and health. Clear targets should be set for them, and monitoring and evaluating them should be incorporated in the municipality's wellbeing report. A concrete agreement on how food services in early childhood education and care will be monitored and evaluated should be included in local and operator-specific service contracts. Early childhood education and care providers should evaluate the local early childhood education and care curricula and curricula implementation. The local early childhood education and care curriculum adds detail to the monitoring and evaluation principles described in the National core curriculum. The way in which the activities are arranged and pedagogy is implemented is a particular target of unit-level evaluation (see Proposals for national indicators, Fact box on page 81).

Self-evaluation in the operating units is part of continuous work development and context-driven improvement of the activities. The operating units agree on what cooperation practices will be used, how cooperation will be monitored and evaluated, and how feedback will be provided. At minimum, the unit's supervisor and catering and pedagogical staff members will participate in the evaluation. They jointly evaluate such aspects as the atmosphere at mealtimes, success with teaching the children to eat a varied diet, effectiveness of the menu, ordering of foods, eating together with the children (setting an example) and the implementation of food education activities



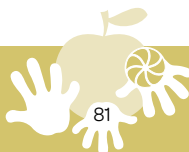


Proposed indicators for local evaluation of how meals and food education are implemented in early childhood education and care.

Evaluation scores:

1 = not implemented • 2 = implemented to some extent • 3 = mainly implemented • 4 = fully implemented

- The minimum requirements of nutritional quality are complied with extensively in the municipality's catering services for early childhood education and care
 - in competitive tendering for catering services (documented in tender documents)
 - food procurements (documented in calls for tenders)
- The meals to be served, the times of the meals, portion sizes and the nutritional quality of the food to be served as well as the implementation methods of food education and cooperation are specified in the catering service contract
- The staff, including substitutes, have received induction training on the unit's meal practices.
- The staff have participated in continuing training related to food education.
- The goals and good practices of food education have been recorded in the local curriculum for early childhood education and care.
 - The food served to the children is varied, looks delicious and is beautifully presented.
 - Each child can eat without rushing in a pleasant atmosphere together with other children, learning about proper table manners.
 - All children, also those with special needs, are supported and guided in eating independently and getting familiar with new tastes.
 - The adults and the children chat at the table: the children learn food vocabulary through discussions, stories and songs.
 - The children and adults familiarise themselves together with the origin, appearance, consistency and taste properties of food using different senses.
- The implementation of food education is monitored and evaluated regularly.
- A child's nutritional needs and food education are addressed in his or her early childhood education and care plan.
 - Each child's special diet is addressed in his or her early childhood education and care plan.
 - Each child's special needs are addressed in his or her early childhood education and care plan.
- The pedagogical staff have their meals with the children (setting an example).





★ Local indicators for day-care centre meals that gauge the children's views may include: "I'm brave for tasting different foods" and "Meal times are happy times". Assessment with smiley faces.

Source: Tampereen kaupungin hyvinvointimatriisi.

https://www.tampere.fi/tiedostot/r/LmIVbDNI7/ravitsemuksen_hyvinvointimatriisin_taustatiedot.pdf

and common policies as well as the feedback received. For instance, the evaluation may be based on the key objectives of food education presented in the National core curriculum for early childhood education and care (Fact box on page 63) or the Signs of a good mealtime environment (Fact box on page 76). The Flavour Alphabet evaluation items, which the pedagogical and catering service staff can use to jointly evaluate and develop the children's meals and food education, can be used for self-evaluation at individual units (day-care centres) (see the Flavour Alphabet on page 86).

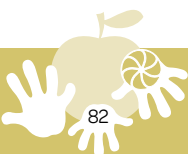
5.1 Monitoring and evaluating the nutritional quality of food served to children

Monitoring the nutritional quality of the meals served to the children is a continuous process through which the catering service provider ensures that the food complies with the recommendations. This process covers all stages from the planning of menus and food procurements to productisation, recipe development and preparing and serving the food. The contract documents must clearly describe what compliance with the meal recommendations for early childhood education and care means. Accurate descriptions of the activities at the level of menus and individual meals, meal component

specific minimum requirements for nutritional quality and nutritional content calculations make it possible to monitor the fulfilment of nutrition recommendations and verify the nutritional quality of the meals served to the children. A plan is prepared for the monitoring of nutritional quality, containing descriptions of criteria, the monitoring interval and methods, the reporting method and cooperation with the contracting entity related to monitoring. It is also important to agree upon feedback practices and procedures to be followed if the activities are not compliant with the contract.

Nutrient content calculations at the level of menus need to be produced in order to monitor the nutrient content in closer detail (the nutrients to be monitored at the weekly level are: energy and energy-yielding nutrients (E-%), saturated fat (E-%), sugar (E-%), fibre and salt (see the calculation example in Appendix 5)). Calculating the nutrient contents of meals is part of basic catering service competence and, above all, a practical tool for developing recipes and meals rather than exclusively intended for overall evaluations of the final menu.

If the catering service is not using any production management software (e.g. Aivo, Aromi, Jamix), at the very least the minimum requirements for nutritional quality of individual meal components must be used in the self-evaluation of the food's nutritional quality, as well as the frequency of use and quality recommendations of foods for breakfasts and





★ The municipality should appoint a multidisciplinary monitoring group on children's nutrition to evaluate and develop children's meals and food education that will work together with the health and wellbeing promotion group.

snacks. In this case, a detailed plan should be produced for monitoring compliance with the requirements, and the entire staff must be involved in implementing it. In the monitoring plan, self-evaluation of the nutritional quality should cover at least the fat content, saturated fat, sugar, salt and fibre contents, the monitoring frequency as well as the recording and reporting practices.

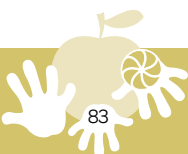
An internal audit/quality evaluation visit, for example once a year, is a good practice. An audit serves as an interactive guidance practice that promotes the provision of early childhood education and care meals that are of a consistently high quality and fulfil the recommendations and contracts at the units in the operating area. Visits

to the units can be combined with cooperation meetings at individual day-care centres, in which the quality and implementation (service quality, meal contents, actual portion sizes and balanced diet, feedback received and corrective actions etc.) are assessed together with the day-care centre staff. In these situations, it is a good idea to organise a meeting of the day-care centre's parents' association or similar group to also hear the guardians' view, discuss any emerging nutritional issues or concerns that the guardians may have, and inform the guardians about the implementation of nutrition recommendations in the children's meals.



