



WELL-BEING AND ABILITY TO STUDY FROM FOOD
MEAL RECOMMENDATIONS FOR HIGHER EDUCATION STUDENTS

2021

© National Nutrition Council and Kela

Published by National Nutrition Council and Kela

Publisher Kela

Photographs

Viestintävalkea Oy / Mikael Kuitunen: Cover image and photographs on the pages: 28, 30, 33, 34, 38, 39, 42, 44, 45, 46, 54 at the top, 55, 57, 59, 60, 63, 69, 89 and 108.

Tuomi-Studio: Meals p. 20, 24, 25, 27, 61, 93 and 107.

Studio Skaala/Ilkka Hietala: Meal p. 54 at the bottom.

Satu Stenroos: Meal p. 41.

Who's that? Photography / Erkkä Lyytikä: p. 67.

Annexus Oy / Marsa Pihlaja: Drawing p. 63.

Graforma / Tiina Kuoppala: Drawing p. 83.

National Nutrition Council: The food triangel p. 20.

Translation Lingsoft Language Services Oy / Tiina Haikonen

Graphic design and layout Lagarto

ISBN 978-952-284-129-2 (pdf)

Parallel versions of the publication:

in Finnish *Hyvinvointia ja opiskelukykyä ruokailusta – Korkeakouluopiskelijoiden ruokailusuositus*, 2021, 978-952-284-117-9 (pdf)

in Swedish *Mat ger välbefinnande och studieförmåga – rekommendation om måltider för högskolestuderande*, ISBN 978-952-284-128-5 (pdf). Translation: Svenska översättningsbyrån Ab

The links in the publication shown in color have been checked and found to work 1.10.2021.

The publication is available at Kela's webpage: www.kela.fi/opiskelija-aterian-sisalto

and at the webpage of National Nutrition council:

<https://www.ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/kuluttaja--ja-ammattilais-materiaali/julkaisut/>

**WELL-BEING AND ABILITY TO STUDY
FROM FOOD**

**Meal Recommendations for
Higher Education Students**

CONTENTS

FOREWORD	6
FOR THE READER	9
HOW TO USE THESE RECOMMENDATIONS	10
1 MEAL RECOMMENDATION TARGET GROUP AND OBJECTIVES	12
1.1 Objectives of the food recommendation	12
1.2 Daily rhythm, life management skills, and eating habits of students	14
1.3 Eating habits as a factor maintaining study ability and coping and promoting well-being at work	16
1.4 Development needs related to eating habits	17
2 FINNISH NUTRITION RECOMMENDATIONS AS THE BASIS FOR ORGANISING STUDENT MEALS	19
2.1 Several options for implementing a health-promoting diet.....	23
3 ORGANISING STUDENT MEALS	31
3.1 Dining environment.....	31
3.2 Enforcing choices that promote health and sustainability.....	36
3.3 Mealtimes, served meals and snacks	40
3.4 Student participation and cooperation with student restaurants	46
3.5 Tendering of food services and procurement of food	48
4 HEALTH AND WELL-BEING FROM FOOD	53
4.1 Planning a menu and meal composition	53
4.2 Nutrient content of the meals served	55
4.3 Supply of meals and their nutritional standard	58
4.4 Beverages	62
4.5 Special diets and special needs	64
5 MONITORING AND EVALUATION OF STUDENT MEALS	68
5.1 Participation in meals and student feedback	70
5.2 Self-assessment and in-house own-check operations	70
5.3 Monitoring of food waste	72
5.4 Official oversight	73
5.5 National monitoring	76

6	STUDENT HEALTH CARE AS A PROMOTER OF GOOD NUTRITION	77
6.1	Nutrition counselling in student health care.....	79
6.2	Most common challenges and diseases related to eating	80
6.3	Oral health as part of student health care	81
7	LEGAL BASIS FOR HIGHER EDUCATION STUDENT MEALS	85
7,1	Organising food services and the content of a student meal	88
7.2	Pricing principles.....	90
APPENDIX 1	MINIMUM REQUIREMENTS FOR NUTRITION QUALITY	94
APPENDIX 2	SALAD BAR IN COMPLIANCE WITH NUTRITION CRITERIA	95
APPENDIX 3	SOURCES OF PROTEIN IN DIFFERENT TYPES OF DIETS	96
APPENDIX 4	SELECTION OF RAW MATERIALS	98
APPENDIX 5	STUDENT MEAL NUTRITION QUALITY ASSESSMENT TOOL....	100
APPENDIX 6	EXAMPLE OF THE CORRECT STRUCTURE FOR AN INVITATION TO TENDER OR TENDERING MATERIAL.....	103
APPENDIX 7	HOW FOOD RECOMMENDATIONS ARE IMPLEMENTED	105
APPENDIX 8	SECURING ADEQUATE INTAKE OF FOLATE, VITAMIN D, IODINE AND IRON	106

FOREWORD

The meals of higher education students are supported with meal subsidy paid by Kela. Provisions on the criteria concerning support for the meals of higher education students are laid down in Government Decree 375/2020. The subsidy enables students to eat a versatile meal that promotes health, ability to study and coping at a reasonable student price. Shared meals increase a sense of community and promote the well-being of students. Responsible practices and food choices can promote a sustainable lifestyle.

