



NATIONAL NUTRITION COUNCIL

# EATING AND LEARNING TOGETHER

– recommendations for school meals

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# FOREWORD

These recommendations provide guidelines for the implementation of school catering and nutrition education at school. The recommendations are designed for providers of education and supporting activities, schools, persons in charge of school food services and pupil welfare, as well as for parents and carers, and the schoolchildren themselves. The recommendations cover guidelines for school meals as well as snacks provided in before and after school activities and extracurricular clubs at the school. The provision of school meals supports learning as well as the health and well-being of the pupils and the whole school community.

The National Nutritional Council considers it extremely important that these recommendations are used in all municipalities as the basic criteria for the quality of the meals and snacks served and the standard of service used when awarding contracts or inviting tenders for food services. The recommendations have been drawn up to support the provider of education in implementing balanced, appropriately organised and supervised school meals. School meals are part of the curriculum as an activity that supports the goals of education. Adequate resources allocated by the provider of education as well as competent personnel ensure that school catering is implemented in accordance with regulations and recommendations. The monitoring and assessment of school catering is part of the larger measurement of health conditions at school and the health and well-being of the pupils, as well as the promotion of learning.

School catering is based on the strategic decision-making of the municipality, and part of local development. The municipal school catering services have the potential to operate as part of a wider range of services and support the welfare and promotion of health for different age groups, e.g. through the provision of meals for elderly people at schools. Information about the mass catering services provided by the municipality is recorded in the municipal electronic welfare report regularly.

Public catering services can also support food production in the local area, create employment opportunities and form a central part of the food security of Finnish people as well as furthering sustainable development. Investments in school catering provide a pro-active means for the municipality to secure welfare and realise savings later.

The national nutrition recommendations issued by the National Nutrition Council are designed to promote the favourable development of nutrition and health in Finland. These recommendations are based on the publications *Health from food – Finnish nutrition guidelines* (2014) and *Eating together – food recommendations for families with children* (2016). In addition to these national recommendations, the National Nutrition Council also provides mass catering guidelines related to specific target groups. The school catering recommendations that are now published replace the recommendations published in 2008 and are included in the series of mass catering recommendations related to children and young people. This series includes recommendations for age groups ranging from early education to adult students, providing guidelines for the implementation of catering services, and the holistic promotion of good nutrition and nutrition education as part of services for children and young people.

The National Nutrition Council recommends that these school catering recommendations for pre-primary and basic education also be used as learning material in vocational education, university education and continuing education. In schools, the recommendations provide a common means for the implementation and development of school meals and nutrition education.

A working group set by the National Nutritional Council revised these recommendations. The Chairperson of the group is Ms. Marjaana Manninen, Counsellor of Education at the Finnish National Agency of Education, and the members represent various expert bodies of nutrition and mass catering. The working group consulted experts from the national steering group for mass catering at the National Institute for Health and Welfare during the preparation of the recommendations, as well as experts in competitive procurement, school health care, oral health care and food safety. The National Nutrition Council organised public commentary sessions of the draft recommendations in October 2016. The National Nutrition Council wishes to express its gratitude for active participation and the valuable comments provided. After reviewing the comments, the Council approved this publication as the national recommendations for school meals.

In Helsinki, Finland, on 9 January 2017



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# TO THE READER

School meals play a key role in food education at school and in the promotion of the well-being of the whole school community. At best, school meals add joy to the working culture at the school, increasing school satisfaction and positive attitudes towards school, and improving learning results. The effects of school meals follow pupils throughout their lives as food memories and experiences about learning to eat, the widening of taste preferences and modeling good eating habits.

Finland is a model country when it comes to school catering and supervised school meals have long educational traditions. School catering is also part of the national effort to establish good nutrition and to promote health and welfare. As a daily event, school meals are a significant long-term investment in learning and welfare.

The school catering forum of the Finnish National Agency for Education has set a common goal: Everybody eats! This can be achieved through cooperation and educational partnership. Appealing and healthy food served at the correct time and enjoyed in a supervised and calm environment tempts one to eat and creates a sense of joy as well as learning opportunities while eating.

The Finnish National Agency for Education and the National Institute for Health and Welfare thank the National Nutrition Council and its working group for the preparation of these recommendations. We advise municipalities and other providers of education as well as schools to follow the guidelines presented in these recommendations when making decisions and arrangements related to school catering.

Let's eat and learn together!

In Helsinki, Finland, on 24 January 2017

**Olli-Pekka Heinonen**  
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# PREFACE

School meals are the highlight of the school day, and support learning, school satisfaction, food competence and development of food sense. The lunchbreak gives the daily work schedule a natural structure and provides pupils as well as school staff an opportunity for refreshment. School catering implemented in compliance with recommendations provides balanced and healthy food that is attractive in appearance, companionship, socialising and well-being. It supports the coping and growth of children and young people, and healthy weight development. The report *Ending childhood obesity by the World Health Organization* (WHO) emphasises, for example, school meals and healthy snacks as well as learning about well-being as part of a health-promoting living environment for children and young people<sup>1</sup>.

These recommendations support the provision of healthy, balanced, appropriately organised and supervised meals free of charge in pre-primary education and comprehensive schools. The national comparison data system<sup>2</sup> for health promotion measures compliance with the school catering recommendations of National Nutrition Council. The goal is for school catering to be implemented in compliance with the recommendations in all schools across Finland.

The school meals are part of the daily teaching, guidance and education tasks defined in the school-specific curricula. In addition to promoting the study ability and health of the pupils, the well-being of the school community is cared for. In the curriculum for each school, the provider of education shall define the principles that guide school catering as well as objectives related to education on food, health and manners, and a sustainable way of life.

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1 WHO. Ending childhood obesity. Report 2016. [http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066_eng.pdf)

2 Finnish National Agency for Education and National Institute for Health and Welfare, TedBM, 2015. TEA-viisari, [www.teaviisari.fi](http://www.teaviisari.fi)  
Peruskoulu: <https://www.teaviisari.fi/teaviisari/en/tulokset?view=PkOPP>



A school meal based on the recommendations covers, on average, about one third of the pupil's total daily energy requirement. This means that two thirds need to be covered by breakfast, snacks, and the evening meal and evening snack at home. Cooperation is needed between homes and schools to secure the good nutrition of schoolchildren, i.e., to ensure that they eat adequate, nutritionally balanced meals and health-promoting snacks. Regular meal intervals contribute to the coping of schoolchildren and are also necessary to maintain oral health. In lower-level comprehensive schools, almost all children partake in school meals five days a week. In upper-level schools, on the other hand, only two out of three pupils say they eat the school meal every day<sup>3</sup>. The key objective in upper-level schools is promoting attendance at school meals regularly.

The majority of children who eat at school choose the main course, but many leave out other components of the meal, particularly the salad and milk<sup>3</sup>. Not all pupils can nor want to eat the whole meal as it is planned to be eaten. Eating choices made at school are affected by several factors, such as the model and encouragement the children get at home, their cultural background in terms of food, other choices available in the school environment, marketing experienced through various channels, the amount of pocket money available to children, and peer pressure. Appetite and the sensory quality of food are influenced by the appeal of the meal, textures, smells, ambiance and the whole sensory world associated with eating. A school meal is a total experience created by catering professionals and all the operators of the school community.

The eating arrangements in place in the schools, an appropriate meal schedule that supports adequate eating, a well organised serving line, a pleasant dining room, a positive atmosphere and a calm meal situation are essential factors that contribute to a pleasant eating experience. The eating experience may be made less pleasant if there is a sense of urgency during the mealtime, long queues or a noisy environment.

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<sup>3</sup> National Institute for Health and Welfare. Kouluterveyskysely/SOTKANET 2015. <https://www.sotkanet.fi/sotkanet/en/haku?g=470>

The most important aspect of the effectiveness of school meals served free of charge is serving a complete and balanced meal to every pupil. A nutritious snack, served as an addition to the school meal or provided as an additional service, or brought by the pupils themselves, supports coping at school and a good meal schedule. Avoiding meals, replacing them with unhealthy alternatives or eating too little may result in health problems, fatigue and further in poor concentration as well as learning difficulties. Not eating enough at the school meal may cause a craving for something sweet in the afternoon. Indeed, it is common in upper-level schools that pupils eat unhealthy snacks, such as sugar-sweetened beverages and sweets during the school day, which has adverse effects on both their general health and oral health.

A regular meal schedule is the foundation of good nutrition. It supports the coping and growth of children and young people, and healthy weight development. Good eating habits learned in childhood and adolescence will later prevent many health problems, the need to treat such problems and costs related to them.

School meals provide a means for practical food education. The educational staff can use menus and plate models as well as their own example and active presence in the meal situation to teach the pupils. The adults encourage and help pupils make balanced food choices. Favourable feedback and a positive atmosphere create good conditions for reinforcing the participation of the pupils. School meals also play a significant role in the development of consumer skills as well as in teaching related to the environment, culture, manners and equality. School catering is reviewed from many different viewpoints in the various Sections of this document. The key factors guiding the provision of school meals are gathered in Figure 1 (p. 14).

**School catering is the whole school's business!**



# LEARNING ABOUT WELL-BEING AND FOOD COMPETENCE



Whether at home or school, eating is part of the holistic learning of well-being which covers daily schedules and use of time, sleep, rest, screen time management, and physical activity. Learning about well-being also includes interactive skills, the food environment, recognition of messages of the body and mind, and the interpretation and expression of these messages. One can learn all of these and develop oneself with respect to them, particularly in interactive situations together with the peer group under adult supervision<sup>4</sup>.

Learning about well-being is a lifelong process that starts in early childhood and continues until old age. The period of basic education is important for children and young people, as it is the time of both rapid physical and psychological development from a child into a young adult, and gradually into an operator aware of their own choices.

Adults' own eating habits, values and attitudes both guide children and serve as an example. For the adults at school, eating is part of their well-being at work and multidisciplinary interaction within the work community. The educational staff, and the food service and health care personnel are involved in it, as are all the other adults who work in the school community. They all implement the educational task of teachers

<sup>4</sup> National Nutrition Council. Eating together – Food recommendations for families with children. 2016. Kide 28. <http://urn.fi/URN:ISBN:978-952-302-626-1>

and educators. Learning about well-being is a challenge for all of the adults at school to consider their own actions and relationship with eating from the viewpoint of both their own life and that of their role as an educator.

The overall subject of well-being and food education consists of the various teaching subjects in the school environment, school catering and the lifestyle guidance provided by the school health care.

The objective of food education at school is to master the everyday food choices, the diversity of food alternatives and their significance, aiming at food competence and creation of a food sense<sup>5</sup>. In the school food education, school catering and the teaching content of the various subjects as well

<sup>5</sup> Food sense is personal and experience-based understanding of food choices. Food sense is a concept that helps us recognise the diversity of food choices, perceive the complete food system and understand the social, cultural and everyday significance of food. Food sense emphasises that there is not just one way to eat in a manner that promotes sustainable well-being. Food sense is an everyday understanding of eating, linked to situations and experiences. (Source: Janhonen K, Kauppinen E, Mäkelä J & Palojoki P. Kotitalous 2016:79(02):30–31)

Cf. food sophistication that comprises the knowledge, skills and competence to understand the significance of food to life, acquired through education. It refers to respecting food and those who prepare it, and understanding that food is not something that can be taken for granted or as a privilege to anybody. Food sophistication is reflected in values and appreciations as responsible choices, sensible use of food, good manners and consideration of others. Food sophistication is, for example, gratitude, responsibility and caring for oneself, others and the whole living environment both nationally and globally. (Source: Lintukangas S. Ruoan arvostaminen – Vastuullinen ja taitava ruokapalveluhenkilöstö muutosagenttina ruokahävikkiä vähentämässä ja ruokasivistystä nostamassa. ResTaRu-hankkeen loppuraportti. Kopijyvä Oy, Jyväskylä, 2014.)

as the participation of the pupils reinforce the development of food sense and form the syllabus of food education for the whole comprehensive school period.

Eating is a basic need that is linked to mental, physical and social well-being. Eating involves many educational goals that can be achieved

through both food education at school and school meals situations. School meals that produce a joy of eating combine tasty, nutritious, sustainable, healthy and safe food with meal discussions related to food and sensory experiences as well as learning of a lifestyle that promotes well-being.



FIGURE 1. Well-organised school catering.

The growth and learning about well-being built in the community and used to create a sustainable lifestyle is reflected in the new curriculum<sup>6</sup> as part of the value base, working culture, support for learning and school attendance, pupil welfare, teaching subjects, and wide knowledge sets. The national objectives of education include e.g. cooperation, responsibility and learning good habits and manners. The knowledge area of taking care of oneself and managing daily life, in particular, emphasises well-being and seeks to provide pupils with competence to make choices and form habits based on a sustainable lifestyle during basic education.

6 National Core Curriculum for Basic Education, 2014. [http://www.oph.fi/download/163777\\_perusopetuksen\\_opetusuunnitelman\\_perusteet\\_2014.pdf](http://www.oph.fi/download/163777_perusopetuksen_opetusuunnitelman_perusteet_2014.pdf)

Available in English: [https://verkkokauppa.oph.fi/epages/OPH.sf/fi\\_FI/?ObjectPath=/Shops/OPH/Products/9789521360046](https://verkkokauppa.oph.fi/epages/OPH.sf/fi_FI/?ObjectPath=/Shops/OPH/Products/9789521360046)

In practise, teachers and educational staff provide education for well-being that guides and encourages pupils to listen to others, do things together and create common rules, as well as accept responsibility for a pleasant learning environment and atmosphere. All study subjects, but particularly home economics, health education, environmental studies, and biology, support growth in terms of responsibility and well-being, and content related to food can be linked to these subjects in a natural way<sup>7</sup>.

7 [http://edu.fi/yleissivistava\\_koulutus/hyvinvointi\\_koulussa/kou-luruokailu/103/0/hyvan\\_olon\\_evaat\\_-ruokakasvatusaineisto\\_opettajille](http://edu.fi/yleissivistava_koulutus/hyvinvointi_koulussa/kou-luruokailu/103/0/hyvan_olon_evaat_-ruokakasvatusaineisto_opettajille). Cf. also Literature and tools, p. 78

*School meal situations form a multidisciplinary learning unit. They integrate the content of several subjects and the objectives of food education. School meals provide an opportunity for the pupil to develop food sense based on experiences gained in an everyday school activity. In addition, school catering can be utilised as a base for wide-ranging learning projects repeated regularly at a certain age level (lower and/or upper-level schools) for analysing and developing school meals from the viewpoints of the provision, significance and execution of school catering, as well as from the viewpoints of children's own actions and experience, and those of their peer group. The output of the project can produce a joy of eating, visible and implemented in school catering and shared by everybody. When communicating the results of the pupils' own project to parents, carers, municipal decision-makers and the media, the pupils also learn how to work together to influence matters that concern themselves.*



# PROVISIONS AND DOCUMENTS THAT GUIDE SCHOOL CATERING





## 2.1 Legislative basis

The organising of school catering is based on legislation. Provisions related to school catering are defined in the Act on Early Childhood Education and Care<sup>8</sup>, the Basic Education Act<sup>9</sup> and the Basic Education Decree<sup>10</sup>, the municipal collective agreement on salaries and working conditions for teaching professions<sup>11</sup>, the regulations in the collective agreement for private teaching professions applied specifically to each education institution<sup>12</sup>, the decision of the Finnish Tax Administration on calculation bases to be applied in taxation to benefits in kind<sup>13</sup> as well as in the national core curricula for pre-primary education and basic education.

Section 31, sub-section 2 of the Basic Education Act (628/1998) guarantees a daily meal free of charge starting in pre-primary and basic education. School meals shall be appropriately organised and supervised. Basic Education Act 628/1998, Section 48 d further stipulates that a snack shall be provided for children attending before and after school activities. The price of the snack is included in the fee charged for the activity, if a fee is charged. Section 28 of the Upper Secondary Education Act (21.8.1998/629) and Section 37 of the Vocational Education Act (21.8.1998/630) lay

8 Act on Early Childhood Education and Care 19.1.1973/36. <http://www.finlex.fi/fi/laki/ajantasa/1973/19730036>

9 Basic Education Act 21.8.1998/628. <http://www.finlex.fi/fi/laki/ajantasa/1998/19980628>

10 Basic Education Decree 20.11.1998/852. <http://www.finlex.fi/fi/laki/ajantasa/1998/19980852>

11 OVTES 2nd edition, Part B, Section 15 Ruokapalvelutoiminnan ohjaus ja valvontatyö. <http://flash.kuntatyonantajat.fi/ovtes-2014-2016--2016-muutokset/html/>

12 [http://www.sivistystyonantajat.fi/tiedostopankki/11/Oppilaitoskohtaiset\\_maaraykset\\_1.4.2014\\_31.1.2017.pdf](http://www.sivistystyonantajat.fi/tiedostopankki/11/Oppilaitoskohtaiset_maaraykset_1.4.2014_31.1.2017.pdf)

13 [https://www.vero.fi/en-US/Precise\\_information/Official\\_Decisions/InKind\\_Benefits\\_Fringe\\_Benefits\\_2016\(38873\)](https://www.vero.fi/en-US/Precise_information/Official_Decisions/InKind_Benefits_Fringe_Benefits_2016(38873))



down the requirement for provision of school meals free of charge until the completion of upper secondary education. The education laws in force were adopted on 1 January 1999.

Section 3, “The foundation for education”, of the Basic Education Act stipulates the following: Education shall be provided according to the pupils’ age and capabilities and so as to promote healthy growth and development in the pupil (13.6.2003/477). Those providing education shall cooperate with pupils’ parents/carers.

The national core curriculum of 2014<sup>14</sup> stipulates e.g. that the provision of school catering shall support the objectives specified for the learning, versatile development and well-being of the pupils. The provider of education shall determine and describe in the curriculum the principles guiding the implementation of school catering as well as the goals related to food and health education, teaching of habits and manners, and a sustainable lifestyle, and how the special nutritional needs of the pupils are taken into account. The decisions on the provision of school meals in each school are presented in the annual plan for the implementation of the local curriculum.

In addition to legislation, the provision of school meals is guided by various recommendations. One objective of recommendations is to facilitate the interpretation of laws and regulations.