Methods for verifying the nutritional quality of meals

- software for calculating nutritional content in production management systems (Aivo, Aromi, Jamix etc.)
- goods suppliers' standard recipes and/or recipes tailored for the unit's kitchen (ready-made nutritional content data)
- the calculation of nutritional content of the standard recipes used by the unit's kitchen may be outsourced (for example to the Finnish Heart Association's recipe calculation services, suppliers, universities of applied sciences)
- the nutritional content of recipes used by the unit's kitchen may be calculated based on a composition database integrated in the production management system or the Fineli database
- using standard recipes of the Better Choice Heart Symbol meal system <https://ammattilaiset.sydanmerkki.fi/ammattikeittiot/nain-sydanmerkki-saadaan-kayttoon> and <https://ammattilaiset.sydanmerkki.fi/ammattilaisreseptit> (in Finnish) <https://www.sydanmerkki.fi/en/>



5.2 Monitoring food losses

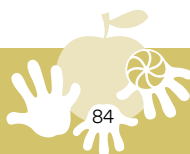
Monitoring food consumption and food losses (losses in the kitchen, during distribution and on the plates) is an essential part of product development and evaluating the effectiveness of the order-delivery system. At the same time, it plays a key role in managing environmental loading and reducing biowaste volumes. Food that ends up being dumped increases food costs and causes unnecessary environmental loading.

Controlling and monitoring losses during distribution and service and on the plate is a common concern for everyone from the catering service to the child groups. Being aware of the issue, agreed practices (including food orders, knowing how many meals will be required) and keeping to what has been agreed are requirements for reducing losses. Children can be involved in monitoring food for plate left-overs from young age. It is part of environmental education in early childhood education and care, which teaches the children to observe the consequences of their actions and value food. Monitoring the quantity of food that goes from the plates to the bin is a highly suitable task for pre-primary education groups. The staff can and the children can discuss what happens to the food that is left uneaten and what the children can do to reduce the losses. “A food loss barometer” makes the progress made in reducing losses clear to everyone. However, the efforts to monitor and reduce food losses must not lead to a situation where the children do not get sufficient food that meets their nutritional requirements or a second helping if necessary.

5.3 Participation of children and parents/guardians

When developing meals in early childhood education and care, the most vital feedback and proposals for improvements are received from the children themselves, the pedagogical staff and the parents/guardians. A direct and interactive feedback system is the best way to achieve concrete improvements. Indirect feedback is received from parents/guardians through what the children tell them about their meals and experiences, and the descriptions of what and how the children eat given to the guardians by the pedagogical staff. It is important to take into consideration continuous feedback and any nutritional issues that have been brought up. Various ideas based on beliefs and assumptions continue to be associated with the meals in early childhood education and care. It is vital to provide appropriate responses to feedback received from both the children and the homes and correct any mistaken ideas or false information if necessary. An effort is made to find constructive and practical solutions to the parents' concerns over what and how the children eat.

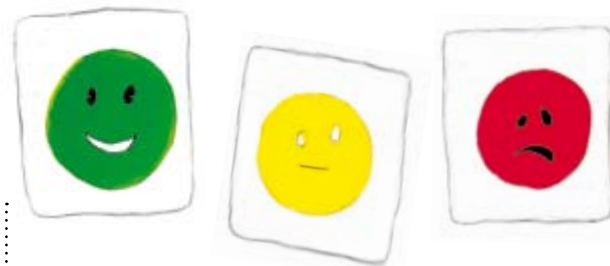
The children's and the parents'/guardians' participation is an important target of monitoring and evaluation as such: is their participation implemented in the planning and delivery of meals and food education? Have the children and the parents/guardians been involved in preparing and justifying the rules and practices related to food and meals? Do the children have possibilities of expressing their experiences of the food? Are the children given opportunities for diverse familiarisation with foods, also outside mealtimes, and regularly participating in mealtime arrangements, serving the portions and





Methods for including and hearing the children:

- asking children about their views of the day's menu using "smiley faces" or "thumbs up"
- surveys of favourite foods (using model meal pictures)
- children's own food or taste panels for new foods and snacks on the menu
- cooking themes for mini-kitchens: cooking a dish or a meal on the menu together with the children, using ingredients ordered from the catering service (for example including pureed vegetable soup and oven pancake with crushed berries). The end product is assessed together using all the senses.

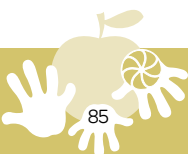


tidying up? Are the parents/guardians provided with an annual opportunity to have a meal with the children at the day-care centre?

5.3.1. Children's opinions of the food – means of increasing the children's participation

Direct daily feedback on the children's meals and the consumption of different foods provides the catering service with essential information for developing the meals and menus. Personal feedback can be collected even from the youngest children by using smiley faces. Older children like to take part in food or taste panels. The catering service can receive valuable information about the acceptability of new foods if

the children are offered new products to try in addition to the foods listed on the day's menu. This also diversifies the offer of food, the children gradually get used to new foods, and the losses caused by foods that the children may not take to are reduced. Sensory food education exercises can also be used to find out about the preferences of a child group and develop the foods to be served to the children (for example, by introducing the children to the products of a salad bar in advance). Working in small groups, the children can be introduced to foods on the menu by allowing them to prepare themselves a meal or a meal component, for instance in the unit's mini-kitchen, and assess the end products by eating them together.





★ Children's meals and food education is an annual theme for the early childhood education and care customer panel.

5.3.2. Parents'/guardians' participation

When it comes to their children's meals, the parents are in the role of both municipal residents and beneficiaries of a service. The parents' participation is a key indicator of successful cooperation. In addition to daily discussions, the parents'/guardians' feedback and views of their children's meals can be collected using surveys, through the open feedback system of early childhood education and care, through an electronic platform, at parents' evenings and through a parents' association/committee. A customer panel on a theme relevant to the children's meals and food education organised once a year or at other suitable intervals has been found a good practice. In terms of the appropriate implementation of special diets, it is important that the parents/guardians give direct feedback actively and, on the other hand, receive factual information on the implementation of special diets and their possible limitations. It is also vital to collect the parents' feedback on other types of early childhood education and care, for example the meals, practices related to snacks and food education in club activities.

5.4 Evaluation tools



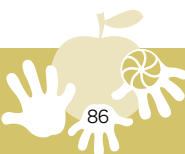
5.4.1 Flavour Alphabet Diploma – a tool for self-evaluation and improvement

The Flavour Alphabet Diploma³⁷ is an award granted to a day-care centre for promoting nutritionally, pedagogically and ecologically sustainable day-care centre meals. This diploma is a self-evaluation and development tool, the aim of which is to support the implementation of day-care centre meals compliant with regulations, recommendations and good practices.

Applying for the diploma encourages day-care centres to improve the quality of meals and food education in early childhood education and care, promoting multidisciplinary cooperation and meals compliant with the nutrition recommendations. The diploma is based on 45 evaluation items for meals and food education, whose implementation the day-care centre's representatives examine together with the catering service provider. The diploma is granted if 85% of the good practices relevant 45 evaluation items for meals are implemented.