Well-being and Ability to Study from Food is a joint recommendation from the National Nutrition Council and the Social Insurance Institution of Finland (Kela) on how to organise meals for higher education students. The recommendation defines the minimum requirements for serving and putting together meals as well as for nutrition quality. The recommendation aims to ensure equal access for all students to tasty, diverse and nutritious meals regardless of their diet or place of study.

The recommendation is intended for universities, universities of applied sciences, restaurants that are responsible for and implement food services and as a source of information for students. It is based on the National Nutrition Council's Finnish nutrition recommendations for adults (Terveyttä ruoasta – suomalaiset ravitsemussuosituksset, 2014). The recommendation is part of the meal recommendations for each target group. Together, these recommendations form a continuum that promotes good life-long eating habits and seek to reduce problems related to unhealthy diets and the early onset risk factors for chronic diseases.

The National Nutrition Council has approved this publication as a national meal recommendation for higher education students. Kela requires that the parties responsible for the student restaurant services and their competitive tendering take the principles and minimum nutrition quality requirements for student meals set out in this recommendation into account in their decisions and arrangements. These recommendations replace the Meal Recommendations for Higher Education Students – Health from Food published in 2016. Compliance with these new recommendations will be mandatory at latest on 1 January 2022.

The meal recommendations were compiled by an expert panel appointed by the National Nutrition Council (24 February 2020 – 27 January 2021). The National Nutrition Council organised an open targeted round of commenting on the draft recommendation in October–November 2020. A total of 50 different organisations, student organisations and students themselves submitted comments. The National Nutrition Council and Kela are grateful for all these important comments and proposals for improvements. The feedback contained content from a diverse range of areas. The recommendation was generally considered good, and it was thought that the revised content of the recommendation worked well. The student feedback highlighted sustainable food choices and support for these, with measures such as pricing, the development of menu entries describing sustainability and access to meals on remote study days. These should be taken into account in the future when developing student meals. Utilis-

ing customer feedback and increasing student participation is the foundation for the successful implementation of student meals. For this reason, it is a good idea to give a description of the establishment and operation of the customer/restaurant committee in food service agreements.

The National Nutrition Council and Kela thank the members of the expert group for their valuable work related to the work of the working group and the production of the manuscript and their background communities and employers for allowing them to participate in the work. In addition, we would like to thank experts from the Finnish Heart Association's Heart Symbol meal system for updating the Nutrition Quality Assessment tool for student meals together with the working group. Special thanks go out to the representatives of the National Union of University Students in Finland and the University of Applied Sciences Students in Finland – SAMOK, who collected students' views on student wishes, good meals and inclusive practices and added these to our work. We also wish to thank students of languages, translation, communications and journalism at the University of Tampere, who produced communication material concerning the recommendation.

The National Nutrition Council and Kela will publish this recommendation in Finnish, Swedish and English as an online publication on the National Nutrition Council and Kela websites.

Helsinki 16.8.2021

Outi Antila

Director General, Kela

Markku Tervahauta

Chair, National Nutrition Council

NATIONAL NUTRITION COUNCIL OF FINLAND

Markku Tervahauta, Director General, Finnish Institute for Health and Welfare,
National Nutrition Council Chair

Sebastian Hielm, Head of the Food Safety Unit, Ministry of Agriculture and Forestry,
National Nutrition Council Deputy Chair

Minna Huttunen, Ministerial Adviser, Ministry of Agriculture and Forestry

Sirpa Sarlio, Ministerial Advisor, Ministry of Social Affairs and Health

Marja Innanen, Senior Adviser, Prime Minister's Office

Marjo Misikangas, Senior Officer, Finnish Food Authority

Johanna Suomi, Senior Researcher, Finnish Food Authority

Suvi Virtanen, Research Professor, Finnish Institute for Health and Welfare

Satu Männistö, Research Professor, Finnish Institute for Health and Welfare

Marjaana Manninen, Counsellor of Education, Finnish National Agency for Education

Maijaliisa Erkkola, University Lecturer, University of Helsinki

Ursula Schwab, Professor, University of Eastern Finland

Satu Lahti, Professor, University of Turku

Juha-Matti Katajajuuri, Senior Scientist, Natural Resources Institute Finland

Marjaana Lahti-Koski, Health Director, Finnish Heart Association

Elina Särmälä, Catering Services Director, Ammattikeittiöosaajat ry (Finnish Association of Food Service Professionals)

Arja Lyytikäinen, Secretary General, National Nutrition Council

EXPERT WORKING GROUP (24 February 2020 – 27 January 2021)

Sirpa Sarlio, Ministerial Advisor, Ministry of Social Affairs and Health, chair of the working group

Marjaana Manninen, Counsellor of Education, Finnish National Agency for Education, deputy chair of working group

Else Turtiainen, Coordinator, Kela, secretary of the working group

Sari Miettunen, Coordinator, Kela

Anne Jääskeläinen, Coordinator, Kela (until 31 December 2020)