14 Regulations and guidelines 2014:96. [http://www.oph.fi/saadokset\\_ja\\_ohjeet/opetussuunnitelmien\\_ja\\_tutkintojen\\_perusteet/perusopetus](http://www.oph.fi/saadokset_ja_ohjeet/opetussuunnitelmien_ja_tutkintojen_perusteet/perusopetus)

## Current legislation, guiding documents and recommendations

- ▶ Act on Early Childhood Education and Care, Section 2 b (8.5.2015/580), Section 6 (8.5.2015/280)  
Children shall be provided with healthy and necessary nutrition that fulfils their nutritional needs.  
Meals shall be appropriately organised and supervised.
- ▶ National core curriculum for pre-primary education 2014, Sections 2.1, 2.5 and 4.  
The objectives and key principles of provision of nutrition, and food education in pre-primary education.
- ▶ Basic Education Act, Section 3 (13.6.2003/477)  
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 pupil s' parents/carers.
- ▶ Basic Education Act, Section 30 (13.6.2003/477)  
The pupil shall be entitled to teaching according to the curriculum as well as guidance counselling.
- ▶ Government Decree 422/2012 on national objectives and distribution of teaching hours in basic education  
Subjects (home economics, health education, environment and nature studies)
- ▶ Basic Education Act, Section 31 (13.6.2003/477)  
The pupil shall be provided with a balanced and appropriately organised and supervised meal free of charge on every school day.
- ▶ Basic Education Act, Section 48 d (19.12.2003/1136)  
A child participating in before and after school activities must be offered a snack.
- ▶ Basic Education Decree, Section 3 (20.11.1998/852)  
The time allocated to teaching shall be divided into appropriate teaching periods.
- ▶ Upper Secondary Schools Act, Section 28 (21.8.1998/629)  
In full-time studies the student is entitled to a meal free of charge on the working days on which their presence is according to the curriculum required in the place of education specified by the provider of education.
- ▶ Act on Vocational Education, Section 37 (21.8.1998/630)  
In full-time studies the student is entitled to a meal free of charge on the working days on which their presence is according to the curriculum required in the place of education specified by the provider of education.
- ▶ National core curriculum for basic education 2014, Section 5.5  
The objectives and key principles of provision of nutrition, and food education in basic education.
- ▶ National Nutrition Council, 2014 Health from food – Finnish nutrition recommendations
- ▶ National Nutrition Council, 2016 Eating together – food recommendations for families with children



## 2.2 Practical application of laws on school meals

### *Appropriately organised*

School meals must be organised and scheduled so that pupils of all ages can eat their meal at the right time and with enough time reserved for eating. The serving lines must be located so that if there is a queue, it will not disturb the pupils who are already eating. (Cf. also 3.1. School lunch environment and 3.2. School meal schedule).

The school lunch area serves as a learning environment, and the pupils shall be included in the interior decorating of the area and other arrangements. An attractively decorated and calm lunch environment makes the food more enjoyable. Attention should also be paid to pleasant lighting and acoustics can be improved by various interior decoration solutions, such as different acoustical products, textiles, plants and wall modules. Appropriate storage possibilities shall be provided outside the lunch area where pupils can leave their outdoor clothing and school bags. It is not recommended to bring them into the lunch area. The school staff should define common principles for teaching of manners, as concerns e.g. the wearing of headwear and outdoor clothing in indoor facilities and at lunch. Increasing the inclusion of the pupil in the planning, implementation and evaluation of the catering arrangements promotes joint responsibility for good mealtimes.<sup>15</sup>

<sup>15</sup> <http://www.kouluruokadiplomi.fi/schoollunchdiploma/>

- The recommendations for school meals are known and they provide a common tool for the evaluation and development of school catering.

- Increasing the inclusion of the pupil in the implementation of the catering arrangements promotes joint responsibility for good mealtimes.

### *Free of charge meals and snacks*

Pursuant to laws, education provided free of charge covers the necessary learning materials, such as textbooks, as well as free transportation between home and school, if necessary, and adequate nutrition. The provisions regarding freedom from charges apply to persons subject to compulsory schooling who have been enrolled as pupils (Lahtinen & Lankinen 2015, 33).

All components of the daily school meals are always free of charge. A snack is provided free of charge to ensure adequate nutrition in cases where the interval between meals becomes too long for the pupil, including lessons and school commuting time. A meal can be divided into lunch and a snack according to the discretionary principle, when the main meal is served early or late in relation to the full length of the pupil's school day.

Snacks can be offered as an additional service for a charge and can be provided by the school, the school catering service or another operator.



### *Balanced meals*

**Balanced** meals refer to the adequacy of the meal, taking the place where teaching is provided as well as the length and nature of the school day into account. On ordinary school days, a lunch, which is normally a hot meal, is served. A child participating in before or after-school activities organised by the municipality must be offered a snack, which is included in the fee charged for the activities (Lahtinen & Lankinen 2015, 33, 316–318). **From the nutritional viewpoint, balanced meals** refer to a meal that has an adequate energy content, is nutrient-dense and composed in accordance with nutrition recommendations (cf. Section 4). The meals must be adequate also on field trip days and various theme days.

### *Appropriately supervised meals*

Supervision refers to food education that considers the age and the capabilities of the pupils, as well as communication that supports school meals as a positive experience for the pupils. Supervision develops food competence and also supports the development of consumer awareness and a sustainable lifestyle. At meals, the pupils are encouraged to exhibit good behaviour, showing respect for others as well as for food and eating. The supervision of the meals shall be pupil-oriented and illustrative.<sup>16</sup>

The pupil's food choices are affected by many different factors, such as habits learned at home, preferences in tastes, cultural background, selection of available foods, peer pressure, previous eating experiences, eating environment and the

<sup>16</sup> Support material: <http://www.kouluruokadiplomi.fi/school-lunchdiploma/>

- A pleasant environment promotes the appeal of school meals and encourages children to eat them.

- Encouraging pupils to eat in natural groups of friends prevents non-attendance at school meals and substitution of meals with snacks.

The principle can be to invite schoolmates, peer support pupils, teachers and other adults as guests to the meal, and to conduct table conversations.

Eating with friends makes the meal situation more pleasant and unhurried, and increases the experience of shared meals and enjoying the food.

experience of interaction with the catering staff. Food choices are also influenced by consciousness of health, quality and the environment. For some, the appeal of food is emphasised, while a full stomach is the key factor for others.

The principles of well-being and healthy nutrition are taught at school in various subjects on the different phases of learning continuums. The meals serve as a daily learning exercise in well-being. School meals provide an opportunity to practice and apply what has been learned together with the peer group under adult supervision.

### *Objectives and implementation of supervision*

The key objective of the supervision of meals is to ensure that the pupil's experiences of eating are positive, that they become motivated and accustomed to choose meals that have been composed according to recommendations, and which are sufficient to cover their own energy expenditure. Another objective is for the pupil to recognise the significance of the meals and the eating situation to their well-being – health, alertness, coping and collective interaction. Supervision is a means to influence the pupils' knowledge, skills, attitudes and choices related to food, and to get them accustomed to regular mealtimes. Guiding pupils in choosing their portion sizes correctly can reduce food losses.

Various methods of communication are used as part of supervision. The most important methods include the description of a model meal (execution cf. Section 4.5, p. 64), menu markings (e.g. suitability of meal components for different diets), personal guidance, a serving line that supports good food choices and a pleasant eating environment. The pupils are told, for example, what kind of food is being served, what the components of the complete meal are, and what raw materials are used to prepare the components. All communication related to food and eating is part of the pupils' guidance.

### *Pupil-oriented supervision*

Good supervision is pupil-oriented, illustrative, practical, and designed to bring about learning. Schoolchildren are conscious consumers and many of them may want to have information about the ingredients used and also about the energy and nutrient content of the foods. An increasing number of pupils also show interest in the origin of foods, their ethical and environmental impact and the manufacturing process.

The inclusion of pupils in the implementation of the meal situation can be part of teaching and supervision; they can help with the organising of the meal or the serving of food, participate in a taste jury or in the menu planning group, and take part in kitchen visits and school campaigns.

If a pupil has individual needs related to nutrition, health care or treatment of an illness, the pupil, the carer, the personnel in charge of school catering and the school health care staff must together agree on supportive and monitoring actions related to eating. When the need for specific support is identified in a pupil, a welfare and health plan must be prepared for them to ensure provision of support. The plan is made in cooperation with the pupil, and depending on their age, with their family.<sup>17</sup>

Persons who follow specific diets require information about the ingredients of the foods served to be able to avoid foods that are not suitable for them and to replace them with more suitable foods. Menus are usually based on standardised

<sup>17</sup> Basic Education Act, Section 3, Sub-section 2, Section 31 a § Sub-section 1, and Government Decree on maternity and child health clinic services, school and student health services and preventive oral health services for children and youth (338/2011), Section 13. <http://www.finlex.fi/fi/laki/alkup/2011/20110338#Pidp3363504>

recipes, which make it easy to produce a list of ingredients of the raw materials used in the foods served. This list can be available in the kitchen or on the serving line, or it can be shown to the pupil upon request. It shall indicate all the raw materials contained in the food, and can also describe other quality factors associated with the food. Where a pupil follows a special diet, but does not require an individually served meal, it must always be verified that they are capable of choosing meal components from the serving line that are safe for them.

### *Role of serving line in terms of guidance*

Pupils can be guided in their food choices through a serving system that supports the making of healthy choices. In a good meal, vegetables and salads consisting of vegetables should account for half of the plate size according to the plate model. Serving vegetables and salads as components and placing them at the start of the self-service line promotes compliance with this recommendation.<sup>18</sup>

The reorganisation of the serving line is easy to implement particularly when old facilities are renovated, new equipment is acquired or a new lunch area is designed and built. It is important that the different user groups, the teachers and the pupils, are included in the process already at the design stage.

<sup>18</sup> [http://www.edu.fi/yleissivistava\\_koulutus/hyvinvointi\\_koulus-sa/kouluruokailu/ohjauksen\\_merkitys\\_luettu\\_13.4.2016](http://www.edu.fi/yleissivistava_koulutus/hyvinvointi_koulus-sa/kouluruokailu/ohjauksen_merkitys_luettu_13.4.2016)

- ▶ The teaching staff should reserve time (e.g. at the start of the school year) for preparing common guidelines for the implementation of school meals in the spirit of the curriculum.

### *Role of adults in guidance*

Adults from the teaching and catering staff set a good example for pupils by talking in a positive manner about school meals, and sharing the meal with the pupils. Adults shall encourage pupils to follow the plate model, take other persons participating in the meal into consideration and behave in a civilised manner, observing good manners at mealtime and being considerate of others.

Children and young persons are increasingly more health conscious and want to eat healthily, but they need justification and support for their choices, both at school meals and at home. Independence and responsibility for one's choice increase as the pupils move from the lower to the upper grades, but teachers still play an important role as educators in nutrition and manners. The tradition of sharing meals, which is established in the lower grades, is continued also under supervision of a subject teacher. When sitting at the lunch table together, the teacher's interactive, encouraging and motivating role as an educator is emphasised instead of that of a controlling supervisor.



## 2.3 School catering in core curricula for pre-primary and basic education

School catering is provided for in the core curricula for pre-primary and basic education. According to the core curriculum for pre-primary education, school meals shall be based on health-promoting eating and learning related to food competence. The children are in the meal situation instructed to use good manners and care for their own welfare.<sup>19</sup> Children shall be taught, according to their capabilities, to look after themselves, other people, their own possessions and the common environment. The day-to-day schedules of the children and the significance of food and rest are addressed in teaching and in cooperation with the parents and carers (Core curriculum for pre-primary education, Section 2.5). Taking care of oneself and managing daily life are part of the transversal competences that pre-primary education aims at. In order to evolve in this area, children need experiences, information and reflection that form the basis on which their values and capabilities can gradually develop. This task in pre-primary education is to address the aspects of physical exercise, food, consumer role, health and safety. The duty of pre-primary education is to build a foundation for a physically active lifestyle that promotes health and well-being, and to develop the health knowledge and the safety skills of the children. Another task is to promote good habits related to food, consumption and cleanness as part of a sustainable lifestyle.

<sup>19</sup> National Core Curriculum for Pre-Primary Education 2014, 13, 17, 38. [http://www.oph.fi/download/163781\\_esiopetuksen\\_opetussuunnitelman\\_perusteet\\_2014.pdf](http://www.oph.fi/download/163781_esiopetuksen_opetussuunnitelman_perusteet_2014.pdf)

In English: [http://www.oph.fi/english/curricula\\_and\\_qualifications/pre-primary%20education](http://www.oph.fi/english/curricula_and_qualifications/pre-primary%20education)

- ▶ As the oldest pupils at their school, the sixth and ninth graders can act as peer support pupils or tutors at school meals at the start of the school year, eating together with the younger pupils and thus setting an example in accepting responsibility for the smooth running and pleasant atmosphere of the meals.

This practice can be repeated during the term, in connection with various food themes or annual school events, for example.

Mealtimes in pre-primary education are used as a learning environment for everyday meals that promote health and food-related competence. The mealtimes with children are made as pleasant as possible and the pupils are guided towards good manners. In addition to the Finnish cuisine and culture of manners, the instruction includes familiarisation with some other cuisines and cultures of manners by utilising the expertise of the children's homes. Advertising targeted at children is examined together with the pupils, and the significance of moderate consumption is considered with them. (Core curriculum for pre-primary education, Section 4.3 Joint objectives for instruction and learning modules; I grow and develop.)

Pursuant to the National core curriculum for basic education, the purpose of school meals is to support the pupils' learning, versatile development and the goals defined for well-being. School meals contribute to the experience of a positive and safe school day and, from



the perspective of the pupils, make possible an integrated and variable day that supports their alertness. The purpose of school meals is to support the pupils' healthy growth and development, ability to study, and knowledge of food.<sup>20</sup>

In basic education, school meals are part of the activities based on the curriculum that support the objectives of teaching and education, as well as part of school work that promotes well-being. Mealtimes have an important recreational role and they promote a sustainable lifestyle, cultural competence, and the objectives of food-related education and instruction in good manners. A well-timed, unhurried and pleasant meal, as well as possible snacks, ensures that pupils have enough energy to get through the school day.

Pursuant to the National core curriculum for basic education, pupils are encouraged to take part in the planning, implementation and evaluation of school meals, and the meal breaks in particular. Attendance at school meals and the quality of the food and the meal situation are monitored and assessed on a regular basis. The national core curriculum for basic education requires that the teaching staff and the catering staff work together to organise school meals and develop the activities.

<sup>20</sup> Perusopetuksen opetussuunnitelma 2014, 41–43. <http://www.oph.fi/ops2016/perusteet> and [http://www.oph.fi/download/163777\\_perusopetuksen\\_opetussuunnitelman\\_perusteet\\_2014.pdf](http://www.oph.fi/download/163777_perusopetuksen_opetussuunnitelman_perusteet_2014.pdf)

In English: [http://www.oph.fi/english/curricula\\_and\\_qualifications/basic\\_education](http://www.oph.fi/english/curricula_and_qualifications/basic_education)

- ▶ The teachers are in charge of the guidance and education of the pupils at school meals, together with the other adults in the school.

National Core Curriculum for Basic Education 2014, 42.

## 2.4 Teaching staff eats with and supervises children

The provider of education shall verify that teachers participate in the control and supervision of school meals (National core curriculum for basic education, 2014). When organising meal situations, it must be ensured that the teachers in charge of the guidance and education provided in connection with the school meals are always present. All of the adults at school support the teachers in the education and guidance tasks according to the defined guidelines.

The arrangements are planned in cooperation between various personnel groups. The planning stage must also include the consideration of regulatory provisions: the Basic Education Act and Decree (e.g. from the perspective of the children's age and capabilities) as well as the valid National core curriculum, which is prepared by the National Board of Education and supplemented on the local level.





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- ▶ A good practice for guidance related to school meals is to present the lunch area and the kitchen to the new pupils enrolled at the lower or upper-level school, describing the significance of a balanced diet to growth, development and learning.

The pupils are reminded of the practices and common guidelines defined for school meals at the start of each school year.

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The supervision of school meals is also provided for in the municipal collective agreement on salaries and working conditions for teaching professions<sup>21</sup> and the regulations in the collective agreement for private teaching professions applied specifically to each education institution<sup>22</sup>. According to the agreements, the responsibility for the control of school catering services rests with the home economics teacher. This responsibility entitles to a remuneration based on one weekly lesson per year.

In the meal situation referred to in the curriculum, the supervision of the meal and food education concerns the whole school and the teaching staff is responsible for them. The home economics teacher may be responsible for coordination, as a representative of the teaching staff and a content expert. This ensures that the multidisciplinary working group (school catering, teaching and education staff) shares the same vision and that the common goal can be successfully achieved.

<sup>21</sup> <http://flash.kuntatyöntajat.fi/ovtes-2014-2016--2016-muutokset/html/#90/z>

<sup>22</sup> [http://www.jytyliitto.fi/fi/tyosuhde/tyoehetosopimukset/yksityinen/Documents/Yksityinen%20opetusalaOppilaitoskohtaiset\\_maaeraeykset\\_1.4.2014.pdf](http://www.jytyliitto.fi/fi/tyosuhde/tyoehetosopimukset/yksityinen/Documents/Yksityinen%20opetusalaOppilaitoskohtaiset_maaeraeykset_1.4.2014.pdf)

Remuneration is paid to the teacher in charge of the coordination of the cooperation.

#### *Meal benefit for supervising teacher*

Teachers who attend school meals can take advantage of a meal benefit. When the teacher supervises the meal and eats together with the pupils, it is natural that they are entitled to the meal benefit. Teachers cannot transfer the supervision responsibility e.g. to a special needs assistant or to the catering staff, not even to divide the supervisory tasks among several persons. Every year the Tax Administration decides the value of the meal benefit for teachers supervising school meals. For example, according to the 2016 decision (165/200/2015, Section 12) of the Tax Administration, the value of the meal benefit to which school personnel are entitled when they supervise the pupils during the meals is EUR 3.78 per meal<sup>23</sup>.

<sup>23</sup> [https://www.vero.fi/en-US/Precise\\_information/Official\\_Decisions/InKind\\_Benefits\\_Fringe\\_Benefits\\_2016\(38873\)](https://www.vero.fi/en-US/Precise_information/Official_Decisions/InKind_Benefits_Fringe_Benefits_2016(38873))

**Section 15 of the municipal collective agreement on salaries and working conditions for teaching professions provides for the control and supervision of school catering services.**

- ▶ Sub-section 1 The holder of the position of the home economics teacher ordered to implement the control and supervision of the school catering services is entitled to a remuneration based on one weekly lesson per year for every starting eight comprehensive schools. However, the remuneration may not be more than 6 weekly lessons per year.
- ▶ Sub-section 2 If the control and supervision of the school catering services is ordered to be implemented by several home economics teachers, the weekly lesson quota referred to in Sub-section 1 is divided between the teachers in proportion to their amount of work.