All private and municipal day-care centres can apply for a Flavour Alphabet® diploma in cooperation with the catering service provider

³⁷ Flavour Alphabet Diploma for kindergartens – a self-evaluation tool for implementing meals and food education in early childhood education and care <http://www.makuaakkosetdiplomi.fi/flavour-alphabet-diploma/>



responsible for the day-care centre's meals. The diploma is granted to a specific unit. An application for a diploma can be submitted at any time, and any development measures can be completed during the application process. A development tool similar to the Flavour Alphabet Diploma® intended for schools is the School Lunch Diploma®. The food diplomas are granted by the Ammattikeittöosaajat (Finnish Association of Food Service Professionals).



5.4.2 The Better Choice Heart Symbol meal system aims to improve nutritional quality

The Better Choice Heart Symbol is a labelling system for healthy foods and meals. It is the only symbol in Finland indicating that a food or a meal offers good nutritional quality. The scheme is managed by the Finnish Heart Association and the Finnish Diabetes Association, and it is developed by an independent expert group based on scientific information.

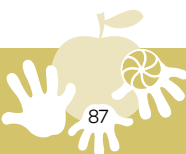
The Better Choice Heart Symbol logo on the label indicates that the food is a healthier choice within its product group. The logo has been registered as a nutrition claim. The Better Choice Heart Symbol meal system,³⁸ on the other hand,

provides professional kitchens with a framework for preparing healthy meals. It also supports customer communications by making it fast and easy for the customer to choose a healthy meal.

The Better Choice Heart Symbol meal system has specific criteria for each meal component that must be fulfilled. The criteria have been created on the basis of scientific research on nutrition. They pay attention to the quantity and quality of fat and the salt content. In cereal-based meal components, the fibre content is a significant quality factor. The Better Choice Heart Symbol criteria are consistent with the meal-specific nutritional criteria given in national nutrition recommendations. The Better Choice Heart Symbol meal system criteria can be applied to lunch and dinner meals. Breakfasts and snacks are also served at the day-care centre, and their nutritional quality must equally be verified. The nutritional criteria for these meals are included in Appendix 3 to this recommendation.

The Better Choice Heart Symbol meals are already being served in a number of municipalities, and they are being introduced more extensively. Demanding that the service provider serves the Better Choice Heart Symbol meals makes it easy for a municipality to promote its residents' health and wellbeing and verify that the dishes served for lunch and dinner are compliant with the recommendation. Preconditions for introducing the Better Choice Heart Symbol meals is standardised recipes, menu planning and nutritional content calculations.

³⁸ <https://ammattilaiset.sydanmerkki.fi/ammattikeittiot/mika-sydanmerkki-ateria> (in Finnish) <https://www.sydanmerkki.fi/en/>



5.4.3 General evaluation of food safety – the Oiva system





An Oiva smiley in a visible location in an early childhood education and care unit's kitchen indicates that the catering service has food safety issues under control and that correct information is provided on the food served to the children. Oiva is a food safety inspection scheme coordinated by the Finnish Food Safety Authority Evira³⁹. Under this scheme, local food inspectors pay visits to service providers and use smiley faces to grade the food safety of kitchens, restaurants, shops and food industry companies, including food hygiene and product safety. The widest smile is awarded to a service provider fully compliant with the food legislation.

The smileys are evaluation results awarded under this scheme. The catering service unit has the obligation to keep the evaluation

results visible for the customers. The results of an inspection visit are also always published as Oiva online reports. When Oiva is smiling, the customers can feel safe. A straight line or a downturned mouth indicate that there is room for improvement, or that the situation is bad.

It should be noted that the Oiva scheme does not assess the quality of customer service or other service level, or the tastiness or nutritional quality of the food. A different feedback system is needed for evaluating customer service. The catering service can also integrate nutritional quality monitoring in its self-checks. For example, while carrying out regular temperature checks, the service provide can also check that food ingredients in the kitchen, including the salt quantity, are in keeping with the recipe.

39 Oiva scheme <https://www.oivahymy.fi/portal/fi/> (in Finnish)

 EXCELLENT	EXCELLENT: Operations comply with requirements.
 GOOD	GOOD: There are small issues with the operations, which do not impair food safety or mislead consumers.
 TO BE CORRECTED	TO BE CORRECTED: There are issues with the operations, which impair food safety or mislead consumers. These issues must be rectified within a deadline set.
 POOR	POOR: There are issues with the operations, which jeopardise food safety or considerably mislead consumers. These issues must be rectified with immediate effect.

OIVA evaluation scale. Oiva scheme : www.oivahymy.fi (in Finnish)

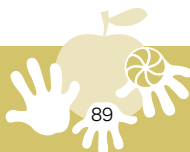


JOY OF FOOD

Joy of food means the good feelings you get from food, making it, eating it and sharing food experiences.

A positive atmosphere associated with food and eating creates joy of food.

Joy of food is fed by children's natural curiosity, willingness to try new things, learning and enthusiasm.



ANNEXES 1–9



APPENDIX 1. Template for the contents and structure of a call for tenders/tendering documents

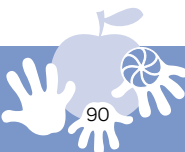
Main document: call for tenders (contains the technical aspects of a procurement, including requirements concerning the tenderer's background and comparison criteria)

- Appendix 1 to a call for tenders: Service description
- Appendix 2 to a call for tenders: Draft contract
- Other appendices to a call for tenders

The service description is the most important document that contains the following key information:

- Name of the service
- Site and customer groups of the service
- Objective of the service
- Contents of the service
 - a) nutrition recommendations and nutritional quality
 - b) customer's policies
 - c) contents of meals
 - components of meals
 - nutritional content
 - variation of main ingredients and the frequency of their use
 - selection of dishes
 - principles of menu planning
 - portion size
 - special diets
 - products obtained from subcontracts
 - packed lunches that replace meals

- celebrations, themes
- self-monitoring and food safety
- product data maintenance
- customer menu
- EU school food scheme
- d) food education
 - implementation as part of the catering service and cooperation
 - availability/supply of ingredients for the children to explore
 - and cook with (pedagogical menus)
- Food distribution, times and serving method of meals
- Other meals and services
- Placing an order
- Delivery
- Facilities, equipment and dishes
- Pricing and billing
- Environmental issues
- Cooperation between the parties (meetings, reception and processing of feedback, cooperation with early childhood education and care staff as well as with parents/guardians, for example participation in parents' evenings)
- Quality monitoring
- Service supplier's staff and substitutes
- Exceptional arrangements
- Reporting



APPENDIX 2. Selection of ingredients for lunches and dinners in early childhood education and care