**The collective agreement for private teaching professions provides as follows for the control and supervision of school catering:**

- ▶ Section 24 Tasks included in teaching duties in comprehensive schools.
- ▶ 6. Control and supervision of catering activities

In comprehensive schools, the home economics teacher responsible according to the work plan for the control and supervision of the catering activities is entitled to a remuneration equalling one weekly overtime lesson per year.



## 2.5 National nutrition recommendations in implementation of school catering

Municipalities and the schools who also organise school catering independently make decisions regarding the catering. The planning and provision of the meals and snacks served in schools is steered by the valid nutrition and food recommendations issued by the National Nutrition Council on population level and for different age groups (Section 4).

This document provides recommendations for the energy and nutritional content of school meals ***on average per one meal on weekly level*** (Section 4.3). The fulfilment of these recommendations can be verified by observing the criteria for nutrition quality specified for the components of the meal (Section 4.4, Table 4a-4c). These recommendations are the basic requirements for the nutrition quality of the food served, and shall be complied with when awarding school catering contracts and in associated competitive procurement processes. They are recorded in the service contracts and together the parties specify assessment and monitoring criteria. For the self-assessment of the school catering activities, the criteria for workday lunches can be applied to the verification and monitoring of the nutrition quality (Annex 5).

With regard to pupils who live in a dormitory or an institution where they are served all the daily meals (breakfast, dinner and supper in addition to school meals), the document Eating together – food recommendations for families with children (National Nutrition Council, 2016) or the Recommendation for clinical nutrition (National Nutrition Council, 2010, [www.vrn.fi](http://www.vrn.fi)) shall be observed, in addition to these recommendations for school meals.

The food triangle and the plate models published by the National Nutrition Council illustrate all the components that create a health-promoting diet. The foods at the bottom of the food triangle form the basis of the daily diet. The “discretionary choices” at the top of the triangle are not part of a health-promoting diet, if consumed on a regular basis (Figure 2).

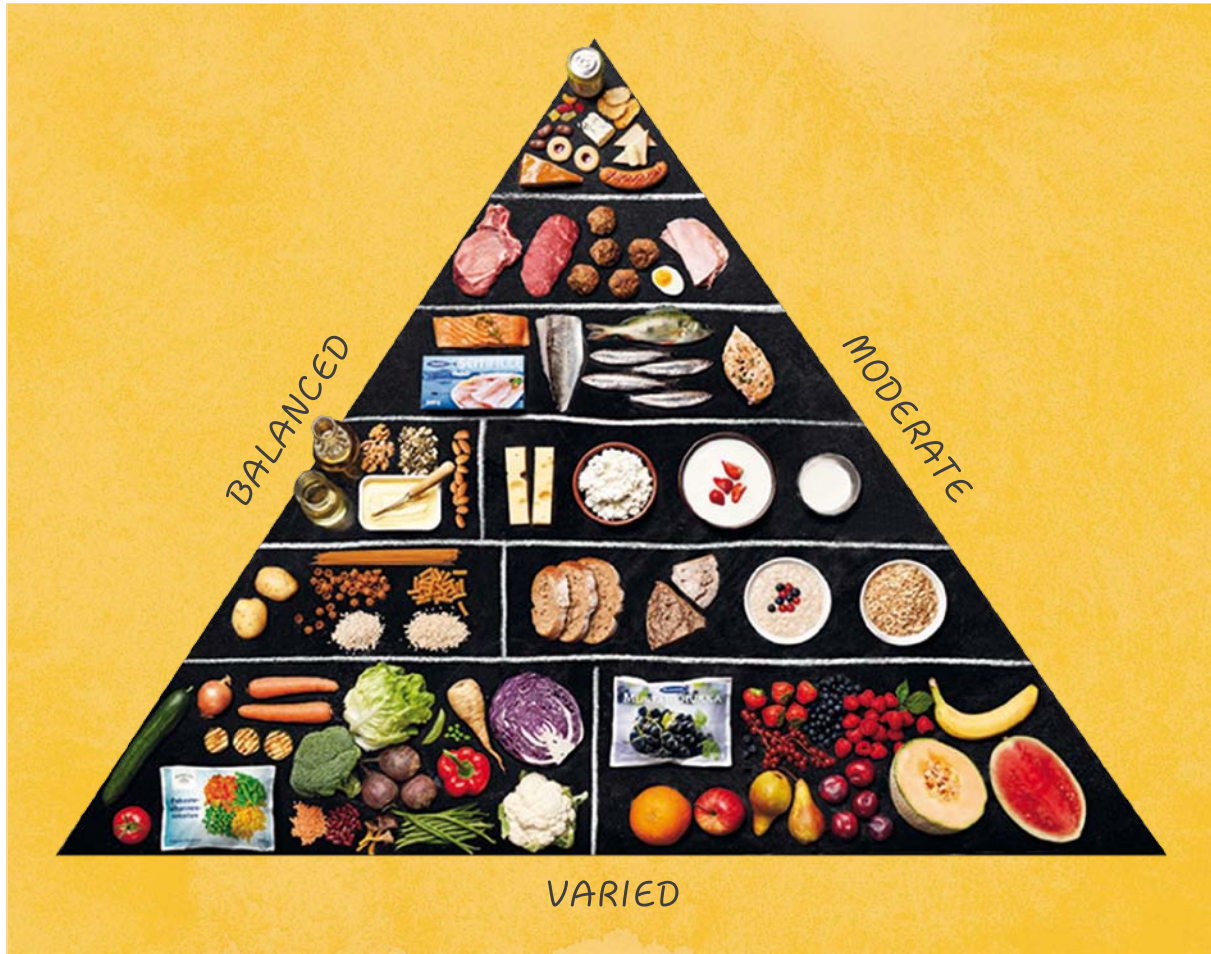


FIGURE 2. Food triangle, Eating together – food recommendations for families with children (National Nutrition Council, 2016).

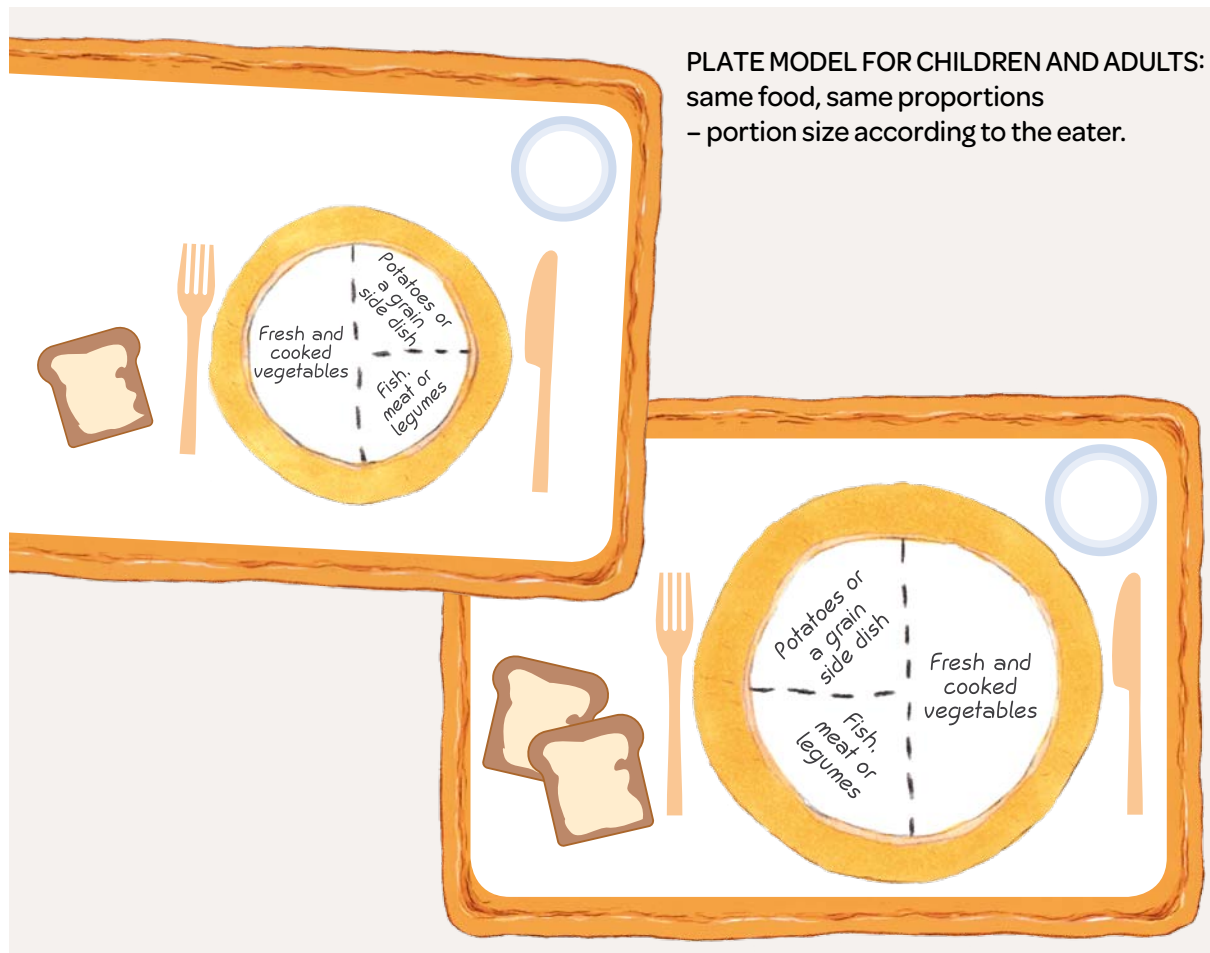


FIGURE 3. Basic plate models take the individual energy expenditure into account.

The plate model illustrates a complete, balanced meal. It can assist in the planning and setting up of the meal as a whole, and in the guidance of pupils in meal situations. The plate model can be realised in many different ways, the basic principle being that half of the plate is filled with vegetables (fresh and/or cooked), one quarter

with potatoes, pasta or a grain side dish, and the other quarter with food that contains meat, fish, egg, legumes or nuts/seeds. The plate model is always shown as a complete model meal that includes the mealtime drink, bread, margarine as well as a dressing or oil for the salad.



# ORGANISING SCHOOL MEALS





### 3.1 Meal environment

The meal environment has an essential effect on the popularity of school meals, either a positive or a negative one. In a calm, tidy, pleasant (plants, napkins, decorations etc.) and guidance-oriented environment, the mealtime provides a refreshing and communal rest break for everybody attending the meal. Mealtimes shall be realised as a learning environment that makes eating appealing to the children and young people, encouraging and enabling them to make healthy choices. A meal environment that invites the children and young people to linger a bit longer teaches them to understand the role of food, social gathering and a meal break in the promotion of their health.

An appropriate lunch area is of an adequate size for the number of eaters and for the meal to proceed smoothly. There must be enough seats to ensure an unrushed mealtime. The area can also be made more pleasant and eating together more attractive if the lesson timetables and flex time are taken into account in the planning of lunch sittings and scheduling of serving. This prevents rush-hour peaks and unnecessary queuing, and reduces noise.

The serving lines are to be planned so that the cold pans for salad and vegetables are placed at the start of the line, followed by the chafing dishes for the main course. The drinks and the bread are served at the end of the line. The correct

serving temperature is important to ensure the tastiness as well as the microbiological safety of both hot food and salads and drinks served cold. A separate counter for bread makes it possible to offer a varying selection of bread. Equipment and furniture of variable heights and types will also enhance the character and ambiance of the lunch area.

The age of the children and their physical capabilities must be considered when designing a lunch area and the furniture and fittings. If pre-primary aged children and senior secondary school students use the same lunch area, for example, the height of the serving line and the tray return station must be designed so as to make the mealtime safe and pleasant for everybody. A separate point can be provided for children coming back for seconds, to avoid them having to queue again. This is particularly important when children of varying ages use the same lunch area at the same time (pre-primary, lower and upper-level comprehensive school).

Washing hands with water and soap before eating prevents the spreading of pathogens and infections among the children. Hand washing can best be organised and made part of the normal lunch break routine by providing a functional and appropriately located hand-washing facility. Hand sanitisers are effective against many



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- School catering is monitored on a regular basis and the effect that the lunch schedule has on eating is assessed.
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- The school lunch area is a place where the pupils and the staff can share a convivial break.
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pathogens, when correctly used, but they are not an adequate substitute for hand washing.

### 3.2 School meal schedule

School meals must be organised regularly at times suited to the normal daily timetable of the pupils. The meals should divide the child's school day into phases, and follow the normal workday schedule of Finnish people. A good time for the school lunch is about 11–12. The lunch must be arranged in sittings with the school timetable planned for groups of different types and ages, giving everybody enough time to eat unhurriedly. The minimum time for eating is 30 minutes. In addition, it is recommended that the pupils have an opportunity to spend e.g. 10–15 minutes outside for some exercise before or after the meal, depending on which is found to work best for the day-to-day operation of the school and the organising of the meals.

If the school meal is served too early, the pupils may not eat enough because they are not hungry yet. This may result in them getting hungry in the afternoon and attracted by the unhealthy choices of kiosks, nearby supermarkets and vending machines. If the lunch break is too short, the

children will be encouraged to devour their food, reduce their portion sizes, or even skip lunch altogether. Reserving a longer-than-average time for lunch sends a message about the values of the school, appreciation of the mealtime, and also about the school's efforts to promote well-being.

### 3.3 Meals and snacks provided to pupils

The meals and snacks provided to the children at school and in before and after school activities and clubs and at home support each other and together form a healthy and solid diet. The menu is on display at the school, and also posted on e.g. the website of the municipality, published in local newspapers as well as in the electronic communication channels between home and school. This makes it easier for parents and carers to adapt the meals at home to school meals, and consider the recommendations regarding the frequency of use of some ingredients, such as sausages.





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- ▶ A school can demonstrate an approach based on the appreciation of school meals and food and promotion of health and well-being by
    - reserving at least 30 minutes for lunch
    - providing a recess break of at least 15 minutes before or after lunch.
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FIGURE 4. A good school meal together with brisk exercise promotes coping and learning at school.

## Lunch

The lunch served at schools covers about one third of the daily energy expenditure (cf. Table 2, p. 58). School meals must fulfil nutrition recommendations and be balanced, tasty and appealing to children. While choices shall be provided to the pupils, it is also important that the different foods are planned based on the basic principles of healthiness.

A balanced school meal shall comprise every day:

- hot food containing fish, white or red meat, legumes or eggs
- a vegetable side dish, and salad dressing/oil
- a drink (milk/milk drink/buttermilk)
- whole grain bread, and
- margarine.

When porridge or soup is served as the main course, side dishes that complete the nutritional content of the meal must also be served.



### Examples of side dishes to be served with porridges and soups

- › cottage cheese, yogurt and curd pastes or sauces, smoothies with berries
- › an egg, egg-margarine spreads, home-made fish spreads
- › hummus (chickpea-sesame paste) and other vegetable, bean and seed pastes, marinated beans and lentils
- › lettuce and sliced vegetables, such as tomato, cucumber, paprika, etc.
- › fruit and domestic berries as such, or as mashed berries or fruit purees

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- The menu is both informative and appealing:
    - the weekly menu is every week on display both at school and in the electronic communication channels used between home and school
    - it can be digitally downloaded by a mobile app.
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It is advisable to provide *two choices for the main course*. One of them can be a vegetarian dish, with the adequate protein content of the meal ensured with legumes, other sources of plant protein, milk products or eggs. Providing vegetarian choices can increase the popularity of vegetarian foods, even among pupils who are not accustomed to them. The availability of different alternatives is also known to increase the attendance of pupils at school meals.

The free choice of a vegetarian alternative accustoms the children to a diet rich in vegetables, which supports a diet that is both health promoting and environmentally responsible. The vegetarian choice also helps fulfil the recommendations for the consumption of red meat. When the vegetarian food is planned to support the basic menu, it will also help reduce the number of special diet meals that need to be prepared.

If a vegetarian choice cannot be provided at the school meal every day, it is recommended that once a week, for example, a vegetarian meal be served. Two different vegetarian dishes can be available on a vegetarian food day. When the versatile use of vegetables is promoted this way, the children become accustomed to different vege-

tarian dishes and the recipe creation process is further developed.

To promote oral health, it is important that hard, chewable food is served on a regular basis, such as root vegetables, fruit and crispbread. Chewing increases salivary flow, which in turn contributes to the digestion of nutrients. Xylitol products should be available to the pupils after the meal. The use of xylitol prevents tooth decay.



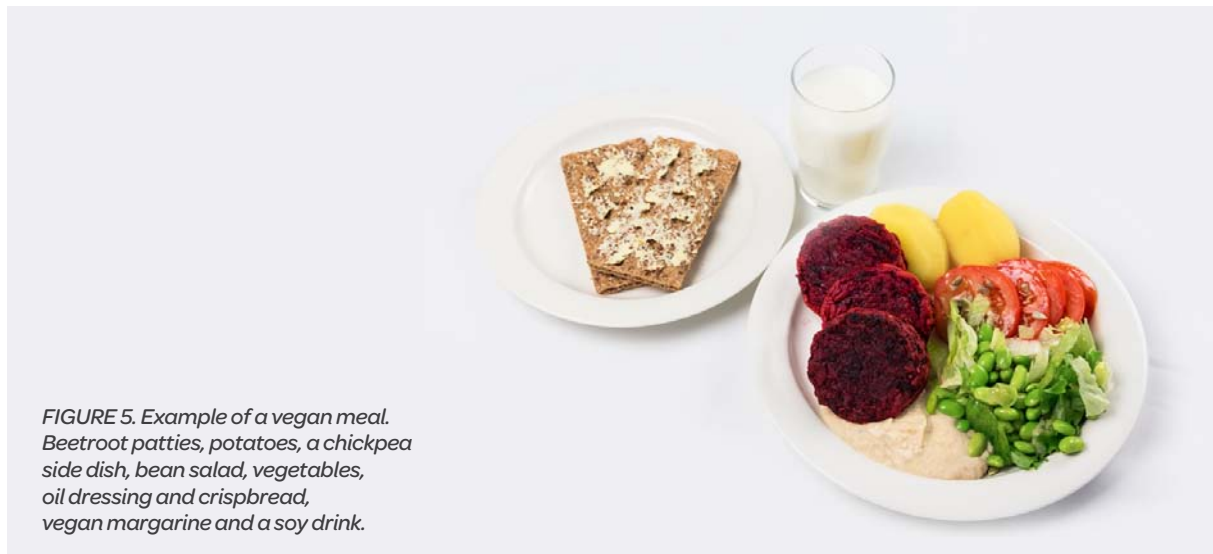
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- Seasonal vegetables are given a place of pride in the presentation of food, also as vegetarian alternatives.
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## Provision of vegetarian diets in school catering

In school catering, vegetarian diets are usually provided as a lacto-ovo-vegetarian diet. A health-promoting diet can be composed as a semi-vegetarian, or flexitarian, diet (contains fish and/or white meat), a lacto-ovo-vegetarian diet (contains milk products and egg), a lacto-vegetarian diet (contains milk products) or a vegan diet (contains exclusively plant-based foods). The popularity of vegetarian diets has increased among both pupils and teachers, as well as among persons who choose vegetarian meals to add variety to

their meat-based diet. As a rule, and provided the vegetarian choice is of a balanced composition, it provides a suitable alternative also when the primary choice does not suit diets based on a religious or ethical belief.

The names of the vegetarian choices should be selected in a way to teach the pupils to identify and name new raw materials, and encourage them to try dishes they have not tried before.



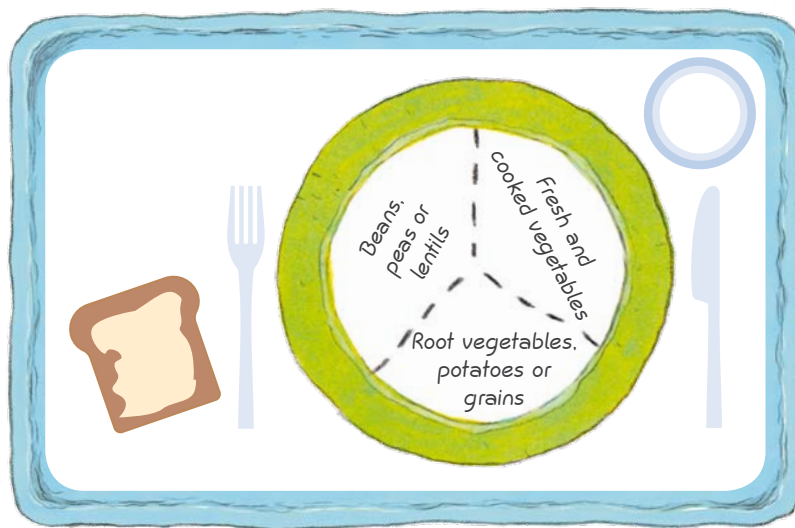
*FIGURE 5. Example of a vegan meal. Beetroot patties, potatoes, a chickpea side dish, bean salad, vegetables, oil dressing and crispbread, vegan margarine and a soy drink.*

### *Balanced, complete vegan meal*

The provision of a balanced and complete vegan meal requires planning and innovation through multidisciplinary cooperation. The challenge of composing a vegan diet for a growing child is to ensure the adequate intake of energy and all necessary nutrients, as well as making the food tasty and easy to implement in practice. The decision on the provision of vegan meals is made according to the guidelines specified by the provider of education, based on local-level consideration. The vegan food that is provided shall form a balanced, complete meal that meets nutritional recommendations. Factors to be taken into account in planning include, for example, the availability of ingredients suitable for a vegan diet, the creation of recipes for nutritionally balanced meals suited to children and young people, and a separate vegan menu.

It is advisable to refer pupils who follow a vegan diet to a nutritional therapist to make sure that their overall diet, including nutrient supplements, guarantees a sufficient intake of nutrients.

To ensure the nutritional completeness of a vegan diet the meal must include sufficient amounts of plant proteins. In addition to the sufficient intake of protein, the adequacy of the energy content of the meal must also be verified. It must also always be ensured that the diet comprises enough foods fortified with calcium, vitamins D and B<sub>12</sub> as well as iodine (e.g. fortified vegetable drinks), or a food supplement is used to verify their intake. The vegan plate model (Figure 6) is used as a tool in the planning of the complete meal and to support guidance and supervision. More information about the vegan diet for children is provided in document *Eating together – food recommendations for families with children*. (<https://www.julkari.fi/handle/10024/130435>)



**FIGURE 6.** A complete and balanced vegan meal comprises three parts: a side dish of root vegetables, potatoes or grains, fresh and cooked vegetables, and legumes.

Foods based on berries, fruit, nuts and almonds complete the meal and provide good snacks. Each complete meal contains a fresh component, salad dressing/oil, bread, vegan vegetable margarine and a fortified plant-based drink.

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- Feedback incites encouragement and development – cooperation works
    - true feedback is received on school meals
    - constructive compliments lead to corrective actions – the pupil jury/ school catering work group is active and works in a proactive manner
    - the inclusion of pupils in the implementation and development of school catering is continuous.
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## Diversity of culinary cultures

In all cultures, food is an important expression of the culture's own identity. The basic foods that we eat and the foods that complete our meal differ according to our cultural background. The food served in Finnish schools and our own personal eating habits are tied to our culture, habits, and traditions. School catering practices and the operating culture of the schools are also different in different countries. The eating routines followed and the foods served at home can differ significantly from school meals. When at school, children and young people may wish to relate and attach to their age group and their behaviour. They may find new foods fascinating and embrace them as a way to becoming part of a new group. On the other hand, taste preferences based on the cultural traditions of one's own home may make them want different spices, stronger flavours than what normal school meals offer, or special raw material choices for the food to be tasty. The diet can be composed in many different ways and still be as good in terms of healthy nutrition. The diversity of culinary backgrounds represented at school enriches the school meal culture. New dishes and eating habits can be a wonderful shared experience that teaches the pupils to appreciate food and its diversity.

In many cultures, all raw materials are cooked through. Only fruit are eaten fresh. Therefore it is not always possible to follow the basic plate model in the division of the meal components. A nutritionally adequate meal can be produced from cooked vegetables just as well as from fresh vegetables. When cooked vegetables are often served or available as side dishes or vegetables are incorporated in sauces, stews and other main dishes, a complete school meal can be created also without raw vegetables or salads. The basic dish (side dish of grains, rice, potatoes) should then account for one third of the meal, the main dish containing meat, fish, egg or legumes and/ or other vegetables for another third, and cooked supplementary vegetables for the last third of the meal. Suitable drinks at school meals include buttermilk products, plant-based drinks and water. Apart from salads and raw vegetables, fruit/slices of fruit or vegetables cut in suitable pieces are served as a supplementary fresh component to ensure the adequate intake of vitamin C and folate.



## Breakfast and snacks at school and in before and after school activities and clubs

In addition to lunch, children shall be offered a nutritious snack free of charge, if the lessons continue for more than three hours after the lunch. School commuting and waiting for transport make the school day longer, which shall be taken into account in the planning and implementation of lunch times and snacks (Basic Education Act, Section 32, Sub-section 2<sup>24</sup>).

The provision of snacks is part of the education and part of the school meals. The school must have a plan in place for the practical implementation of snacks, their supervision and assessment. It is advisable to create a snack list, in addition to the lunch list, with the diversity and variation of snacks taken into account and planning the school lunch and the snack as school meal components that supplement each other. A snack may be necessary also due to the pupil's special diet/health (e.g. diabetes, cf. Annex 6).

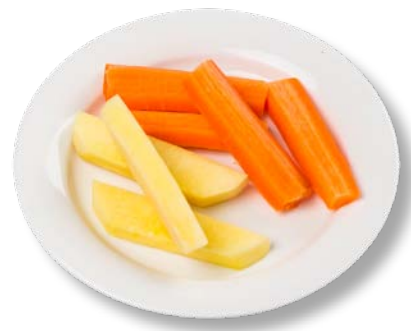
If the municipality or some other provider of education organises before and after school activities, the children participating in such activities shall be provided with a balanced and varying breakfast and/or snack that meets nutrition recommendations. As snacks, alternatives that make it possible for a child to assemble the snack him or herself should be preferred, to help children learn to make healthy choices.

24 <http://www.finlex.fi/fi/laki/ajantasa/1998/19980628?search%5Btype%5D=pika&search%5Bpika%5D=perusopetuslaki#L7P32>

- The snacks served and the school canteen and kiosk activities, if any, are based on providing healthy choices.

- Sugary products are not necessary to celebrate birthdays at school. Congratulations can be offered also in the form of games, cards and songs, for example.

A good breakfast or snack is based on vegetables, fruit, berries, and whole grain porridges, breads and baked goods that are rich in fibre and low in salt, as well as fat-free and low-fat milk products. The criteria for the composition of snacks and tips for the implementation of snacks are presented in the Table (Annex 3).



Soft drinks, juices, sweets and/or other products that contain a high level of added sugar, salt or saturated fat are not suitable snacks in the school environment. Selling such products from vending machines or a kiosk, a canteen run by the pupils' association or the school lunch restaurant is not appropriate in schools. The meal environment of the pupils is a responsibility area of the adults. The adults are responsible for ensuring that the choices available to the children and young people promote their health.

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- ▶ School facilities must not be used as a place for commercial persuasion.
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- ▶ Not selling sweets, soft drinks or juices with added sugar in the school on a regular basis ensures that the pupils eat a complete school meal.

Vending machines and kiosks should provide products that are good for the health and growth of the pupils.

(National Agency for Education, 2007\*)



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\* National Agency for Education and National Institute for Health and Welfare  
Makeiset ja virvoitusjuomat kouluissa ja oppilaitoksissa.  
(Sweets and soft drinks in schools and educational institutes)  
News release 11/2007.  
[http://www.edu.fi/download/119396\\_pdfMakevirkouopp.pdf](http://www.edu.fi/download/119396_pdfMakevirkouopp.pdf)





## Consideration of special diets

Pupils who follow a special diet for health reasons shall be provided with suitable and safe food at school. The pupil's need for a special diet is established in the child health care clinic before the child attends pre-primary education. In school health care, matters related to school meals and the establishment of the need for a special diet and the provision of associated guidance are part of the extensive health examination, but if necessary, they are taken into consideration also in connection with the other services provided by the school health care<sup>25</sup>.

The practices to be followed regarding notifications of special diets are agreed on locally between the schools and the school health care services. It has been established that an appropriate and straightforward notification system reduces the number of unnecessary special diets. The form included in the national allergy programme, for example, can be used for notification of special diets to schools and catering services; (<http://www.filha.fi/fi/hankkeet/kansallinen-allergiaohjelma/allergiaruokavalio-ohjeet-ja-kaavakkeet-terveydenhuollolle>).

When the special diet is part of the treatment of an illness, a certificate is needed from the school health nurse. Children suffering from an illness that requires permanent dietary treatment, such as diabetes or celiac disease, only need to notify the school once, and every time they change to a new school. When the need for a special diet has been appropriately diagnosed, the pupil will

be provided with meals that meet the treatment recommendations related to the illness. If necessary, individual instructions will be acquired from a registered nutritionist therapist to assist the practical implementation of the diet.

For the implementation of a demanding special diet, it is advisable to organise a meeting between the parents or carers of the pupil, the school health nurse or a representative of the health care unit, the rehabilitation instructor, and a representative of the school catering services. Cooperation is required in the implementation of school meals for children suffering from e.g. diabetes or a severe food allergy (Annex 6, Meals in pre-primary education/at school for diabetics; Annex 7, Meals in pre-primary education/at school for allergic children).

Pupils with severe or life-threatening food allergies must present a medical certificate, which is always valid for a fixed period of time. Clear practices must be agreed on with the food catering services (preparation, storage, serving) to avoid contamination, and to specify procedures in case of human errors or abnormal conditions, for example. With severe and life-threatening allergies, it is advisable to reserve an individual tray, marked with the pupil's name, in the kitchen. The teachers must also be informed of how allergies need to be taken into consideration in teaching arrangements and how severe reactions shall be dealt with at school (use of adrenalin, cf. Annex 7).

<sup>25</sup> Laaja terveystarkastus. Ohjeistus äitiys- ja lastenneuvolatoimintaan ja kouluterveydenhuoltoon, 2012. <http://www.julkari.fi/handle/10024/90831>

Pursuant to the Food Information to Consumers Regulation (EU No. 1169/2011)<sup>26</sup>, customers shall be provided with adequate information about the ingredients used. The catering staff in the kitchen and in customer service must always have knowledge about all the ingredients used and their suitability to various diets. Particularly in cases where meals are served outside the regular lunch area, the staff must be capable of providing correct information. Customers must be provided with information on certain substances listed in regulations that cause allergies or intolerances, if they have been used in the manufacturing or preparation of the meal or the foods (EU No. 1169/2011, Annex II). As a rule, this information shall be indicated in writing, but can also be given verbally provided the customers are clearly informed of the possibility to obtain additional information about the substances causing allergies and intolerances contained in the meals. When the pupil's special diet has been established in writing in advance and food is served individually to the pupil, there need not be a specific notice in the lunch area of where information on the composition of the products can be obtained.

More information about food allergies:

<http://www.filha.fi/fi/hankkeet/kansallinen-allergiaohjelma>

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

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

<sup>26</sup> 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>

## Other special needs and special conditions

Needs related to ethical and religious beliefs that differ considerably from the Finnish diet based on the eating habits of the mainstream population are taken into account in accordance with the guidelines of the municipality of the provider of education concerned.

Pupils participating in education must be provided with a complete meal on every work day. In special conditions, for example on days of field trips, festivities or special themes, an adequate amount of food shall be secured for the pupils, particularly if the meal is replaced with a packed lunch. In terms of the nutrition quality, the normal criteria specified for school meals can be deviated from with packed lunches. On field trip and physical exercise days, for example, it must be ensured that enough food is provided also for pupils who follow a special diet.



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- The inclusion of pupils also covers the perception of the economic aspect of food choices, as food choices that promote health and reduce food losses are also economical. Critical reflection is part of food talk.
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### 3.4 Inclusion of pupils

The versatile inclusion of the pupils in the school catering arrangements shall be supported pursuant to regulations, and they must be given the opportunity to participate in the planning and implementation of school meals according to their developmental phase. Participation, engagement and building a sustainable future will then be addressed in a manner that is suitable to the comprehension ability of the child or young person. Pupils gain experience in being appreciated as members of the community. The implementation of school meals that have been planned, monitored, assessed and developed together commits pupils to eating and learning together.

Inclusion is an integral part of health equality, as, in addition to health inequalities, differences in inclusion are also great between population groups. In the school environment, supporting the inclusion of the pupils contributes to the development of both the community and the individual. The stronger the pupils see their possibility to influence, the more motivated they are to act. Enabling structures in the society as well as inclusion help an individual evolve from a passive target into an active operator.<sup>27</sup>

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<sup>27</sup> Rouvinen-Wilenius P & Koskinen-Ollonqvist P (toim). Tasa-arvo ja osallisuus väylä terveyteen. 2011. Terveyden edistämisen keskus. Julkaisu 9/2011

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- A school catering committee/school catering agent team/school jury or some other school catering development group is set up in the school.
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School meals and the meal situation concern all children and young people. According to the Basic Education Act, pupils must have the opportunity to influence matters relating to themselves, according to their developmental phase. In addition to forms of inclusion related to school meals, the versatile inclusion of the pupils is supported by the possibility to impact and develop the meal environment. Various models for action have been produced for schools for the development of school catering and promotion of pupil inclusion, such as a manual for appointment of school catering agents.<sup>28</sup>

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<sup>28</sup> Ruokatieto Yhdistys ry. Kouluruoka-agentin käsikirja. <http://www.ruokatieto.fi/ruokakasvatus/kouluruoka-agentin-kasikirja>

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➤ By talking in a positive manner about school meals, parents play an important role in promoting the attendance of pupils at school meals and increasing the appreciation of school meals.

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➤ Food losses from plates and in the kitchen are monitored  
– pupils and teaching staff are included in the planning and implementation of corrective actions.

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**Pupil inclusion can be supported by, for example:**

- a school meal panel open to everybody
- direct, open school meal feedback systems
- school-specific barometers for attendance at school meals, monitored by pupils themselves
- monitoring of food losses as a learning exercise
- appointing pupils to assist in organising or serving of meals
- older pupils acting as peer support pupils/tutors for younger pupils at school meals
- forming a menu planning group or taste jury
- familiarisation visits to the kitchen
- work experience periods with school kitchen or serving staff
- school campaigns and school meal themes implemented by pupils
- social media projects between schools for sharing of positive experiences
- decoration of the lunch area (with e.g. culinary school year themes)
- exhibitions of pupil works in lunch area
- information material on school meals for the media, produced by pupils
- catering at parents' evenings and programmes about school meals, provided by pupils
- development of the kiosk activities of pupils' association to support school meals

### 3.5 Cooperation between different school personnel groups and home

The successful implementation of school catering requires cooperation on a multidisciplinary level and between different stakeholders. The responsibility for the control and supervision of school meals rests with the teachers, with all the adults at the school participating in it. The objectives and the provision of school meals are discussed with the parents and carers, and cooperation with homes and the different stakeholders is described in the local curriculum. Together, the teachers and the other adults in the school ensure that pupils take part in the school meals and are able to choose an adequate, complete meal based on the plate model.

School catering is in a good position to achieve its objectives, when all the adults in the school commit to its implementation, together with the pupils and the homes. In addition to the catering staff, the development and organisation of school meals requires the involvement of the headmaster, teachers, special needs assistants, school nurse, housekeeping staff, building managers and school secretaries. It is of utmost importance that the school health care together with the other pupil welfare services work in cooperation with all the operators in the school community. It should be remembered that oral health care professionals can provide special expertise in the development of school meals and the assessment of the health aspects of the school environment.

#### *School catering committee*

A school catering committee shall be set up in every school to support and develop the successful implementation of school catering. The committee convenes at the invitation of the headmaster, or if agreed on for the school concerned, the head or manager of catering services. The committee members include the headmaster/deputy headmaster/school manager and or the home economic teachers, as well as representatives of at least the catering services, health care, teachers and pupils. One member should be a representative of the parents/carers. In addition to the school health nurse, the school doctor, curator or psychologist can also be asked to attend, if necessary. If the school provides a kiosk or snack service, either as an ancillary service or an outsourced service, a representative of this service should also be invited to be a part of the school catering committee. The duties of the committee include, among other things, monitoring of attendance at school meals, expressing opinions on the meals and snacks served, and contributing to the provision and development of school meals. It is also important to collect and review experiences on good school catering examples. Another important aspect is that the opinions of the pupils and the school personnel on, for example, the smooth running of school meals, the appeal of the food and the dishes served, as well as any other matters related to schools meals are addressed together and communicated on a regular basis to the persons responsible for the preparation of the food, or their representatives.