Food group	Recommended choices *	Served at lunch/dinner
Vegetables, fruit and berries	A large variety of seasonal produce	In different forms at every meal. Herbs used for seasoning.
Legumes (peas, beans and lentils or other sources of vegetable protein)	Diversely as a protein source in vegetarian main meals, prioritising local foods as far as possible	On a weekly basis as a vegetarian dish and/or side dish
Potato and cereal side dishes	Boiled potato, brown pasta, barley, spelt, brown rice, other brown cereal side dishes, wholegrain porridge	Potatoes in a variety of forms: boiled in their skins, cubed, stripped, sliced or mashed. Pasta and rice should be brown, both in side dishes and main meals.
Bread	Low-salt (maximum salt amount in fresh bread 0.7 g/100 g and in crisp bread 1.2 g/100 g) and brown options (minimum fibre content 6 g/100 g, in crisp bread 10 g/100 g)	At every meal
Milk/milk-based drinks and buttermilk Liquid dairy products/ cultured milk products	Fat-free products with added vitamin D Products that are fat free or contain 1% of fat at maximum, and options that contain little or no added sugar. The maximum sugar content in yoghurt and fromage frais 10 g/100 g and in other cultured milk products 12 g/100 g.	At every meal, milk/milk-based drinks and buttermilk Plain yoghurt, fromage frais or other cultured milk products should be favoured. When using flavoured products, choose ones that contain less or no added sugar.
Cheese	Low-fat (maximum fat content 17%) and low-salt (maximum salt content 1.2 g/100g) options	At most once a week on bread
Fish**	A variety of species	1 to 2 meals/week
Poultry		1 to 2 meals/week

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Food group	Recommended choices *	Served at lunch/dinner
Red meat (beef, pork, lamb), mince	Low-fat meat	At maximum 1 to 2 meals/week
Processed meat products and sausages	Low-fat and low-salt processed meat products	Cold meat cuts at maximum once a week. Dishes containing sausage or other processed meat products should not be served every week.
Egg		In foods, on bread, as a side dish
Fat spreads	Vegetable margarine with a minimum fat content of 60%	Spread for bread
Vegetable oil	Rapeseed/olive oil	In salad dressing or on its own with a salad
Nuts, almonds and seeds***	A variety of different types (with individual consideration for allergies)	At maximum 15–30 g/day (total intake should be taken into account)

* In addition to the products shown in the table, all products that meet the Better Choice Heart Symbol criteria can be used.

** Recommendations for eating fish: <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/>

*** Limiting the quantities is justified especially because nuts, almonds and seeds have a high fat content and contain large quantities of energy. Heavy metals in soil accumulate in the seeds of some oil plants (including flax, sunflower, pumpkin, sesame, hemp and chia). This is why the recommended intake for adults is at maximum 2 tablespoons of seeds a day. A child's portion can be approximately one half of an adult's portion. No seeds should be used in foods intended for infants. See Evira's up-to-date instructions on safe use of foodstuffs: <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/>



APPENDIX 3. Selection of ingredients for breakfasts and snacks in early childhood education and care

Food group	Recommended selections*	Practical examples for breakfasts	Practical examples for snacks
Vegetables, fruit and berries	A large variety of seasonal produce	In different forms at every breakfast. Fresh and colourful vegetables, fresh berries and fruit, vegetables cut into strips, salad vegetables on bread, desserts made from fresh berries, and crushed berries and pureed fruit with porridge should be favoured.	The children should be familiarised with fruit and vegetables in different forms at every snack time, teaching them to eat a varied diet. Offered as finger foods and on sandwiches, in smoothies and fromage frais snacks, with pancakes, on dip plates, in fruit salads and as desserts made from fresh berries.
Legumes (peas, beans and lentils)	A large selection		Spreads made from legumes and other vegetables are served with bread, familiarising the children with their use (hummus etc.)
Bread	Low-salt (maximum salt content in fresh bread 0.7 g/100 g and in crisp bread 1.2 g/100 g) and high-fibre options (minimum fibre content 6 g/100 g, in crisp bread 10 g/100 g)	Low-salt and high-fibre cereal products should be preferred.	A variety of different types of bread, rolls, flatbreads, pies etc. should be served. In bread made on the premises, a salt content compliant with the criteria is achieved by adding at maximum 15g of salt per one litre of liquid. To make sure that the fibre content is reached, brown flour, bran or rolled cereals are used.
Porridge	The minimum fibre content in cereal ingredients should be 6 g/100 g. Porridges should preferably be made without added salt, or with a maximum salt content of 0.5 g/100 g.	High-fibre rolled and hulled grains should be favoured.	Porridges should be made with a variety of fruit and berries, with moderate amounts of sugar as indicated by the acidity of the fruit.
Breakfast cereals and mueslis	The maximum fat content should be no more than 5 g/100 g, or if the fat content is 5.1–15 g/100 g, no more than 30% of this amount should be hard fat Maximum sodium content 1 g/100 g Maximum sugar content 15 g/100 g Minimum fibre content 6 g/100 g (The Better Choice Heart Symbol criteria)	To add variety, may be served with cultured milk products to replace porridge.	As an accompaniment for cultured milk products, in smoothies, berry or fruit bakes, with desserts made from fresh berries.

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Food group	Recommended selections *	Practical examples for breakfasts	Practical examples for snacks
Baked goods, biscuits and crisp rolls	Low-fat, low-sugar and low-salt options.		Sweet baked goods should be served no more than once a week. Baked goods made from a yeast dough should be favoured over shortcrust pastries. Buns and berry and fruit pies made with yeast doughs should be selected as sweet baked goods. Unsweetened, low-sugar and low-salt biscuits and crisp rolls (products that meet the Better Choice Heart Symbol criteria) should be served.
Milk/milk-based drinks and buttermilk	Fat-free products with added vitamin D	A large variety of milk and cultured milk products	At snack times, a variety of milk/buttermilk or other milk-based or cultured milk products should be served.
Snacks and cultured milk products eaten with a spoon	Fat free products and products with a maximum fat content of 1%. The maximum sugar content in yoghurt and fromage frais should be 10 g/100 g and in other cultured milk products 12 g/100 g.		Plain cultured milk products should be favoured; when using flavoured products, options with little or no added sugar should be selected, in which the children can add whole or crushed berries or sliced or pureed fruit.
Cottage cheese	Maximum fat content 2.0%	As a side dish, with bread or in porridge.	On its own with berries and fruit and in spreads.
Cheese	Low-fat (maximum fat content 17%) and low-salt (maximum salt content 1.2 g/100 g) options	At either breakfast or snack time once a week	At either breakfast or snack time once a week

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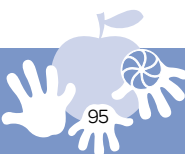


Food group	Recommended selections *	Practical examples for breakfasts	Practical examples for snacks
Fish**	A variety of species		Fish-based spreads or fish as a sandwich filler.
Processed meat products and sausages	Low-fat and low-salt products (in full meat products, maximum fat content 4 g/100 g and salt content 2 g/100g, in cold meats and sausages maximum fat content 12 g/100 g and salt content 1.5 g/100 g)	At either breakfast or snack time once a week	At either breakfast or snack time once a week
Egg		With bread on its own or as a spread	With bread on its own or as a spread and in baked goods
Margarine	Vegetable margarine with a minimum fat content of 60% (a product compliant with the Better Choice Heart Symbol criteria)	On bread and in porridge (oil could also be used)	On bread or in baked goods and snacks (vegetable margarine or oil)
Nuts, almonds and seeds***	A wide variety At maximum 15 g/day (taking into account the use of these products as a whole)		In snack products, including seed breads and rolls, in mueslis, and in side dishes containing nuts.