The cooperation group that focuses on school catering issues in each school shall be described in the school catering contracts, including a description of the group's operation. This



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- School meals are part of the communal promotion of well-being at school. The implementation of the operation according to the objectives can be promoted through cooperation between the catering service provider and the communal student welfare group\*\*.

\*\* Cf. Act on Pupil and Student Welfare 1287/2013. <http://www.finlex.fi/fi/laki/alkup/2013/20131287> and guidelines of the National Agency for Education [http://www.oph.fi/oppilashuollon\\_opas/yhteisollinen\\_oppilashuolto](http://www.oph.fi/oppilashuollon_opas/yhteisollinen_oppilashuolto)

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ensures the multidisciplinary composition of the group, and its capabilities to function and influence. This is of particular importance in cases where school catering is outsourced to an external cooperation partner.

### *Cooperation with school health care*

The lifestyle guidance provided by the school health care services, together with school meals, health education, physical education and home economics, and other lessons, form an extensive educational package that promotes the health and well-being learning of the pupils.

Pupil health monitoring and promotion is part of pupil welfare services. According to the curriculum for basic education, if a pupil has individual needs related to nutrition, health care or treatment of an illness, the pupil, the carer, the personnel in charge of school catering and the school health care nurse must together agree on supportive and monitoring actions related to eating.

This cooperation and the duties of the school health care services are provided for in the basic Education Act, Section 3, Sub-section 2 and Section 31 a, Sub-section 1, in the Health care Act<sup>29</sup> (1326/2010), Section 16, and in the Government

29 Health Care Act 1326/2010. <http://www.finlex.fi/fi/laki/ajantasa/2010/20101326>

Decree on maternity and child health clinic services, school and student health services and preventive oral health services for children and youth (338/2011), Section 13<sup>30</sup> and in the Act on pupil and student welfare (1287/2013).<sup>31</sup> The Decree on maternity and child health clinic services, school and student health services also contains provisions for the content of the nutritional and lifestyle guidance provided by school health care services.

### *Cooperation between home and school*

The objective of the cooperation between home and school is to promote the healthy growth and development of the pupils. Regular meals and food that meets nutritional recommendations play a key role in the healthy growth and development of children and young people. The main meals provided at home and at school, supplemented with health-promoting snacks, are the components of adequate, balanced nutrition for children and young people. Dining together as a family is just as important in terms of coping, growth and development as the midday meal provided at school. Studies show that family meals produce long-term benefits for the

30 VNA 338/2011, Government Decree on maternity and child health clinic services, school and student health services and preventive oral health services for children and youth. <http://www.finlex.fi/fi/laki/alkup/2011/20110338>

31 Act on Pupil and Student Welfare 1287/2013. <http://www.finlex.fi/fi/laki/alkup/2013/20131287>

children: eating together is linked with the later health behaviour of young people. Parents should be informed about the favourable effect of eating together as a family, encouraging also families with adolescent children to dine together.<sup>32</sup>

The provider of education is responsible for the development of possibilities for cooperation between home and school. Pursuant to the curriculum for basic education, carers shall be provided with opportunities to familiarise themselves with day-to-day activities at school and to participate in the planning, assessment and development of the objectives of school activities and educational work together with school personnel and pupils. For this reason, it is important that schools include parents in the assessment and development of school meals, and in discussions about food education at school and its objectives. The presence of the school catering staff in these discussions is important. They

<sup>32</sup> Mattila M, Erkkola ML & Konu A. Perheateriöinnin yhteys nuoren tulevaan terveyskäyttäytymiseen, päihteiden käyttöön ja terveellisiin elintapoihin. Nuorisotutkimus 1/2016.

have the best knowledge about practical implementation and the eating habits of the pupils. Information about school meals and the rules to be complied with is produced together with the catering staff and communicated to the parents. The school catering committee is introduced, with a description of its purpose and list of contact persons, in the annual school newsletter or the school's website.

Joint discussions and consideration of opinions are important to the implementation of consistent school catering in compliance with recommendations. Information is provided to the parents about recommendations and general guidelines related to school catering, and the educational objectives are agreed on with them. The national recommendations related to food and nutrition shall be complied with in school catering, while the parents are in charge of the nutrition of the child or young person at home and in their free time. The meals served at home and at school complement one another and parents can do their part to contribute to the fulfilment of these recommendations through an encouraging attitude towards school meals.

### Tools for cooperation between home and school:

- › newsletters about school catering sent home at the start of the school year
- › regular messages about school meals and feedback requests on an electronic platform (e.g. Wilma and Helmi systems)
- › discussions and provision of information in parents' evenings
- › presentations/exhibitions produced by pupils about school catering for parents' evenings
- › parents given an opportunity to familiarise themselves with school catering in practice
- › parents' evenings/other events for parents arranged in the school lunch area, with the school meal/snack of the day served to the parents
- › when a Saturday is a school day, an opportunity is given for a shared meal at school.

Shared and aligned food education provided by school and home is a real and practical way to promote well-being and public health. Teachers can inspire the pupils to apply what they learn at school also in their everyday life outside the school. The influence that the day-to-day routines of the school day and the model given by the teacher has on the food choices and eating habits of the pupils can reach far into the future.

Parents' associations in individual schools make a valuable contribution by keeping in contact with municipal decision-makers, e.g. by increasing their awareness of the importance of school resources, including school catering.

### 3.6 Competitive procurement

School catering services can be produced by the provider of education, such as the municipality or the school itself, or procured from a catering firm that can be a company owned by the municipality or a private catering company. School catering can be procured through a competitive process as an extensive complete service or in parts to specific customer groups or establishments, for example. The provider of the catering service then organises a competitive process for the procurement of the required foods. When the municipality procures the foods through a competitive process, it must comply with the Act on Public Contracts<sup>33</sup>, but private service providers are not under an obligation to comply with the Act.

33 Legislation on procurement procedures: <http://www.hankinnat.fi/fi/mika-julkinen-hankinta>

Cf. Legislation 1397/2016 5 and 6 Section.  
<http://www.finlex.fi/fi/laki/alkup/2016/20161397>

#### *Competitive procurement of catering services*

The competitive process shall include a description of how the principles specified in legislation for balanced, appropriately organised, supervised and free-of-charge meals are to be fulfilled with respect to different meals. The procurer must also specify the objectives of the procured service, describe the criteria, the content and the quality of the service, and assign responsibilities. Factors that determine the nutrition quality of the food are of particular importance in the competitive procurement of catering services, as are also matters related to the implementation of the service and cooperation. Contracts and service descriptions will ultimately be prepared on the basis of the invitation to tender documents, which is why it is advisable to attach to the invitation a draft of the contract or the most important conditions and terms of the contract. A carefully prepared invitation to tender is a precondition for successful competitive procurement.

The recommendations presented in this document with regards to energy and nutrient contents, nutrition criteria and preferred ingredient choices (cf. Section 7) are to be observed in the procurement of school catering services. These recommendations also apply to snacks, in addition to the school lunch. The meals served to the pupils shall comply with the recommendations when assessed on a weekly basis. The service provider must ensure that a plate model meal is available for the pupils to see to guide them into assembling a nutritionally balanced complete meal. The invitation to tender should include a request for a description of how the service provider intends to implement this guidance.

It is recommended that the tenderers are asked to include a description of properties related to the society and social aspects in the tender, in addition to nutrition quality factors. These could include e.g. the seasonality of the raw materials





used and the energy efficiency of the operation. The strategies and guidelines of every individual municipality and provider of education also steer the procurement.

The quality factors of a catering service can be assessed on the basis of the following: a model menu (5–6 week rotation), accompanied by a description of the recipe creation process and nutrient content calculations used by the service provider, a description of the foodstuffs used and their procurement channels, as well as consideration of different themes and holidays. An operational assessment report detailing the number and competence of the personnel, as well as the development plan, can be requested.

The organiser of the competitive bidding process/procurer of catering services must also control the service during the contract period to verify that the agreed criteria regarding the quality and appeal of the food are fulfilled. The invitation to tender shall include a request for a description of the methods used by the provider of catering services to monitor and verify the fulfilment of the selection criteria, and how the procurer controls them in practice. Quality can be monitored by the systematic gathering of customer feedback and comparing the implemented menus and their nutrient content against the agreed upon criteria, as well as by monitoring pupil attendance at school meals and the completeness of their meals. The appropriateness of the catering operation is also evaluated, monitoring the feedback received on the appeal and adequate amount of food, implementation of in-house control, number of non-conformances and corrective actions, as well as the activity of customer cooperation.

The organiser of competitive bidding/procurer of the service must have the required professional

skills and competence to provide guidance to the catering service and control the fulfilment of the quality criteria. This guidance is a regulatory requirement and thus the procurer of the service is under the obligation to organise and develop appropriate guidance activities.

### *Competitive procurement of foods*

The procurer of foods must consider the nutrition quality of foods in compliance with the nutrition recommendations. The nutrient content values recorded in Tables 4a–c and Annexes 2–3 can be used as the minimum quality criteria for the nutrition quality of foods.

According to the Government's decisions in principle<sup>34</sup>, factors to be considered in the procurement of foods include food safety, compliance with sustainable development, ethical production methods, and the welfare and treatment of animals. The proportion of locally sourced food and organic food shall be increased in public food procurement. The Government's decisions in principle oblige Government officials and municipalities should also comply with them.

The structural model for an invitation to tender or competitive procurement material is described in Annex 1.

34 Valtioneuvoston periaatepäätös julkisten elintarvike- ja ruokapalveluhankintojen arviointiperusteista (ympäristömyönteiset viljelytavat, elintarviketurvallisuutta ja eläinten hyvinvointia edistävät tuotanto-olosuhteet). 2016. <http://valtioneuvosto.fi/paatokset/paatokset?decisionId=0900908f804cfc99>

Lähiuokaa – totta kai! Hallituksen lähiuokaohjelma ja lähiuokasektorin kehittämisen tavoitteet vuoteen 2020. 2013. <http://mmm.fi/documents/1410837/1890227/L%C3%A4hiuokaohjelmaFI.pdf/a30211ac-ff80-4722-984f-3fc26e5c1467>

Lisää luomua! Hallituksen luomualan kehittämisohjelma ja luomualan kehittämistavoitteet vuoteen 2020. 2013. [http://mmm.fi/documents/1410837/1890227/Luomualan\\_kehittamisohjelmaFI.pdf/9068c3b3-2e34-45ed-a917-10358dd132e2](http://mmm.fi/documents/1410837/1890227/Luomualan_kehittamisohjelmaFI.pdf/9068c3b3-2e34-45ed-a917-10358dd132e2)



# HEALTH FROM SCHOOL MEALS



## 4.1 Menu planning

Productisation and the use of raw materials of high quality and nutritional standard are preconditions for good menu planning and implementation of school meals. Productisation refers to the planning of menu rotation, which covers the raw materials used, recipe creation and frequency of occurrence on the menu for various dishes.

The responsibility for the school menu's fulfilment of the nutrition recommendations, and the diversity and balance of the menu, rests in practice with the catering services. However, those in charge of the organising and procurement of school catering services are responsible for allocating sufficient resources for implementing high-quality complete meals and for recording the nutrition recommendations and criteria for nutrition quality as minimum quality criteria in the competitive procurement of catering services and raw material purchasing. The service contract between the client and the provider must define the quality, content and appropriateness of the menu.

Menu planning is to be based on serving soups, main dish sauces, casseroles, stews and unit foods in turns as specified in the recommendations. In the selection of unit foods (e.g. fish fingers, meatballs and spinach patties), attention should be paid to their fat and salt content. Menus and dishes, as well as meal components, are to be varied and reformed to give the pupils an

opportunity to try new raw materials and dishes. Finnish dishes and dishes typical of the local area as well as seasonal dishes are appreciated and served at school meals. At the same time, the changing world and the changes in eating habits are also taken into consideration.

The recommendations for the selection of food-stuffs and recurrence frequency presented in Annex 1 are used as the basis in menu planning.

### *Menu rotation used to support the school food year*

The rotation cycle must be long enough to ensure the variation and diversity of the menu. A six or eight-week rotation, which is the most commonly used cycle, is long enough to guarantee diversity. The entire food year of the school is considered in the planning of menu rotation. The annual plan for food education<sup>35</sup> can be utilised in menu planning. The year is structured according to seasons, themes and holidays, which provide variation and a natural way to learn traditions related to food and cultural habits. Themes and holidays should be integrated in the planning of the basic menu to avoid overlapping and errors in the implementation of the menu.

<sup>35</sup> Annual plan for food education. [http://www.edu.fi/perusopetus/kotitalous/ops2016\\_kotitalouden\\_tukimateriaalit/sisaltoalueet/materiaalia\\_opetukseen](http://www.edu.fi/perusopetus/kotitalous/ops2016_kotitalouden_tukimateriaalit/sisaltoalueet/materiaalia_opetukseen)



## 4.2 Choice of ingredients a stepping stone towards nutrition quality

Food served as part of school meals is balanced, varied, tasty and appealing. While pupils are to be offered choices, it is also important that the nutrition quality of the meals is based on nutrition recommendations. A nutritionally balanced daily school meal contains a hot main dish, a high-energy side dish (potatoes, barley, grain mix, whole grain pasta or whole grain rice), a vegetable side dish, a vegetable oil-based salad dressing or oil, a drink (milk/milk drink, buttermilk), bread and margarine.

- The nutrition quality of food is monitored regularly using the agreed methods.

The recommendations pertaining to the improvement of the diet of children and young people (Table 1) are to be taken into account in the planning of raw material choices for school meals.

TABLE 1: Promotion of health through food choices.

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

Add	Replace	Cut back on
Vegetables, including mushrooms, berries, fruit	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.	Animal fat, 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 versatile variety of vegetables, berries and fruit in different forms is served at school lunch and as snacks to accustom the pupils to different flavours and textures. Fruit is served whole and in slices. The variety of the selection can be increased by means of pureed berries, grated fruit and smoothies. Root vegetables and other vegetables are served whole or chopped, uncooked and grated, in salads and/or cooked, or incorporated in the food, or as bread topping or bread roll filling. Annual seasons are taken advantage of and domestic alternatives are used when possible.

Pickled vegetables, such as pickled beetroots or cucumbers are not a substitute for fresh vegetables as such because of their added salt and sugar and strong flavour. Using vegetables, fruit and berries of different colours can increase the appeal of the food. A diverse selection and a salad buffet where the components of the salad can be chosen separately increase the popularity of vegetables.

The serving line shall be organised so that salads/vegetable side dishes can be chosen and placed onto the plate or tray at the start of the line, as this will increase their consumption and make it easier to comply with the plate model. Vegetables and fruit that can be eaten with fingers/hands should also be favoured, particularly as snacks. Placing a variety of vegetables on the serving line as such increases their appeal. It also makes it easier for pupils with food restrictions due to allergies or other factors to choose their food.

Schools can apply for financial support from the Agency for Rural Affairs to serve fruit and vegetables as snacks to pupils (in Finland starting in the autumn of 2017). The School Fruit and

- ▶ Younger children in pre-primary education and lower-level schools are guided to use their own palm size as an indicator for a suitable portion of vegetables. Familiarisation with new vegetables is promoted by serving them as finger food.

- ▶ The younger the pupil, the more important it is that the raw materials of the main dishes are identifiable.

Vegetables Scheme<sup>36</sup> is funded by the EU and aims at increasing the proportion of healthy products in the diet of children. EU funding is also used to support educational measures related to food in order to familiarise the children with e.g. healthy eating habits, agriculture and food production, as well as environmental issues.

### *Grain products and grain-based side dishes*

The bread served at school is high in fibre and lower in salt. (cf. Annexes 2-3). It is recommended that also soft alternatives are made available, in addition to crispbread. Grains are an important source of protein, particularly in a vegetarian diet.

<sup>36</sup> EU school distribution system. [http://ec.europa.eu/agriculture/school-scheme\\_en](http://ec.europa.eu/agriculture/school-scheme_en)

### *Dairy products*

The drinks available at school meals include fat-free milk/milk drinks and buttermilk, fortified with vitamin D. Other liquid dairy products and fermented milk products should be fat-free or low-fat products with a maximum fat content of 1%.

Cheese products with a fat content of at most 17% and a maximum salt content of 1.2% should be selected. Consuming a wide variety of low-fat dairy products can easily insure the intake of protein in a vegetarian diet (cf. Annexes 1-2).

The School Milk Scheme implemented in Finland for a long time has been combined with the School Fruit and Vegetables Scheme (autumn 2017)<sup>36</sup>. At present, the School Milk Scheme already covers 90% of pupils entitled to the aid. The school distribution system funded by the EU makes it possible for schools to procure fat-free milk, 1% milk and buttermilk at a reduced price. The target groups of the School Milk Scheme include all children and pupils in day care, pre-primary and basic education and upper secondary education.



<sup>36</sup> EU school distribution system. [http://ec.europa.eu/agriculture/school-scheme\\_en](http://ec.europa.eu/agriculture/school-scheme_en)

### *Vegetable oils, margarines, nuts and seeds*

Vegetable oils and margarines are rich in soft fat and should therefore be used as the source of visible fat in the diet. Vegetable margarines with a fat content of at least 60% are used as spread on bread. At most 30% of this fat is saturated fat. For salads, an oil-based dressing or just vegetable oil is recommended. Vegetable oil, a fluid vegetable oil product or a margarine with a fat content of at least 60% is used as cooking fat. Rape-seed oil is a particularly good choice thanks to the health-promoting fatty acids it contains and its excellent properties as a cooking oil.

Nuts, almonds and seeds can be served but only if they are not covered with salt, sugar or any other coating. Seeds such as sunflower, pumpkin, sesame and flax seeds can be used to complement various dishes or in the salad buffet.

Potential food allergies to nuts and almonds shall be taken into account in communication and pupil guidance, presentation, serving and product information.

### *Legumes*

Legumes, such as peas, broad beans, beans, lentils and products made from them, are good sources of protein. Sources of plant protein are recommended and sustainable choices in terms of both health and the environment. One decilitre of cooked beans equals one portion of protein for school-aged children. According to recommendations, legumes should be used as the source of protein at main meals or as side dishes on a weekly basis.

### *Meat, fish, eggs*

Fish<sup>37</sup>, chicken, turkey, red meat<sup>38</sup>, game, offal and eggs are used varyingly in the main dishes. Attention should be paid to the amount and quality of fat in products of animal origin. Fish fat is the best alternative in terms of health. The quality of fat in chicken and turkey prepared without the skin is better than the fat of beef, pork or mutton.