* In addition to the products shown in the table, all products that meet the Better Choice Heart Symbol criteria can be used.

** Recommendations for eating fish: <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/>

*** Limiting the quantities is justified especially because nuts, almonds and seeds have a high fat content and contain large quantities of energy. Heavy metals in soil accumulate in the seeds of some oil plants (including flax, sunflower, pumpkin, sesame, hemp and chia). This is why the recommended intake for adults is at maximum 2 tablespoons of seeds a day. A child's portion can be approximately one half of an adult's portion. No seeds should be used in foods intended for infants. See Evira's up-to-date instructions on safe use of foodstuffs: <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/>



APPENDIX 4. Minimum requirements for nutritional quality*

TABLE 4a. Lunch and dinner

Main food type	Nutrient content/100 g, at maximum		
	Fat g	Saturated fat, g	Salt g
Porridges** In rolled grains etc., minimum fibre content 6 g/100 g.	3	1	Preferably no added salt, at maximum 0.5
Soups**	3 (5)***	1 (1.5)	0.5****–0.7
Bakes, risottos, pasta meals, pizza	5 (7)***	2 (2)	0.6****–0.75
Dishes with meat in a sauce for main meals (e.g. with beef or chicken)	9 (11)***	3.5 (3.5)	0.9
Itemised foods with or without a sauce	8 (12)***	3 (3.5)	0.9

* All products compliant with the Better Choice Heart Symbol criteria can be used

** If cold meats or cheese are served with bread at a meal consisting of soup or porridge, products compliant with the Better Choice Heart Symbol criteria should be used.

*** The fat contents in brackets refer to fish meals; the fat content can be higher if fish is the only source of fat. The fat contents relevant to fish can also be applied to purely vegetarian dishes.

**** The salt content is a range where the lower limit is the target in foods intended for young children.

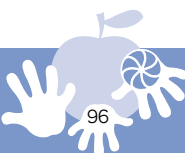


TABLE 4b. Potato and cereal side dishes served with a main dish*

Side dish	Nutrient content/100 g			
	Fat g	Saturated fat g	Salt g	Fibre (of dry weight) g
Pasta	–**	At maximum 0.7	Preferably no added salt, at maximum 0.3	At minimum 6
Hulled barley, rice-cereal mixtures etc.	–	At maximum 0.7	Preferably no added salt, at maximum 0.3	At minimum 6
Brown rice	–	At maximum 0.7	Preferably no added salt, at maximum 0.3	At minimum 4
Boiled potato	–	–	No added salt	–
Other side dish made with potato (e.g. mashed potato, potato wedges)	–	At maximum 0.7	At maximum 0.3***–0.5	–

* All products compliant with the Better Choice Heart Symbol criteria can be used

** (–) No criterion applies to this factor.

*** The salt content is a range where the lower salt limit is the target in foods intended for young children.

TABLE 4c. Other meal components*

Meal component	Nutrient content/100 g			
	Fat	Hard fat (saturated and trans fat), %	Salt g	Fibre g
Bread	–	–	Fresh bred at maximum 0.7 Crisp bred at maximum 1.2	At minimum 6
Margarine	At minimum 60	Maximum 30 of fat	At maximum 1.0	–
Milk or buttermilk	At maximum 0.5	–	–	–
Vegetable side dish • fresh vegetables	–	Hard fat maximum 20 of fat in a marinade	No added salt	–
Vegetable side dish • cooked vegetables	–	Hard fat maximum 20 of fat in a marinade	At maximum 0.3	–
Salad dressing or Oil for a salad	At minimum 25	Maximum of the fat content 20 Maximum of the fat content 20	At maximum 1.0	–

* All products compliant with the Better Choice Heart Symbol criteria can be used

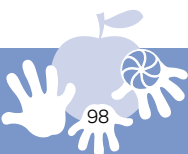


APPENDIX 5. An example of calculating the nutrient content of a menu

ONE-WEEK SAMPLE MENU*		
MONDAY		
Breakfast (Portion g**)	Lunch (Portion g**)	Snack (Portion g**)
Oatmeal porridge (150 g) Brown bread (20 g) Turkey slice (15 g) Vegetable sticks (60 g)	Minced beef (and bean) sauce with tomato (120 g) Brown pasta (80 g) Grated carrot/mixed grated root vegetables (60 g)	Rye dough pies with rice filling/ Barley flatbread wraps (70 g) Cottage cheese and egg spread/ fish spread (20 g) Fruit (80 g)
TUESDAY		
Breakfast (Portion g**)	Lunch (Portion g**)	Snack (Portion g**)
Barley gruel (150 g) Rye bread (20 g) Fruit segments (60 g)	Turkey and vegetable soup (250 g) Blueberry and rye porridge (120 g) with milk (50 g) Rye bread (20 g)	Fromage frais with berries and muesli (80 g) Rye bread (20 g) Vegetables (50 g)
WEDNESDAY		
Breakfast (Portion g**)	Lunch (Portion g**)	Snack (Portion g**)
Rolled rye porridge (150 g) with margarine (10 g) Potato flatbread (30 g) Pea hummus (15 g) Vegetable sticks (60 g)	Vegetable croquettes (100 g) Sour cream sauce with herbs (30 g) Boiled potatoes (80 g) Colourful warm vegetables (60 g)	Vegetarian omelette (80 g) Fruit (mandarin) (80 g) Brown bread (20 g)
THURSDAY		
Breakfast (Portion g**)	Lunch (Portion g**)	Snack (Portion g**)
Semolina (150 g) Fresh berry puree (30 g) Pepper slices (30 g)	Chicken sauce (120 g) Multi-cereal side dish (oats/barley with brown rice) (80 g) Crushed blackcurrants (15 g) Pea and sweetcorn salad (70 g)	Buttermilk drink or smoothie with berries/fruit (170 g) Stoneground bread roll (40 g) Tomatoes, cucumber, salad (30 g)
FRIDAY		
Breakfast (Portion g**)	Lunch (Portion g**)	Snack (Portion g**)
Full-grain bread roll (40 g) Vegetable spread (20 g) Plain yoghurt (150 g) Fresh berry and fruit puree (redcurrant and apple) (50 g)	Salmon and potato bake (200 g) Red cabbage and apple salad (70 g)	Vegetables and fruit with a dip (120 g) A light cheese (to go with the dip) (20 g) Dip (yoghurt/fruit puree) (30 g) Oat bread (20 g)

* At all meals, crisp bread, vegetable margarine, fat-free milk and oil/salad dressing are also served, depending on the dish.

** Children's individual energy requirements vary considerably. The indicated portion sizes are for reference only to be used for planning meals at group level.