The use of sausages and deli meats, such as ham, beef, turkey and chicken deli meats, strips and kebab meat, in dishes and as deli meats is to be restricted. Meat and meat products are served varyingly, and fish, eggs and legumes are served in addition to and instead of them. Cooked vegetables or vegetable side dishes should be available with meat dishes as often as possible. Meat products low in fat and salt are to be selected. Products that meet the criteria specified for nutrition quality are favoured as deli meats. (cf. Annexes 2-3).

Red meat, sausages and deli meats are not part of the daily selection of products served. For school-aged children, the recommended maximum amount of red meat or meat products increases as their energy expenditure increases up to the amount recommended for adults. The recommended maximum weekly consumption of cooked red meat is 500 g for adults (equals a raw weight of 700–750 g). For pre-primary and lower-level school pupils, the weekly consumption is about 350–400 g, and for upper-level students

37 The guidelines issued by Evira for children, young people, persons of reproductive age as well as pregnant and nursing and lactating mothers regarding the selection of fish species and the frequency of eating fish are to be taken into consideration. <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/>

38 Red meat refers to beef, pork and mutton.



and young adults about 400–500 g. These amounts refer to the whole diet of the pupil, including meals at home.

### *Drinks*

Fresh water should be available as the primary beverage and at meals. Water must be available as the primary beverage to everybody during the whole school day. No soft drinks, energy drinks or any other acidified beverages or beverages with added sugar are served at school. Unsweetened juices can be given to the pupils occasionally, for example with packed lunches.

### *Sweetening and use of sugar*

Products that contain added sugar are avoided or only served very occasionally as snacks. Snacks are to be prepared and selected according to the nutrition criteria (cf. Annex 3). Added sugar can be used in small quantities in foods made from berries to moderate acidity or bitterness. The sugar naturally contained in milk, fruit, berries and vegetables need not be avoided.

- 
- Fresh domestic water is served at school as the primary beverage.
- 

### *Low salt levels – iodised salt*

Low-salt products (bread, other cereal products, cheese, deli meats) that meet the nutrition criteria (cf. Annexes 2-3) are to be selected for school meals. The amount of salt shall always be taken into account in the creation of recipes and the specified amounts shall be observed in food preparation by weighing and measuring. Iodised salt is to be used in food preparation.





### *Environmental aspects of food choices*

The aspect of sustainable development must be taken into account when determining food choices. A diet favouring vegetables and based on the recommendations reduces the environmental loading caused by food. An environmentally friendly diet favours domestic seasonal vegetables, root vegetables and legumes in a wide variety, and the consumption of red meat does not exceed the recommendations. Choices that support sustainable development also include domestic grains or side dishes of grains in place of rice, and the use of fish, particularly lake fish<sup>37</sup>, rapeseed oil, and margarine, and tap water as the primary beverage.

In addition to food choices, the reduction of food losses is a significant contributor to preventing the environmental loading caused by food. The pupils are guided in assembling their meal according to the plate model, and encouraged to have seconds, if necessary. The possibility to have seconds reduces food losses due to food

left on the plate. In the preparation of food, food losses can be avoided by having a plan that covers the whole school in place, as well as by a good order and logistics system. Field trip days and higher absence numbers should also be taken into account in food preparation amounts. In the leftover lunch concept, the school can sell any extra food left over.

37 The guidelines issued by Evira for children, young people, persons of reproductive age as well as pregnant and nursing and lactating mothers regarding the selection of fish species and the frequency of eating fish are to be taken into consideration. <https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/>



## 4.3 Energy and nutrient content of school meals

The nutrient content planning of the main meals served at schools is based on the *Health from food – Finnish nutrition recommendations* of the National Nutrition Council (2014). It is particularly important to ensure that the proportions of energy nutrients as well as the quality of fat and the amount of salt in the food served in pre-primary education and at schools meet the recommendations.

### Energy

The meal is to be planned so that it is possible for pupils to fulfil one third (1/3) of their own energy expenditure with the school meal. It should be borne in mind that the energy expenditure, and consequently the portion size, varies considerably between the pupils. The recommendation will only be fulfilled provided the pupil eats the whole meal, including the side dishes. The indicative energy amounts of the school meal are presented in Table 2 for use as a basis for food planning. Examples of portions with different energy amounts in Figure 7.

TABLE 2. The indicative energy amount of the school meal on average on weekly level on various grades

School grade/age	Energy kcal/meal	Energy MJ/meal
<b>S</b> Pre-primary– 2nd grade (6–9 yr)	550	2.3
<b>M</b> 3rd–6th grade (10–13 yr)	700	3.0
<b>L</b> 7th–9th grade (14–16 yr)	850	3.5

FIGURE 7. Portion size examples S, M and L for school-children of different ages.





## Energy nutrients

### Fat

The fat contained in school meals must fulfil the recommendations. At least two thirds (2/3) of the fat must be unsaturated fat. Unsaturated fat contains fat-soluble vitamins and essential fatty acids; their intake is essential to the well-being of e.g. the brain, nervous system, heart, blood vessels and hormonal functions, as well as eyes, skin and hair. Soft fat improves blood fat values and thus prevents e.g. cardiovascular diseases.

Saturated fat (saturated fatty acids) should account for less than 10% of the total energy of the meal (E %). Saturated fats are to be avoided, because they have adverse effects on the health of the heart, brain and blood vessels, for example. Recommended sources of fat are described in Section 4.2. Replacing foods containing hard, saturated fat with foods that contain soft, unsaturated fat is essential to improving the quality of fat in the diet.

### Carbohydrates

Carbohydrates are the primary source of energy in the diet. The sources of carbohydrates to be selected for school meals are foods high in fibre (Table 4a-4c, p. 62-63, and Annexes 2 and 3).

The intake of added sugar must not exceed 10 E% in the diet. Children and young people consume high amounts of sugar from soft drinks, juices, sweets, sweetened milk products as well as cookies and other nibble foods. A diet high in sugar provides a lot of energy, but is poor in protective nutrients. With children, in particular, a diet poor in nutrients is linked to obesity, cardiovascular diseases, high blood pressure, certain cancers, and tooth decay.<sup>39</sup>

### Protein

The sources of protein in school meals include meat, fish, milk/buttermilk, other dairy products, eggs and legumes. Grains are also sources of protein. In a vegetarian diet, the intake of protein can be secured by eating a variety of legumes, grain products and dairy products.

The recommended relative proportions of energy nutrients are presented in Table 3. The proportions of energy nutrients in the recommended school meal refer to variation in meals on a weekly menu. The amount of fat can in the main meal exceed the recommendation specified for the diet as a whole, provided the fat is of good quality (less than 10 E% of saturated fat).

<sup>39</sup> 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>



TABLE 3. Average proportions of energy nutrients on weekly level in school meal based on plate model

	% of energy
Fat	30–40
Saturated fat	less than 10
Protein	13–17
Carbohydrates	45–50

The aforementioned recommendations are fulfilled when the preparation of the meals is based on the criteria presented for nutrition quality in the next section. Individual meals may deviate from what is presented above, but the average proportions of energy nutrients on a weekly level shall be in accordance with the recommendations in school meals based on the plate model.

### Salt recommendation

There is a direct link between salt intake and blood pressure. Since sodium is naturally contained in almost all foods, healthy children and adults have an adequate sodium intake without having to add salt in the food<sup>40</sup>. The recommended salt intake is at most one teaspoon (5 g) per day for adults. For children up to the age of ten years, the recommendation is lower, a maximum of 3–4 g per day. By paying attention to the amount of salt in the meal as a whole, we can positively affect the salt intake of children and young people and their predisposition to high-salt food. The salt

<sup>40</sup> Table salt is sodium chloride containing 40% of sodium. The salt content of a food product can be calculated by multiplying the amount of sodium contained in the product by 2.54 (a rounded factor of 2.5 is used in regulations and labelling).

content of meals is reduced when salt-free raw materials and low-salt foodstuffs are selected and only a very limited amount of iodised salt is used according to the recipe in the preparation of food. ((Cf. nutrition criteria for meal components), Tables 4a-c, p. 62–63).

### Making the school meal a good source of iodine

Studies indicate that the iodine intake of Finnish people is too low. Iodine is a mineral that is necessary to humans. In Finland, the iodine content of the soil is very low. Significant iodine deficiency can cause thyroid enlargement, and disturb growth and development in children. The best sources of iodine include dairy products, fish, egg and iodised salt. In order to increase the iodine intake of children and young people, iodised salt is used in the preparation of school meals. Products manufactured using iodised salt should be favoured also when procuring industrially produced foods. A school meal based on the recommendations contains an adequate amount of iodine.



## 4.4 Criteria for nutrition quality of different meal components

The nutrition criteria are based on the meal component-specific criteria specified for catering services in *Health from food – Finnish nutrition recommendations* (2014). In case only one meal choice is available every day, the majority (at least 80%) of the meals fulfilling the recommendations is an acceptable level. When pupils are provided with several meals at school (breakfast, lunch, snack, dinner, evening snack), the overall

diet based on the meals served during the school day is to be taken into account in menu planning. In addition to the criteria for individual meal components, all products fulfilling the criteria of the Heart Symbol are recommended meal components as such, even if the nutritional content of the product is not in agreement with the figures presented in the Tables below.

TABLE 4a. Main dishes

Type of main dish	Nutrient content/100 g, max.		
	Fat g	Saturated fat, g	Salt g
Main dish porridges* Minimum fibre content of flakes, etc. 6 g/100 g	3	1	0.5
Soups*	3 (5)**	1 (1.5)	0.5***–0.7
Casseroles, risotto, pasta, main-dish salads****, pizza	5 (7)	2 (2)	0.6***–0.75
Main-dish sauces (e.g. beef stroganoff, chicken sauce)	9 (11)**	3.5 (3.5)	0.9
Unit foods with or without a sauce	8 (12)**	3 (3.5)	0.9

\* If bread with toppings (e.g. deli meats, or cheese) is served with main-dish soups and porridges, products that fulfil the Heart Symbol criteria are to be used.

\*\* The fat figures in brackets apply to fish meals.

\*\*\* The variation range of salt amount, with the lower salt limit the long-term target value.

\*\*\*\* In a main-dish salad, the proportion of vegetables is at least 150 g/portion.

TABLE 4b. Potato and grain side dishes to accompany the main dish

Side dish	Nutrient content/100 g			
	Fat g	Saturated fat, g	Salt g	Fibre (of dry weight) g
Pasta	–*	Max. 0.7	Max. 0.3	Min. 6
Barley groats, rice-grain mixes, etc	–	Max. 0.7	Max. 0.3	Min. 6
Whole grain rice	–	Max. 0.7	Max. 0.3	Min. 4
Boiled potato	No added fat	–	No added salt	–
Other potato side dish (e.g. mash, wedges)	–	Max. 0.7	Max. 0.3**–0.5	–

\* (–) No criterion specified for this factor.

\*\* The variation range of salt amount, with the lower salt limit the long-term target value.

TABLE 4c. Other meal components

Meal component	Nutrient content/100 g			
	Fat %	Hard fat (saturated and trans fat), %	Salt g	Fibre g
Bread	–	–	Soft bread max. 0.7 Crispbread max. 1.2	Min. 6
Margarine	Min. 60	Max. 30 of fat	Max. 1.0	–
Milk or buttermilk	Max. 0.5	–	–	–
Vegetable side dish uncooked vegetables	–	Hard fat max. 20 of fat in marinade	No added salt	–
Vegetable side dish cooked vegetables	–	Hard fat max. 20 of fat in marinade	Max. 0.3	–
Salad dressing or Oil for salad	Min. 25	Max. 20 of fat	Max. 1.0	–



## 4.5 Model meal

No matter how well balanced the menu and the meals are and how well they fulfil the recommendations, the food needs to be eaten for it to nourish the pupil. Guidance, encouragement, motivation and a good example set by adults are all significant factors as to whether the children and young people eat a health-promoting meal. Guidance will essentially affect which and how much of the meal components they choose from the available selection (cf. p. 29).

### *Model meal – providing information to customer*

Children and young people are provided with guidance in assembling a recommended meal utilising a model meal as well as indications on the menu and/or in the serving line. The model meal helps the pupil understand how to assemble a balanced lunch from the serving line. Instead of a model meal actually assembled from real food, it can be presented on e.g. a TV screen or in a photo.

The model meal is comprised of the food assembled on the plate according to the plate model, as well as bread, margarine, a glass of milk/butter-milk, and possibly also a dessert. Half of the plate is filled with vegetables, one quarter with potatoes or pasta/some other grain side dish, and the final quarter with meat/fish/egg/legumes. Soup and porridge dishes are presented in a similar manner in a bowl, with the vegetables, berries, fruit and other side dishes shown separately.

The model meal is a tool for pupil guidance, used to demonstrate how a meal that comprises all the

meal components produces a nourishing whole (cf. model meals, Figures 8-13). The variation in the individual energy expenditure of children of different ages and sizes shall also be taken into consideration in the model portions as well as in the preparation of portion size guidelines and in guidance during the school meal. The relative proportions of the foods remain the same in the model plates of children of different ages, despite different portion sizes. As the energy expenditure increases, so does the amount of food (particularly increasing the amount of potato/grain side dish, bread, bread spread). As of pre-primary school age, children should be allowed to take food themselves and define their own portion size, as this will support the normal development of self-control when eating. In the guidance of children, it is also important to remember that their eating may vary considerably from one day to the next, and the adequacy of energy intake can only be assessed over the long-term.

The model meal can be presented in many different ways. The start of the serving line is a natural place for the model meal, presenting a model for assembling various complete meals to the pupils. The use of a model meal can be integrated in the teaching of different subjects, and can also be described in the electronic platform for school-home cooperation. The school catering committee can decide on the best ways to implement the model meal. A model distributed electronically can be used to inform parents and carers about the composition of the school meal and to encourage interaction between home and school.





**FIGURE 8.**

*Chicken curry, whole grain rice, blackcurrant puree, salad mix, seed mix, salad dressing, crispbread, margarine and fat-free milk. Cf. nutritional content calculation, Annex 4.*



**FIGURE 9.**

*Beef stew with root vegetables, potatoes, salad mix, salad dressing, crispbread, margarine and fat-free milk. Cf. nutritional content calculation, Annex 4.*



**FIGURE 10.**

Wheat tortillas, bean sauce, salad mix, salad dressing, crispbread, margarine and fat-free milk.  
Cf. nutritional content calculation, Annex 4.



**FIGURE 11.**

Porridge of barley groats, a compote of berries, crispbread, margarine, egg and fat-free milk.  
Cf. nutritional content calculation, Annex 4.



**FIGURE 12.**

*Chicken and vegetable soup, rye bread, margarine, fruit, vegetables as bread topping and fat-free milk.  
Cf. nutritional content calculation, Annex 4.*



**FIGURE 13.**

*Macaroni casserole, ketchup, salad mix, salad dressing, crispbread, margarine and fat-free milk.  
Cf. nutritional content calculation, Annex 4.*





# MONITORING AND EVALUATION OF SCHOOL CATERING



Participation in school meals and the quality of the food and the meal break are monitored and evaluated regularly (National Core Curriculum for Basic Education 2014, p. 42)<sup>41</sup>. School catering is monitored and evaluated on the school, education provider and municipal level, as well as on the national level. The monitoring and evaluation of individual schools and service providers is described in more detail in the following sections.

On the municipal level, the monitoring of school catering shall be part of the municipal welfare report. Attendance at school meals and compliance with the school meal recommendations are key indicators. By participating in the school health survey<sup>42</sup> of the National Institute for Health and Welfare, the municipality obtains information reported by the pupils themselves. Information is obtained on attendance at school meals and choosing different meal components in the municipality as a whole and in each school.

A summary of the key figures that describe the implementation of school catering and the development actions, as well as a summary of customer feedback are presented in the annual report and the website of the school.

41 POPS, 2014. [http://www.oph.fi/saadokset\\_ja\\_ohjeet/opetusuunnitelmien\\_ja\\_tutkimosten\\_perusteet/perusopetus](http://www.oph.fi/saadokset_ja_ohjeet/opetusuunnitelmien_ja_tutkimosten_perusteet/perusopetus)

42 School health survey/National Institute for Health and Welfare. <https://www.thl.fi/fi/tutkimus-ja-asiantuntijatyo/vaestotutkimukset/kouluterveyskysely>  
In English: <https://www.thl.fi/en/web/thlfi-en/research-and-expertwork/population-studies/school-health-promotion-study>

- ▶ The results of the school catering system can be reported in the municipal welfare report by means of welfare indicators.

The welfare index: <http://www.tampere.fi/tampereen-kaupunki/tietoa-tampereesta/tietonakoala/hyvinvointi-indeksi.html>

On the national level, the implementation of school meal services for pupils is monitored as part of the health monitoring of school-aged children (school health survey<sup>42</sup> of the National Institute for Health and Welfare, the study of WHO; Health Behaviour in School-aged Children<sup>43</sup>) and as part of the measures designed for promotion of health in municipalities (TEAvisari/National Institute for Health and Welfare<sup>44</sup>). National population-level follow-up studies on the nutrition of children are designed for regular monitoring of the consumption of food by pre-primary and school-aged children at school and at home, their intake of energy and nutrients, and the significance of the main meals and the snacks for their nutrition intake.

43 WHO study of school-aged children. <https://www.jyu.fi/sport/laitokset/tutkimusyksikot/tetk/vahvuus/who>  
In English: <http://www.hbsc.org/>

44 TEAvisari National Institute for Health and Welfare. <https://www.thl.fi/fi/web/terveyden-edistaminen/johtaminen/tyokaluja>  
In English: <https://www.thl.fi/en/web/health-promotion>

## 5.1 Monitoring and evaluation of nutrition quality of school meals

The monitoring of the nutrition quality of the school meals is a continuous process used by the catering service provider to ensure that the food served complies with recommendations. The process covers all the phases of school catering: menu planning and food procurement planning, productisation, development of recipe creation, food preparation and serving.

The meaning of implementation in compliance with school meal recommendations is explained in a concrete manner in the contract documents. Precise descriptions of the catering operation at the level of menus and single meals, nutrition criteria of individual meal component, and the nutrient content calculation make it possible to monitor compliance with the nutrition recommendations and verify the nutrition quality of the food served. A plan is prepared for the monitoring of the nutrition quality, including descriptions of the criteria and their monitoring intervals and methods as well as the method of reporting and cooperation with the service provider regarding monitoring. Procedures for providing feedback and for non-conformances should also be agreed on.

Meal and menu-level nutrient content calculations are needed for more detailed monitoring of the nutrition content (nutrients to be monitored on weekly level, minimum: energy and energy yielding nutrients, saturated fat, fibre and salt), see example in Annex 4. The calculation of the nutrition content of meals is part of the basic competence of catering services, and most of all, a tool for the development of recipe creation

and complete meals, instead of just general evaluation of the final menu.

If the catering service provider does not have software for calculation of the nutrition intake, the self-evaluation of the nutrition quality of the meals shall be based on at least the criteria defined for the nutrition criteria of the meal components. In this case a detailed plan shall be prepared for the monitoring of the fulfilment of the criteria, with the whole personnel engaged in its implementation. In the in-house control of the nutrition quality, the monitoring plan covers at least the amount of fat, levels of saturated fat, fibre and salt, the monitoring frequency, as well as recording and reporting.

The criteria defined for workday lunches can be applied to the nutrition quality of school meals (Annex 5). These criteria are used to evaluate if the food served at school complies on average with the recommendations. There are four criteria used in evaluation: basic criterion, fat criterion, salt criterion and communication criterion. The fulfilment of the fat, salt and fibre criteria is monitored also with respect to the meal components. As far as snacks are concerned, the selection criteria defined in Annex 3 are monitored.

A good approach is to carry out internal auditing/ a quality review of the catering operation at regular intervals, for example once a year. Audits serve as an interactive method for control and promote the implementation of school



catering in accordance with high standards of consistency and quality, and in compliance with recommendations and contracts in the service points of the area concerned. Visits to individual establishments may include school-specific cooperation meetings for the assessment of quality and execution (quality of service, content of meals, realised portion sizes, completeness of meals, etc.) together with the school personnel and representatives of e.g. the catering committee.



### Methods for verification of the nutrition quality of meals

- ▶ dietary intake nutrient analysis software
- ▶ standard recipes of material suppliers and/or recipes tailored for own kitchen (pre-defined nutrient values)
- ▶ standard recipes for a specific kitchen with calculations made by external providers/students (e.g. recipe calculation service of Sydänliitto (Finnish Heart Association), material suppliers, Universities of Applied Sciences)
- ▶ nutrient content calculations of specific recipes utilising National Food Composition Database Fineli
- ▶ use of Heart Symbol meal system and standard recipes from the system (<http://ammattilaiset.sydanmerkki.fi/ammattikeittiot/nain-sydanmerkki-saadaan-kayttoon>) and <http://ammattilaiset.sydanmerkki.fi/ammattilaisreseptit>

## 5.2 Monitoring and evaluation of participation and inclusion in school meals

Monitoring the attendance of pupils at school meals (daily/weekly/annual monitoring) is a key indicator of operation. “Everybody eats” can be set as the common goal with pupils and homes. The monitoring results will provide motivation for the achievement of the common goal. Participation should be monitored separately for each grade. It is advisable to also monitor participation in snack service and the consumption of snacks as part of the monitoring of school catering. In addition to the monitoring of pupils, it is also important to monitor the attendance of the whole personnel at school meals.

The feedback received from pupils, teachers and other staff members is of key importance to the development of school catering. Pupils and the personnel are encouraged to continually provide feedback and proposals for development on matters related to school catering via e.g. the catering committee or the pupil committee. A direct and interactive feedback system supports concrete improvement actions best in the development of school catering (e.g. electronic feedback system, feedback boxes/boards, chalkboard, feedback machine/QR code, Taplause system).

Cooperation between the catering service providers and the school, maintained through the use of things like simple electronic surveys, makes it possible to collect feedback quickly and efficiently about the pupils’ own assessment

of their attendance at meals and participation in snack service, in addition to proposals for development actions related to school meals. An evaluation form posted on the school’s website could also be used to encourage pupils and parents/carers to evaluate the implementation of school catering together.

### *Inclusion of parents and carers*

In matters related to school catering, parents play the roles of both residents of the municipality and beneficiaries of the service. A key indicator of the successful execution of cooperation between home and school is the level of participation activity of the parents. Feedback can be collected from the parents through surveys, an open feedback system, an electronic platform or in parents’ evenings. To ensure the appropriate implementation of special diets, it is important for the parents to actively give direct feedback, and on the other hand, parents must be provided with proper information about the implementation of special diets and any restrictions related to them. Feedback from homes is also needed on ancillary services. For example, cooperation between the school and home is particularly necessary in the development of a snack service provided as an additional service.

Everyone has their own beliefs and ideas based on assumptions about school catering. It is of primary importance that feedback from both pupils and homes is responded to appropriately, and if necessary, also by correcting false assumptions or information.





## 5.3 Other forms of monitoring and evaluation

Pursuant to the Health Care Act (1326/2010, Section 16)<sup>45</sup>, the health and safety of school environments and welfare promotion among learning communities shall be inspected in comprehensive schools every three years. The main objective is to verify that the coverage of the inspections is extensive and also that attention is paid to school meals and the procedures applied to their implementation. Any issues found in the inspection as requiring corrective actions are part of the overall development of provision of school meals. It is important that the representative(s) of the school catering service (supervisor at the establishment, school catering coordinator) is present in the inspections. The inspection of the health and safety of the school shall also include the pupils' possibility to wash their hands before meals as well as matters related to oral health (water points, dispensers, snack service).

The TEAvisari<sup>46</sup> developed by the National Institute for Health and Welfare has been used since 2015 as a tool of the municipalities for measuring the attendance of pupils at school meals. The positive development of the attendance numbers at school meals should be defined as a common goal in municipalities and in individual schools, and as a monitoring object on national level.

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45 Health Care Act 1326/2010. <http://www.finlex.fi/fi/laki/ajantasa/2010/20101326>

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46 TEA-visari National Institute for Health and Welfare. <https://www.thl.fi/fi/web/terveyden-edistaminen/johtaminen/tyokaluja>

In English: <https://www.teaviisari.fi/teaviisari/en/index>

## Factors to be monitored and monitoring methods

- ▶ the feedback system and the methods for providing feedback as well as responding to feedback are recorded in service contracts (customer work groups/customer juries, electronic feedback systems and responses to them/recording of corrective actions)
- ▶ indicators developed to be included in the municipal welfare reports, e.g. the “welfare of school catering” indicator (attendance at meals, customer feedback received and results of school meal survey, quality indicators such as proportion of pupils who eat salad, proportion of “yes” answers to “it is nice to come to the school meal”)
- ▶ the inclusion and activity of pupils in the development of school catering is monitored (indicators include participation of pupils, implemented activities, coverage of operation and consideration of different grades)
- ▶ communication and how it is implemented (to pupils, personnel, homes; external news releases and the channels used)
- ▶ cooperation between home and school (parents’ evenings/meetings/parents attending school meals/themes/events etc.; number of events, number of participants)
- ▶ interaction with homes (contacts, feedback)
- ▶ monitoring and evaluation on school/municipal level:
  - is school catering implemented appropriately and as agreed
  - is the provision of school meals based on objectives related to health promotion and promotion of good nutrition/the strategy and actions of the municipality
  - participation in the TEAvisari service.



### *Monitoring of food losses*

The monitoring of the consumption of food as well as food losses (losses in kitchen, distribution and from plates) is an essential part of the product development efforts and evaluation of the effectiveness of the order-supply system, but at the same time it also plays an essential part in the management of environmental loading and reduction of biowaste. All food that ends up in waste increases catering costs and causes an unnecessary load to the environment. The responsibility for the reduction of food losses is shared by everybody.

The monitoring of food losses both in the kitchen and from the plates can be part of the school's environmental teaching programme, where pupils from different grades in turns participate and act as responsible operators. The monitoring results regarding the amount of food going to waste because it is left on the plate should be kept on display. Publishing the "loss barometer", i.e., the monitoring data on the wall in the lunch area, on the door or at the tray return station can serve as a concrete message to the pupils as well as to the entire school personnel about the progress made in the reduction of food losses.



*School Lunch Diploma – a tool for self-evaluation and activities in schools*

The School Lunch Diploma®<sup>47</sup> is an award granted to schools for providing nutritionally,

<sup>47</sup> School Lunch Diploma – self-evaluation tool for implementation of school catering <http://www.kouluruokadiplomi.fi/schoollunchdiploma/>

educationally and ecologically sustainable school lunches. The School Lunch Diploma is a work platform and tool for self-evaluation, designed for the development of school catering in individual schools. It covers the various aspects of school catering from food education to the quality of the food served and effective cooperation. The Diploma is awarded by Ammattikeittiöosaajat ry (Finnish Association of Food Service Professionals). The Diploma is a recognition of the school's commitment to verify the achievement of the objectives specified for school lunches in terms of nutrition and health education as well as instruction in manners. It communicates to the customers and other stakeholders that school catering is implemented according to quality standards and national objectives. The School Lunch Diploma is designed to increase the appreciation of school lunches and the professionals behind them, and to make school catering a visible part of common activities in the school. The support material and the questionnaire related to the Diploma also give new ideas for the implementation of school catering, and encourage the development of aspects that require improvement.

According to a study assessing the usefulness of the School Lunch Diploma, headmasters and catering staff have found it to be useful in several matters associated with the promotion of school meals and the meal situation.<sup>48</sup>

<sup>48</sup> School Lunch Diploma promotes provision of school meals. Article. <http://www.kouluruokadiplomi.fi/schoollunchdiploma/>

### *Heart Symbol meal system<sup>49</sup> in development of nutrition quality*

The Heart Symbol is a system for identifying food products and meals that are of high nutrition quality. It is the only symbol in Finland that indicates the good nutrition quality of a food product or meal. The Heart Symbol has been registered as a nutritional claim. The system is maintained by Suomen Sydänliitto ry (Finnish Heart Association) and Suomen Diabetesliitto ry (Finnish Diabetes Association) and the system is developed on the basis of scientific data by a group of independent experts.

A Heart Symbol meal facilitates quality assurance and customer communication in professional kitchens. It ensures that the customers can choose a healthy complete meal. The Heart Symbol provides a means to inform customers about good choices, making it easy and quick for them to choose healthy options. Specifying serving of Heart Symbol meals as a criterion for service providers gives municipalities an easy way to promote health and well-being. Heart Symbol meals are already provided in several municipalities and their number is increasing.



Specific criteria have been defined for every component of the meal and they must be fulfilled. The criteria are based on scientific data. The focal areas of the criteria include the amount and quality of fat and the amount of salt. The fibre content is also an essential factor for grain-based meal components. The criteria defined for Heart Symbol meals are in line with the nutritional meal criteria specified in national nutrition recommendations.

<sup>49</sup> <http://www.sydanmerkki.fi/en> and  
<http://www.sydanmerkki.fi/en/criteria-for-healthy-lunch>



## Evaluation of food safety in school catering – Oiva system

An Oiva smiley posted in a visible location at the door of the school lunch area indicates that the school catering service has matters related to food safety under control and correct information is provided about the food served at school meals. Oiva is a national system for food control<sup>50</sup> coordinated by Finnish Food Safety Authority Evira. In the Oiva system, local food control authorities carry out inspections in restaurants, stores and food sector companies and assess the food safety, including food hygiene and product safety, of the establishments by means of smileys. Compliance with the food laws is required to obtain the widest Oiva smile.

Smileys indicate the assessment results of the Oiva system. The school catering service must display the assessment results for the customers. The results of the inspection visits are also published online as Oiva reports. A smiling Oiva smiley tells the customers they have nothing to worry about. A straight-line smile or an unhappy smiley, on the other hand, indicates that some aspect needs to be improved, or that the situation is bad.

It should be understood that Oiva does not include an assessment of the quality of customer service or other service aspects, or the appeal or nutrition quality of the food. A specific feedback system is needed for the assessment of customer service. The evaluation of the nutrition quality and fulfilment of nutrition recommendations must be based on monitoring the implementation of recommendations given for use of ingredients, the

50 Oiva system <https://www.oivahymy.fi/portal/fi/>

quality nutrition criteria of the meal components and the nutritional content. The catering service provider can include the monitoring of the nutrition quality in its in-house control. For example, the monitoring of compliance with recipes regarding the ingredients of the food, such as the amount of salt, can be included in the regular temperature monitoring in the food preparation facility.



**EXCELLENT:** Operations comply with requirements.

**GOOD:** There are small issues with the operations, which do not impair food safety or mislead consumers.

**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:** There are issues with the operations, which jeopardise food safety or considerably mislead consumers. These issues must be rectified with immediate effect.



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## ANNEXES 1–7

**ANNEX 1. Structural model for invitation to tender/competitive procurement material**

**ANNEX 2. Selection of foods at school lunch**

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## ANNEX 1. Structural model for invitation to tender/competitive procurement material

**Main document:** Invitation to tender (includes the technical procurement aspects, e.g. requirements regarding the background of the tenderer and comparison grounds)

- Appendix 1 to invitation to tender: Service description
- Appendix 2 to invitation to tender: Draft contract
- Other Appendices to invitation to tender

**The service description is the most important document; it covers the following key factors:**

- Name of service
- Target establishment and customer groups for service
- Objective of service
- Content of service
  - nutrition recommendations and nutrition quality
  - guidelines of the Client
  - meal content
    - meal components
    - energy and nutrient content
    - variation and recurrence frequency of main foodstuffs
    - selection of dishes
    - principles for menu planning
    - portion size
    - special diets
    - intercompany products
    - packed lunches as substitutes for meals
    - festive holidays, themes
    - in-house control and food safety
    - maintenance of product information
    - customer menu
    - EU school distribution scheme
- Distribution of food, lunch schedule and serving
- Other meals and services
- Ordering
- Delivery
- Facilities, equipment and crockery
- Pricing and invoicing
- Environmental issues
- Cooperation between parties (including cooperation with teachers and participation in food education)
- Monitoring of quality
- Service provider's personnel and substitutes
- Arrangements for abnormal conditions
- Reporting



## ANNEX 2. Selection of foods at school lunch

Food category	Recommended choices	Availability at school lunch
Vegetables, fruit and berries	In a wide variety, according to season	At every meal in different forms. Herbs for seasoning.
Legumes (peas, beans and lentils or other sources of protein of plant origin)	In a wide variety, as sources of protein in vegetarian main meals, favouring local food as far as possible	As a vegetarian meal once a week or as a side dish
Potato and grain side dishes	Boiled potatoes, whole grain pasta, barley, whole grain porridge and whole grain/dark rice	Potatoes varyingly as boiled unpeeled, cubes, strips, slices or mash. Whole grain types of pasta and rice, both as side dishes and integrated in main dishes
Bread	Lower-salt (soft bread max. salt content 0.7 g/100 g, crispbread max. 1.2 g/100 g) whole grain bread (fibre content min. 6 g/100 g, crispbread min. 10 g/100 g)	At every meal
Milk/milk drink and buttermilk Liquid dairy products/ fermented dairy products	Fat-free products fortified with vitamin D  Fat-free and max. 1% fat products, and unsweetened and low added sugar products. Sugar content of yogurt and curd max. 10 g/100 g and curd milk max. 12 g/100 g	Milk/milk drink and buttermilk at every meal  Plain yogurt, curd milk or curd to be preferred. With flavoured products, favour low-sugar or sugar-free yogurts, curd milk and curd.
Cheese	Low-fat (max. 17% fat) and lower-salt (salt content max. 1.2 g/100 g) products	At most once a week as bread topping
Fish*	Fish species to be varied	At 1–2 meals/week

Food category	Recommended choices	Availability at school lunch
Poultry	Without skin	At 1–2 meals/week
Red meat (beef, port, mutton), minced meat	Low-fat meat	At most 1–2 meals/week
Meat products and sausages	Low-fat and lower-salt meat products	Deli meats at most once a week. Dishes containing sausages or other meat products are not to be served every week.
Egg		In food, as bread topping, as side dish
Fat spreads	Margarine with a fat content of min. 60%	Bread spread
Vegetable oil	Rapeseed oil	In salad dressing or as such with salad
Nuts, almonds and seeds**	Varying varieties (considering allergies on individual basis)	At most 15–30 g/day

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

\*\* Restriction of amount is justified particularly because nuts, almonds and seeds contain a lot of energy due to their high fat content. Heavy metals from the soil are accumulated in the seeds of some oil plants (such as flax, sunflower, pumpkin, sesame, hemp and chia). For this reason, the recommended portion of seeds is 2 tablespoons per day for adults. For children, the portion can be about half of the adult portion.

### ANNEX 3. Selection of foods for snacks

Food category	Recommended choices	Practical implementation
Vegetables, fruit and berries	Wide variety, according to season	At every snack in different forms. Un-cooked and colourful vegetables, berries and fruit are to be preferred, served as such, root vegetables as wedges, on bread, in smoothies, in curd snacks, as dipping pieces and in compotes made from fresh berries. Vegetables used abundantly also in pies, pancakes, hot sandwiches and similar snacks.
Legumes (peas, beans and lentils)	In a wide variety	Pastes made from legumes (hummus etc.) as bread spread
Bread and porridges	Lower-salt (soft bread max. salt content 0.7 g/100 g, crispbread max. 1.2 g/100 g) whole grain bread (fibre content min. 6 g/100 g, crispbread min. 10 g/100 g)	At every snack in different forms. Whole grain products to be preferred. Porridges made from berries and fruit to be also served. Bran and groats to be used in doughs, yogurts and smoothies.
Baked goods*	Low fat products with lower sugar and salt content	Yeast dough to be preferred over puff and shortbread dough. Buns and yeast dough pies with berry/fruit filling to be served as sweet pastries. Karelian pastries and low-fat pastries with vegetable filling.
Milk/milk drink and buttermilk Liquid dairy products/ fermented dairy products	Fat-free products fortified with vitamin D  Fat-free and max. 1% fat products, and unsweetened and low added sugar products. Sugar content of yogurt and curd max. 10 g/100 g and curd milk max. 12 g/100 g.	Plain yogurt, curd milk or curd to be preferred. With flavoured products, favour low-sugar or sugar-free yogurts, curd milk and curd.
Cheese	Low-fat (max. 17% fat) and lower-salt (salt content max. 1.2 g/100 g) products	At most once a week
Fish**	Fish species to be varied	Fish-based spreads, burgers

Food category	Recommended choices	Practical implementation
Meat products and sausages	Low-fat and lower-salt meat products	At most once a week as deli meats
Egg		In food preparation, baking, as bread topping/side dish
Fat spreads	Margarine with a fat content of min. 60%	Bread spread
Nuts, almonds and seeds***	Varying varieties (considering allergies on individual basis)	At most 15–30 g/day

\* Heart Symbol criteria can be applied to selection of baked goods.