NUTRIENT CONTENT OF THE ONE-WEEK MENU*								
Weekday	Energy (kcal)	Energy (kJ)	Protein (E-%)	Fat (E-%)	Saturated fat (E-%)	Carbohydrates (E-%)	Fibre (g)	Salt (g)**
Monday	900	3761	17.3	28.7	6.6	50.9	15.6	2.8
Tuesday	965	4041	15.5	29.0	9.3	53.0	17.7	3.5
Wednesday	934	3860	14.8	42.4	10.1	39.1	18.4	2.9
Thursday	1004	4193	14.6	31.6	6.9	51.4	16.5	2.5
Friday	1021	4249	16.2	41.1	10.0	40.6	16.7	2.7
Weekly average:	960	4020	16	35	8,6	47	17.0	2.9
Recommendation:			10–15	30–40	<10	45–60		2.0–2.6

* The recipes and nutrient content data used for the calculations were obtained from several catering service units that provide food for children's day-care centres.

** Low-salt bread varieties were used in the calculations, and cereal and potato side dishes as well as porridges were assumed to have no added salt. Otherwise the salt amount was included as per the recipe used.



APPENDIX 6. Meals for a child with diabetes in early childhood education and care

In early childhood education and care and pre-primary education, adults are always responsible for diabetes care. All parties can feel safe when the division of duties and responsibilities is clearly defined.

The care arrangements for a child with diabetes must be put in place in good time before he or she comes to the day-care centre. The arrangements are agreed upon and basic information about diabetes care is provided at a cooperation meeting. Participants at this meeting are the child's parent(s)/guardians, the diabetes nurse and/or rehabilitation nurse from the health care unit treating the child's diabetes, possibly a nutritional therapist as well as the persons responsible for the child's care and meals in early childhood education and care. A further cooperation meeting is organised at least once a year. A cooperation meeting is also organised as soon as possible when a child who already attends a day-care centre is diagnosed with diabetes or changes groups.

It is a good idea to collect information about the child's diabetes care, including arrangements related to meals, into a folder where essential information can be found and is easily available. The information should be updated whenever there is a change in the child's care (e.g. insulin dosage), or at least once a year.

Meals prepared and served at the times indicated in this recommendation are suitable for a child with diabetes without modifications. The difference compared to other children is that the volume of carbohydrates in the portion served to a child with diabetes must be estimated to administer the correct dosage of fast-acting insulin needed for the meal in question. The evaluation of the carbohydrate content is assigned to the persons responsible for the child's meals and diabetes care at the day-care centre. Each unit must have several of these persons to ensure that one staff member well informed about the child's care is always present when the child attends. Another difference is related to any additional snacks that may be needed if the child takes more exercise than usual. Some children may also need additional snacks as part of their insulin regime. These needs are always individual and will be agreed

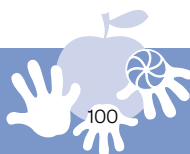
upon at the cooperation meeting. This additional snack may consist of foods that can be easily arranged and quickly consumed, including a piece of fruit or some crisp bread and a glass of milk.

For first aid purposes in case the child develops hypoglycaemia, or excessively low blood sugar, the staff at the unit must always have access to a food or drink that is easy to consume and that contains fast-absorbing carbohydrates. At the joint meeting, the participants decide which foods or drinks should be used, who will provide them and where they are stored. This information is also kept in the child's folder. The fastest-absorbing options are glucose tablets and sugary juices. The staff must always bring these foods or drinks needed to treat low blood sugar with them when the group leaves the unit, for example on excursions.

Sufficient food must be brought along on excursions if the children take more exercise than usual. The child's parents/guardians should be informed in advance of any excursions to allow them to make the necessary changes in the insulin dosage or provide the staff with instructions on modifications needed during the excursion. If the decision to go on a short excursion is made on the day and the children take exercise during the excursion, in addition to foods or drinks to treat low blood sugar, an additional snack to compensate for the exercise should be brought along.

If products with a high sugar content are offered at the unit in addition to normal meals (for example on excursions or at celebrations), it is a good idea to agree in advance on the quantity of these products that the child can be allowed, or if fast-acting insulin should be administered to the child in these situations. Normal sugary "treats" are also suitable for children with diabetes. Soft drinks and juices with a high sugar content are only suitable for a child with diabetes to treat low blood sugar, but there is no need to serve these to any child at the day-care centre.

For more information (in Finnish): Diabetes leikki-ikäisellä. Opas päivähoitoon. Finnish Diabetes Association.



APPENDIX 7. Meals for children with food allergies in early childhood education and care

Food allergies are frequently suspected, but the prevalence of genuine allergies confirmed by tests in children is in the range of a few per cent. A young child's body is continuously developing, and the prevalence of allergies in each age group varies, too. It is important that an allergy-related diet is based on a physician's diagnosis and that a certificate of this diagnosis is presented to the director of the early childhood education and care unit.

What early childhood education and care and catering service staff should know about children's food allergies

Research indicates that expanding and diversifying a child's diet following the nutrition recommendations reduces sensitisation to foods. Allergies cannot be prevented by avoiding certain foods as a precaution. The lists of foods containing common allergens given out some years ago are now considered outdated.

A food allergy usually emerges during the child's first year of life. The most typical causes of children's food allergies are milk, eggs, cereals containing gluten (wheat, barley, rye), nuts and fish. The diagnosis of a food allergy is not based on a positive skin prick test. So-called allergy tests indicate potential sensitisation to individual foods. The food in question does not cause symptoms in all those who are sensitised to it, however; in other words, they are not allergic to it, and avoiding this food is unnecessary. Some foods are more likely to cause symptoms when eaten raw and may be tolerated quite well when cooked. A food allergy diagnosis is based on an allergen exposure-avoidance test carried out under a physician's supervision. A medical certificate is only issued to a child who experiences severe allergic symptoms or who is allergic to key ingredients, including milk or cereals. These should be replaced with other ingredients even in mild cases of allergy to make sure the child eats a balanced diet. The medical certificate and special diet notification form should be handed in to the unit director responsible for information flows within the unit/day care centre. The medical certificate should be updated every one or two years.

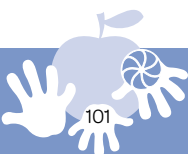
The severity of food allergies varies: some children experience minor itching in the mouth, while others have a serious allergic reaction. The majority of allergies to milk, eggs and cereals in infants and pre-primary age children disappear by the time they reach school age, but in some cases the condition is permanent. Allergies to fish and nuts usually are permanent. Mild symptoms do not need to be treated with a special diet and no medical certificate is needed, but these cases should be accounted for at mealtimes, for example by moving foods that cause symptoms to one side of the plate. Mild food allergies are often associated with cross-reactivity related to a pollen allergy, in which case raw root vegetables and fruit cause itchiness in the mouth and ears in the pollen season. Some allergens can be modified by processing. Cooked carrots and apples do not cause symptoms, for example, while uncooked ones do. Heating a food to a high temperature may also reduce the allergenicity of the proteins in milk and eggs, as a result of which most of those allergic to milk and eggs can tolerate them. Allergies to additives and spices are rare, and the mildly seasoned dishes served at the day-care centre can usually be eaten by children who are allergic.

For more information:

The Allergy, Skin and Asthma Federation's guide Food allergies in children: <https://www.allergia.fi/allergiat/in-english/>

Information package on children's allergies (in Finnish): <https://www.thl.fi/fi/web/lastenneurolakasikirja/tietopaketti/allergiat>

A project titled "Promotion of the nutrition and allergy health of pre-primary education age children" has created a form for submitting a diet notification concerning a child with allergies. The use of this national form is recommended instead of local forms.



Severe allergic reactions

Particular care is needed at mealtimes when a child has a severe food allergy, as even a small amount of the allergen can cause a life-threatening situation. A severe allergic reaction usually progresses rapidly. The way the symptoms start is individual. The most typical symptom is increasing itchiness and redness of the skin, “a lump in the throat”, coughing and swelling of the skin. There are individual variations in the order in which the symptoms appear. Anaphylaxis may also occur without skin symptoms, which may make it more difficult to recognise. As first aid in these situations, adrenaline must immediately be injected in the muscle using a suitable device (Epipen, Jext).

It is the responsibility of the early childhood education and care unit’s director to prepare clear instructions and assign responsibilities, of which the entire staff should be informed. The instructions should also always be separately explained to substitute staff. The staff must be clear about the following:

- where the adrenaline injector is stored
- who administers the injection
- who assumes responsibility for the child’s care (calls the emergency number, contacts the parents/guardians)

The adrenaline is injected in the thigh, preferably through bare skin. The injection can be given by any staff member. Instructions for using the adrenaline injector:

- take the injector out of the protective casing and grab it firmly in your fist
- remove the cap (yellow or blue) from the other end of the injector
- put the black/orange needle end close to the thigh and jab/press it firmly into the thigh, counting to ten
- remove the adrenaline injector and massage the injection site
- the adrenaline injector is a disposable device

Anaphylaxis (in Finnish)

<https://www.allergia.fi/allergiat/anafylaksia/>

After administering the injection, first call the emergency number and then contact the child’s parents/guardians. The adrenaline injection is intended for first aid only. A person having an allergic reaction may not be left alone for a single moment.

Some 30 cases in children are notified to the national anaphylaxis register annually. In more than 70% of these cases, the probable cause is a food ingredient. According to the anaphylaxis register, the most common food that causes anaphylaxis in children is cow’s milk. A few notifications every year have also been made to the register where the cause has been eggs, wheat, nuts or seeds, vegetables or fruit, or fish.



Joint meeting with a severe allergy sufferer

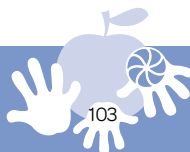
This meeting should take place before the child comes to the day-care centre. The participants at the meeting should include the parents/guardians, a catering service representative, a health care professional and, depending on his or her age, also the child as well as the early childhood education and care unit's director and the carer responsible for the child. At the meeting, the causes and symptoms of the food allergy and the severity of the symptoms caused by each food should be discussed.

The practices, the medications to be administered and actions in case of exposure should be agreed upon. It is also a good idea to talk to the parents/guardians about who should be told about the allergy and what they should be told (whether or not the other children in the group should be told to make sure that they know what to do in case of a reaction).

It is important that a health care professional teaches the day-care centre and catering service staff to use the adrenaline injector. Injectors for training purposes are available at pharmacies. It is also important that substitute staff members receive the instructions and training. It should be remembered that severe allergic reactions are rare, but when they do occur, it is important to recognise the symptoms and act promptly.

What precautions should be taken in the daily life of the day-care centre?

- food should be served carefully, avoiding contamination
- the meal should be supervised to make sure that the child does not accidentally eat food meant for somebody else
- the environment in which the food is prepared, served and consumed should be kept tidy
- food allergies should be checked out every year – a medical certificate
- a specific adrenaline injector should be provided for the day-care centre – complete with training for its use
- a person to take responsibility for responding in emergencies should be appointed
- the staff should carry the adrenaline injector when on excursions and similar
- the catering service staff, including substitutes, should be informed about food allergies and provided up-to-date information about changing allergies and the degree to which an allergen need to be avoided



**Appendix 8a. Notification of a special diet/early childhood education and care.
Special diet form (LILLA project), 8/2017.**

Municipality Agency	NOTIFICATION OF A SPECIAL DIET EARLY CHILDHOOD EDUCATION AND CARE To be completed by the guardian 8/2017	Validity: From ___/___/20____ <input type="checkbox"/> no need to renew (coeliac di- sease, diabetes, lactose-free diet)
CHILD'S BASIC INFORMATION	Surname	
	First name	Date of birth
	ECEC unit	Group
	Guardian	Telephone/e-mail
SPECIAL DIET FOR HEALTH REASONS Medical certificate	<input type="checkbox"/> Diabetes (please attach a personal meal plan if necessary)	
	<input type="checkbox"/> Coeliac disease	
	<input type="checkbox"/> Lactose-free diet	
	<input type="checkbox"/> Food allergy with severe symptoms <input type="checkbox"/> Adrenaline injector as standby medication	
	Forbidden food	Risk of anaphylaxis (generalised allergic reaction)
	_____ <input type="checkbox"/>	_____ <input type="checkbox"/>
_____ <input type="checkbox"/>	_____ <input type="checkbox"/>	
_____ <input type="checkbox"/>	_____ <input type="checkbox"/>	
_____ <input type="checkbox"/>	_____ <input type="checkbox"/>	
OTHER DIET No medical certificate is required	<input type="checkbox"/> Vegetarian diet that contains: <input type="checkbox"/> dairy products <input type="checkbox"/> egg <input type="checkbox"/> fish <input type="checkbox"/> poultry	
	<input type="checkbox"/> Diet based on religious beliefs: <input type="checkbox"/> no pork <input type="checkbox"/> no dishes containing blood <input type="checkbox"/> no beef	
	<input type="checkbox"/> Low-lactose diet	
ALSO NOTE		
CHANGES IN DIET	Please notify all changes to the unit director. The director will inform the catering service staff of them.	
SIGNATURE	Date	Guardian's signature



APPENDIX 8b. Instructions for filling in the special diet form (Attachment to the form)

SPECIAL DIETS IN EARLY CHILDHOOD EDUCATION AND CARE

A special diet for health reasons will be organised for children in early childhood education and care based on a medical certificate. Please copy the date indicated on the medical certificate to the section Validity (top right hand side of the first page). For a low-lactose diet, a vegetarian diet and a diet based on a religious belief, no medical certificate is required.