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

\*\*\* Restriction of amount is justified particularly because nuts, almonds and seeds contain a lot of energy due to their high fat content. Heavy metals from the soil are accumulated in the seeds of some oil plants (such as flax, sunflower, pumpkin, sesame, hemp and chia). For this reason, the recommended portion of seeds is 2 tablespoons per day for adults. For children, the portion can be about half of the adult portion.

## ANNEX 4. Example of calculation of energy and nutrient content of a one-week menu

1 WEEK											
Includes vegetarian dish alternatives. All meals include crispbread, margarine 60%, fat-free milk and salad dressing.											
	Meal type	Energy kcal	Energy MJ	Fat E%	Saturated fat E%	Protein E%	Carbo-hydrates E%	Fibre g	Fibre g/MJ	Salt g	
Lake fish patties + mashed potatoes, lemon mayo sauce, salad	Patty and mashed potatoes (fish)	740	3.1	41	10	18	41	10	3.2	2.8	
Beetroot patty, chickpea spread, potatoes, salad, soy drink	Patty and potatoes (vegan)	720	3.0	37	5	16	47	17	5.6	3.0	
Chicken curry + whole grain rice, blackcurrant puree, salad mix, seed mix	Chicken (sauce) and grain side dish	790	3.3	43	14	16	41	10	3.0	2.6	
Vegetable curry + whole grain rice, blackcurrant puree, salad mix, seed mix	Vegetable (sauce) and grain side dish	770	3.2	44	14	12	44	14	4.4	2.3	
Beef stew with root vegetables, potatoes, salad mix	Stew and potatoes (red meat)	720	3.0	39	10	18	42	11	3.7	2.6	
Wheat tortillas, bean sauce, salad mix	Other food, vegetable filling	740	3.1	32	5	15	53	14	4.5	3.1	
Milk-based porridge of barley groats, a compote of berries, egg	Porridge (lacto-ovo-vegetarian)	610	2.6	27	10	20	52	9	3.5	2.1	
Turkey and vegetable soup, soft bread, tomato, apple	Soup (white meat)	520	2.2	28	9	20	51	12	5.5	2.9	



	Meal type	Energy kcal	Energy MJ	Fat E%	Saturated fat E%	Protein E%	Carbo-hydrates E%	Fibre g	Fibre g/MJ	Salt g
Lentil soup with vegetables, soft bread, tomato, apple	Soup (vegan)	570	2.4	19	5	19	62	18	7.5	2.3
Macaroni casserole, ketchup, salad mix	Casserole (red meat)	700	2.9	33	13	19	46	9	3.1	3.4
<b>Average:</b>		670	2.8	34	9	17	47	12	4.2	2.7
<b>RECOMMENDATION</b>		700	3.0	30–40	<10	13–17	45–50			

## ANNEX 5. Workday lunch criteria – tool for assessment of nutrition quality of food

The criteria are used for assessing how healthy the food is. If the four criteria – basic criterion, salt criterion, fat criterion and communication criterion – are well fulfilled in the kitchen, the food that is served probably complies with recommendations. The criteria cannot be used to determine the exact nutrient content of the foods. Each criterion is scored separately and the total point score indicates how the criterion is fulfilled in the kitchen in question. The objective is to have all four criteria fulfilled well in the kitchen. The criteria have been specified for the assessment of Finnish everyday food.

Tick for each criterion the alternative that best describes the situation in your kitchen. Sum up the points for each ticked box and compare with the interpretation of each criterion.

The criteria form to be filled out, and the interpretation guidelines for the criteria:  
<http://sydanliitto.fi/ruokapalvelut>

Electronic form: <https://www.dropbox.com/s/ent8syj0g2udzsn/arkilounaskriteerit%20marraskuu%202015.pdf?dl=0>

### BASIC CRITERION

#### Do you serve in your restaurant every day with the meals

	Yes	No
1. Bread with min. 6 g/100 g of fibre and max. 0.7% of salt, crispbread max. 1.2%	<input type="checkbox"/> 1 p.	<input type="checkbox"/> 0 p.
2. Bread spread with saturated fat accounting for max. 30% of total fat and salt content max. 1%	<input type="checkbox"/> 1 p.	<input type="checkbox"/> 0 p.
3. Fat-free milk or buttermilk (fat content max. 0.5%)	<input type="checkbox"/> 1 p.	<input type="checkbox"/> 0 p.
4. Uncooked vegetables, fresh salad, berries or fruit	<input type="checkbox"/> 1 p.	<input type="checkbox"/> 0 p.
5. Vegetable oil-based salad dressing or vegetable oil?	<input type="checkbox"/> 1 p.	<input type="checkbox"/> 0 p.

**BASIC CRITERION: Point score \_\_\_\_\_**

Interpretation: 5 points, basic criterion is fulfilled  
0–4 points, basic criterion is not fulfilled



## FAT CRITERION

**1. Do you use butter in food preparation?**

- 2 p. Not used in any food preparation
- 0 p. Used for frying meat
- 0 p. Used for frying fish
- 0 p. Used in preparation of mashed potatoes
- 0 p. Used in preparation of some other food

**2. How often do you use cream or a cream-like product with a fat content of more than 15%?**

- 2 p. At most once a week or not at all
- 0 p. More than once a week

**3. What is the fat content of your preferred meat and minced meat?**

- 2 p. At most 10%
- 0 p. More than 10%

**4. How often do you use cheese with a fat content of more than 17% in cooking or as part of the meal?**

- 1 p. At most once a week
- 0 p. More than once a week

**5. How often do you use meat food products (e.g. patties, meatballs, rolls) with a fat content of more than 12%?**

- 2 p. At most once a week or not at all
- 0 p. More than once a week

**6. How often do you use other processed food products (e.g. casseroles, risotto, pizza) with a fat content of more than 7%?**

- 2 p. At most once a week or not at all
- 0 p. More than once a week

**7. How often do you serve high-fat potato side dishes (e.g. fried potatoes, cream potatoes, French fries)?**

- 1 p. At most once a week or not at all
- 0 p. More than once a week

**8. How often do you serve foods made from sausages?**

- 1 p. At most once a week or not at all
- 0 p. More than once a week

**9. How often do you serve fish foods?**

- 2 p. Once a week or more
- 0 p. Less than once a week

**FAT CRITERION: Point score \_\_\_\_\_**

Interpretation: 13–15 points, fat criterion is fulfilled well  
7–12 points, fat criterion is fulfilled moderately  
0–6 points, fat criterion is fulfilled poorly

## SALT CRITERION

- 1. Do you monitor the salt content of the foods you prepare (analyses, salinity meter)?**
  - 3 p. Yes, regularly as part of in-house control, and the salt content is reduced based on the monitoring, if necessary (criterion e.g. recommendation of Ministry of Social Affairs and Health 2010, or contract with Client)
  - 2 p. Yes, regularly, no further measures
  - 1 p. Yes, on a random basis
  - 0 p. Not monitored
  
- 2. Do you use standard recipes with a calculated salt content?**
  - 2 p. Yes, all recipes
  - 1 p. Yes, part of recipes
  - 0 p. No
  
- 3. Do the recipes you use indicate the amount of bouillon cubes and spices that contain salt?**
  - 2 p. Yes
  - 0 p. No
  
- 4. If the food to be prepared comprises raw materials that contain salt (e.g. ham, sausage, marinated or cured meat), is this taken into account in the recipe in the amount of salt, or when salt is added during food preparation?**
  - 2 p. Yes
  - 0 p. No
  
- 5. How do you add salt, seasoning containing salt, or mineral salt in the foods?**
  - 2 p. In measured amounts, not exceeding the amount defined in recipe
  - 0 p. According to the personal preference of the person preparing the food
  
- 6. Do you normally use iodised salt in food preparation?**
  - 2 p. Yes
  - 0 p. No
  
- 7. Do you use salt or bouillon cubes and seasoning containing salt when cooking vegetables?**
  - 1 p. No
  - 0 p. Yes
  
- 8. Do you use salt or bouillon cubes and seasoning containing salt in the preparation of pasta, rice, potatoes and similar side dishes?**
  - 1 p. No
  - 1 p. Used to a very limited amount (salt content of finished dish max. 0.3%, i.e., max. 20 g added in 2.5 kg of uncooked rice)
  - 0 p. Used to some extent or a lot



**9. How often do you use processed meat, fish or vegetarian food products (e.g. patties, balls, rolls) with a salt content of more than 1%?**

- 2 p. At most once a week or not at all  
 0 p. More than once a week

**10. How often do you use other processed food products (e.g. casseroles, risotto, pizza) with a salt content of more than 0.75%?**

- 2 p. At most once a week or not at all  
 0 p. More than once a week

**SALT CRITERION: Point score \_\_\_\_\_**

Interpretation: 10–19 points, salt criterion is fulfilled well  
7–10 points, salt criterion is fulfilled moderately  
0–6 points, salt criterion is fulfilled poorly

**COMMUNICATION CRITERION**

**1. How often do you display a model meal for the customers (actual meal, photo or written recipe)?**

- 2 p. Every day  
 1 p. At least once a week  
 0 p. Less than once a week or not at all

**2. How often do you display information about the nutrition quality of the food for the customers; e.g. indicating on the menu the foods and complementing meal components (milk, bread spread, bread) that comply with nutrition recommendations?**

- 2 p. Every day  
 1 p. At least once a week  
 0 p. Less than once a week or not at all

**COMMUNICATION CRITERION: Point score \_\_\_\_\_**

Interpretation: 3–4 points, communication criterion is fulfilled well  
1–2 points, communication criterion is fulfilled moderately  
0 points, communication criterion is fulfilled poorly

These criteria have been specified applying the workday lunch criteria of 2011. The criteria were updated in 2016. The numerical values used in the criteria are based on the recommendations published by the Ministry of Social Affairs and Health for meals in mass catering (Heart Symbol meals) and procured foods (Developing mass catering services. Guidelines by the working group to monitor and develop mass catering services, 2010<sup>1</sup>) and the Heart Symbol criteria ([www.sydanmerkki.fi](http://www.sydanmerkki.fi)).

1 Sources: Ministry of Social Affairs and Health. Working group to monitor and develop mass catering services. Developing mass catering services. Guidelines by the working group to monitor and develop mass catering services. 2010. <http://urn.fi/URN:ISBN:978-952-00-2985-2>  
Report on the nutrition criteria developed for the control system of institutional catering and on the fulfilment of the criteria in institutional kitchens providing food services for the public sector in 2004. [www.odl.fi/odl/wp-content/uploads/2015/04/sydanmerkkiateria.pdf](http://www.odl.fi/odl/wp-content/uploads/2015/04/sydanmerkkiateria.pdf)

## ANNEX 6. School meals of children with diabetes in pre-primary education/at school

Children with diabetes need support at school, depending on their age, developmental level and competence, with the assessment of the amount of carbohydrates contained in their meals and snacks, and with the dosing of insulin. It is important there is an adult in the school who can guide the child and together with them verify the correct amounts of carbohydrates and insulin doses, if necessary. The presence of an adult also has a pedagogical objective; to support the child's own competence and only provide help, where needed. The child can be helped with the assessment of carbohydrates also by an adult who is not a member of the catering staff.

*For more information: Diabetes kouluikäisellä. Opas kouluille. (Diabetes in school-aged children. Guidelines for schools.) Finnish Diabetes Association.*

A meeting is organised between the parents, the school personnel and a representative/ representatives of health care before the start of pre-primary education/school, or when the child is diagnosed with diabetes. The arrangements related to treatment as well as the responsible persons are agreed on together. For this purpose, a form has been developed to ensure that all relevant issues are considered. The form needs to be signed.

(Form: <http://www.julkari.fi/bitstream/handle/10024/112420/URN%3aNBN%3afi-fe201504226383.pdf?sequence=1>)

A meeting is organised once a year to review any changes in responsible persons, arrangements, what the pupils needs to bring with them and what the school can provide. This meeting is attended by the child, the parents and the teacher, as well as other members of the school personnel, depending on the situation, and also other professionals, if necessary.

### Day-to-day support

A child with diabetes needs support with the assessment of the amount of carbohydrates contained in meals. The need for support changes with age and increasing competence. Small school-children require an adult to help them every time they must assess the amount of carbohydrates. As their competence increases, support is offered according to the pupils wishes, at least when less common dishes are served. Some children are quite capable of making the assessment after the age of ten years, but even then an adult should check the amount of carbohydrates.

Some diabetics need a snack during the school day. This need varies from one individual to the other, and depends on the manner their insulin therapy is implemented. Arrangements related to snacks are always agreed on at the start of the school year/ term with the person responsible for school catering, the parents and the pupils. The premise is that the child will get a snack at school, if they need one.



## Special situations

### Treatment of hypoglycaemia

- For treatment of hypoglycaemia, the school must be able to provide something easy to drink or eat that contains carbohydrates.
- The place where these are to be stored, who will supply them and who is responsible for them is agreed on in the meeting.
- The drink/food needed for the treatment of hypoglycaemia cannot be stored in a place where it is not available during the whole school day (e.g. catering staff may finish their work day already at one o'clock).

### Physical education

- Most diabetics require an extra snack during physical education, at least during double lessons. The type of the snack depends on the time of day and several individual factors. The related arrangements are to be agreed on in the meeting organised at the start of the school term.

Field trips and other abnormal situations that may require more physical exertion than usually.

- The parents of pupils with diabetes shall always be informed of any field trips so that they can provide instructions regarding the insulin therapy and eating requirements of the child. The school provides the required packed food. The amount of packed food must be enough even in case the trip is prolonged for quite some time for some unforeseeable reason.
- For field trips in the local area decided on the same day, the adult participating in the field trip must ensure that pupils with diabetes are provided with enough food for the prevention and treatment of hypoglycaemia.

## ANNEX 7. School meals of children with food allergies in pre-primary education/at school

Food allergies are commonly suspected, but depending on age only 3-9% of children are actually diagnosed. It is important that in case of severe allergies, a medical certificate be presented to the school. The certificate is always issued for a limited period of time. Food allergies differ in severity: while some experience mild itching in the mouth, others will suffer a severe allergic reaction. Most allergies disappear by school age, but some patients have permanent allergies. If the symptoms are mild, no special diet is needed. Mild food allergies are often related to a cross-allergy of pollen allergy, with uncooked vegetables and fruit causing e.g. itching in the mouth. Processing will change part of the allergens. For example, carrots or apples may be suitable if cooked, but will cause symptoms if served raw. Heating to a high temperature can also reduce the allergenicity of the proteins contained in milk and eggs enough to make it possible for some people allergic to egg and milk to tolerate extensively heated products.

A specific form for use as notifying the special diet of an allergic child was developed in the LILLA study<sup>1</sup> (promoting the nutrition and allergy-related health of toddlers). It is recommended that this form be used across the country instead of local forms.

The most typical causes of food allergies in children include:

- milk
- egg
- fish
- grains containing gluten (wheat, barley, rye)
- legumes (peanut, peas, beans)

Symptoms range from hives to intestinal symptoms, also to severe allergic reactions.

*More information: [www.allergia.fi/allergiat/lasten-ruoka-allergia](http://www.allergia.fi/allergiat/lasten-ruoka-allergia)*

<sup>1</sup> Form: Finnish Medical Journal 2016;71(33):1931-33. <http://www.laakarilehti.fi/ajassa/paakirjoitukset-tiede/milloin-lapselle-kirjoitetaan-laakarintodistus-erityisruokavaliosta/>

### Severe allergic reaction

Persons with a severe food allergy need to follow a strict diet, as even the smallest amount of the allergen can cause a life-threatening situation. The onset of severe allergic reactions is usually quick. Initial symptoms vary from one person to the other. The most typical symptom is increasing itching and reddening of the skin, throat clearing, cough, swelling of the lips. The symptoms appear differently and in a varying order in each individual. Anaphylaxis may also occur without any skin symptoms, making it more difficult to identify. Immediate injection of adrenaline into a muscle is necessary as a first aid measure.

### Agreed procedures shall be in place in schools and day care for situations like this:

- where is the adrenaline auto-injector kept
- who injects
- who assumes responsibility for treatment (calls the emergency number, informs the parents)

The adrenaline auto-injector is injected into the thigh, preferably on exposed skin. Anybody can give the injection.

Auto-injector instructions for use:

- remove the auto-injector from the protective tube and hold it firmly in your fist.
- remove the safety release (yellow or blue) from one end of the auto-injector
- place the black tip against the outer thigh and push the auto-injector firmly
- hold the auto-injector firmly against the thigh counting to ten
- remove the auto-injector and massage the injection area
- the injector is a disposable single-dose device.

*More information: [www.allergia.fi/allergiat/anafylaksia](http://www.allergia.fi/allergiat/anafylaksia)*

After the injection has been given, call the emergency number and inform the parents. The auto-injector is only for first-aid use. A person who has had a reaction must not be left alone even for a moment.

In Finland, about 30 cases of children suffering an anaphylactic reaction are reported to the national anaphylaxis register every year. In more than 70% of the cases, the probable cause is a food product. According to the anaphylaxis register, the most common food causing an anaphylactic reaction in children is cow's milk. Annual reports to the register also include a few cases where the cause is egg, wheat, nuts or seeds, vegetables or fruit, and fish.

## Joint meeting with pupils with severe allergies

The meeting should take place before the child starts in pre-primary education/school. The parents, the child, the teacher and the school health nurse should be present in the meeting. The causes and symptoms of the food allergy are to be described in the meeting, as well as the degree of avoidance necessary for each food.

The procedures to be followed, the medication to be given and the correct action in case of a severe allergic reaction need to be established in the meeting. It is also advisable to discuss with the parents the extent of communication about the allergies, whether e.g. fellow pupils should be told so that they could recognise the situation, should one occur.

The instructions for the use of an adrenaline auto-injector should first be explained by a health care professional to the teacher and other school personnel, including the catering staff.

It should be remembered that severe allergic reactions are not common, but in case one occurs, it is important that the symptoms are recognised and action is taken quickly.

What needs to be taken into consideration in day-to-day school work?

- safety of catering arrangements, avoiding contamination
- a separate adrenaline auto-injector kept in the school
  - guidance in its use
- appointing a responsible person
- adrenaline auto-injector must be brought along for field trips etc.
- knowledge of catering staff about food allergies and degree of avoidance
- also substitute catering staff need adequate training.