The special diet will be implemented in early childhood education and care, ensuring that the child will not consume foods that are not suitable for him or her. For a child following a special diet, a menu that is as similar as possible to the other children's menu will be prepared. In the section "Also note", write down anything that should be taken into account at mealtimes, for example leaving vegetables that cause mild allergic symptoms on the side of the plate. The child's carer will be responsible for ensuring that these instructions are followed. A copy of the form will be sent to the kitchen. Food allergies will be checked at one-year intervals.

Diabetes

Children with diabetes eat the same food as the other children. If necessary, the guardian should submit a personal meal plan for a child with diabetes to the unit's director, who will communicate this information to those responsible for the catering service and, if necessary, organise a separate meeting. A diabetes nurse from a specialised medical care unit or a rehabilitation nurse usually attends the first meeting with the parents/guardians and the early childhood education and care staff. The child's diabetes care form can be filled in at the same time. At this meeting, the participants agree on the consuming and serving of meals, any snacks that are needed and juices used in case of sudden hypoglycaemia (low blood sugar). Portion sizes will be looked after by the early childhood education and care staff. The catering service staff will assist them if necessary.

Coeliac disease

Wheat, rye and barley are replaced by gluten-free cereals and products whose analysed gluten content is less than 20 mg/kg. Almost all those with a coeliac disease can tolerate gluten-free oats. Products containing gluten-free wheat starch are also allowed.

Allergies

a) Severe allergic symptom or key food causing it: Milk, eggs, wheat, fish and nuts are the most common causes of severe allergic reactions. Foods that play a key role for nutrition will be replaced by other foods that are suitable for the child. The diet is based on a diagnoses made by the physician treating the child and a medical certificate issued by him or her. A medical certificate is needed on all foods that cause severe symptoms, even if they were not replaced by other foods. If the child's diet is particularly limited, an individual diet plan should also be attached to the notification.

The day-care unit must know how to use an adrenaline injector and how to treat the child in case he or she accidentally consumes the food that should be avoided.

b) Mild symptoms that pass without treatment: If the child gets mild symptoms, this is addressed at mealtimes by leaving the food in question on the side of the plate. In this case, the child does not need a special diet or a medical certificate. Foods causing mild allergic symptoms that pass without treatment, including itching in the mouth and redness of skin, typically are uncooked vegetables (tomato, carrot, apple) and fruit, especially in the case of those allergic to birch pollen and children with atopic dermatitis. Those who get mild symptoms from uncooked vegetables usually can tolerate them well enough when cooked. Allergies to additives and spices are extremely rare, and the mildly seasoned dishes served at the day-care centre can usually be eaten by children who are allergic. It is important for the child



to learn to eat a varied diet. The more foods there are that must be avoided in the child's diet, the more difficult it is to put together a nutritionally balanced diet. Extensively avoiding vegetables, fruit and berries will reduce the intake of many vitamins and minerals and may expose the child to excessive weight gain. Current care guidelines: Food allergies (children) (in Finnish) (www.kaypahoito.fi). Food allergies in children guide (<https://www.allergia.fi/allergiat/in-english/>)

Lactose intolerance

Dairy products containing lactose are replaced with low-lactose or lactose-free products. At meals, low-lactose milk/buttermilk or a lactose free milk drink is served as indicated by the child's tolerance. A notification made by the parents is sufficient for a low-lactose diet. A medical certificate is required for a fully lactose-free diet.

Special infant formulas, clinical nutritional products and other nutritional supplements reimbursed by Kela and prescribed by a physician

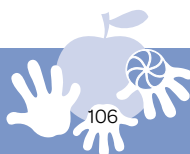
The parents/guardians should themselves deliver to the kitchen any special infant formulas, clinical nutritional products or similar products as well as any other individual products prescribed by a physician that are reimbursed to the customer under the Health Insurance Act (1224/2004).

Vegetarian diet and diets followed for religious reasons

The most nutritionally adequate option for a vegetarian diet is either a pescaterian diet in which vegetarian products are emphasised (and which includes fish) or a lacto-ovo-vegetarian diet (which includes dairy products and eggs). Decisions on offering a vegan diet are made following the early childhood education and care providers' policies and local consideration.

In a diet based on a religious belief, pork, beef or blood products are mainly replaced by a lacto-ovo-vegetarian diet. The parents/guardians agree with the unit's director on how strictly the diet is followed at the day-care centre.

More information about nutrition for children and families: Eating together – food recommendations for families with children <http://urn.fi/URN:ISBN:978-952-302-626-1>



APPENDIX 9. Examples of packed lunches

PACKED LUNCHES

Eco-friendliness and sustainable development should be accounted for when planning the contents and packaging of packed lunches. The nature and duration of the excursion is always taken into consideration when planning a packed lunch. When visiting a theatre, for example, snacks that can be eaten quickly and without making a mess should be selected, whereas a few crumbs would not matter when having a picnic in the woods. For a short excursion from which the group returns to the unit for lunch, a small piece of bread, a piece of fruit and a drink of water are sufficient. On a longer trip, the packed lunch should add up to a healthy meal that provides the children with enough energy, especially when they do not return to the unit for their lunch.

The day-care centre staff can work together with the catering service staff to plan ahead and create packed lunches for different excursions.

The children's food should be packed in plastic containers that can be washed, while the drinks can be carried in a bottle or a flask. The use of plastic bags should be avoided. When packing a lunch for an excursion, attention should be paid to carefully packing and labelling the food for those on a special diet to ensure that they do not get mixed up with the food intended for other children. Water or milk is brought to drink as needed. In the winter, a hot drink would be a good idea, for example hot juice or hot chocolate. In that case, plastic cups need to be provided.

A picnic made at home/packed lunches for club days:

If the children bring their packed lunches from home (for example for a walk in the woods or for a club day), each child's lunch is stowed in his or her backpack, which the children carry themselves. Instructions should be provided for the parents/guardians for making the packed lunch together with the child and as indicated by the type of the excursion. For example, on an excursion where the children only need a snack, the following instructions are sufficient:

- a sandwich the size of the child's palm in a plastic container
- drinking water in a small plastic bottle
- a few pieces of fruit, for example apple slices, half a banana or a few grapes, or vegetables chopped up for finger foods in a small plastic container

Packed lunches:

Examples of packed lunches planned together by the pedagogical and catering service staff:

Packed lunch I

- » hot or cold lunch
- » 200 ml tetra packs of milk + water containers
- » a sandwich
- » disposable plates and cups

Packed lunch II

- » a wholegrain roll or a piece of rye bread with vegetable margarine and cheese or cold meat
- » water containers
- » a Finnish apple/one or two mandarins/a banana

Packed lunch III

- » one sausage to cook over a campfire/child, mustard and ketchup
- » a wholemeal/wholegrain roll or a piece of rye bread, vegetable margarine
- » carrot sticks/vegetables chopped for finger foods
- » water containers

Packed lunch IV

- » a vegetable pie, a rice or carrot filled pie made with a rye dough, or potato flatbreads with spreads (depending on size, one or two per child)
- » 200 ml tetra packs of milk + water containers