Virpi Hiltunen, Ministerial Adviser, Ministry of Education and Culture

Susanna Raulio, Senior Researcher, Finnish Institute for Health and Welfare

Johanna Pohjonen, student, deputy chair, National Union of University Students in Finland (SYL)

Elin Viitaniemi, student, member of the board, University of Applied Sciences Students in Finland – SAMOK

Antti Hallia, working life policy specialist, University of Applied Sciences Students in Finland – SAMOK

Leila Fogelholm, Nutrition Specialist, Compass Group Finland Oy

Minna-Mari Mentula, Service Manager, South-Eastern Finland University of Applied Sciences

Susanne Reiju, Product Development and Purchasing Manager, Unicafe / Ylva Palvelut Oy

Nina Lyytinen, Development Manager, Juvenes Oy

Jonna Kekäläinen, Public Health Nurse, Finnish Student Health Service

Katja Karppinen, Registered Clinical Nutritionist

Arja Lyytikäinen, Secretary General, National Nutrition Council

FOR THE READER

Well-organised and appealing student meals are important in many ways. A health-promoting diet and regular meal rhythm are key factors affecting well-being, coping and study and work ability, which also prevent nutrition-related chronic diseases. Eating at the student restaurant adds rhythm to the students' day and also offers an opportunity for casual social interaction and forming links to the higher education community. Many higher education students are in a situation where they are taking on more independent responsibility that previously not only for their studies but also for their own meals and other daily routines. "Well-being and Ability to Study from Food – Meal Recommendations for Higher Education Students" supports this important phase of life.

The well-being and study ability of higher education students has been reinforced for over 40 years by means of subsidised student meals. The meal subsidy paid from central government funds contributes to ensuring the students' financial means for daily meals, thus enabling full-time studies. A subsidised student meal must be of such quality that it meets general health and nutritional requirements. In addition, regulation will ensure that the price of the meal does not grow too high for students. Students pay a reasonable price for their student meals reduced by the amount of the meal subsidy. I encourage students to actively utilise this benefit!

I believe that the new meal recommendation is an important publication in many ways. The meal recommendation defines the guidelines for the implementation of subsidised student meals and also defines the minimum nutritional standards for the meals served. It contains an abundance of information on healthy food, taking different diets into account. It also promotes cooperation between different actors, creating a good basis for the development of food services and the active participation of students. The impact of the recommendation will extend far into the future, as eating habits that promote health and sustainability are important for the well-being of society as a whole. I truly hope that this meal recommendation will be applied diligently!

18 August 2021

Antti Kurvinen

Minister of Science and Culture

HOW TO USE THESE RECOMMENDATIONS

The recommendation is a collection of provisions, documents and nutrition recommendations concerning the organisation of student meals. The recommendation applies to several different actors and target groups. Tips for further reading for different target groups are provided below.

For students and student organisations

The meal recommendations for higher education students provide information on how to compile nutritionally balanced, diverse and tasty student meal that provides the student with sufficient energy and essential nutrients. Student meals must be nutritious, health-promoting and environmentally friendly. The recommendation also provides ideas for developing your own eating. The recommendation encourages all students and student organisations to be active in providing feedback to student restaurants on student meals and organising student catering and to participate in the development of student catering in cooperation with the student restaurant, the higher education institution and student health care.

For higher education institutions and student health care

The publication is intended as a quality recommendation for higher education institutions, which will be used in the implementation of food services and to determine the quality of the food to be served when purchasing food services and when concluding service contracts. It contains good practices for communal student meals and operating models for the provision of subsidised student meals and for the monitoring and evaluation of its implementation. The recommendation can be used as a tool in cooperation groups, such as the Food Committee. The recommendation also describes the nutrition counselling provided by the Finnish Student Health Service (FSHS) as part of the student health care service package and contains information on the organisation of meals for the purpose of checking the health conditions of the educational institution.

For student restaurants, restaurant staff, and people responsible for the procurement of food services and foodstuff

The publication contains instructions for producing and serving meal-subsidised meals. The recommendation and its tables on raw materials and the minimum nutritional requirements for meal components can be used as such in the competitive tendering of foodstuffs and as annexes to catering service agreements. The examples provide ideas for product and service design, cooperation practices, communication, and monitoring and evaluation of operations. The recommendation also includes a self-assessment tool for restaurants for the assessment of nutrition quality. It can be used for personnel orientation, in-house on-site inspection and preparation for Kela supervision and inspection visits.

For parties responsible for the implementation and control of meal subsidies

The Social Insurance Institution of Finland (Kela) is responsible for the implementation of meal subsidies for higher education students and for inspection activities. This recommendation serves as an instrument in the implementation of meal subsidies and in the guidance and supervision of student restaurants. It defines the meal-subsidised student meals that comply with regulations and nutritional recommendations and its content, as well as how dining must be organised and how the activities of student restaurants are monitored, assessed and supervised. The recommendation also includes an evaluation tool that facilitates the performance of inspections and can be used to assess the realisation of the food's nutrition quality and composition requirements and the dissemination of information on meals.

1 MEAL RECOMMENDATION TARGET GROUP AND OBJECTIVES

This meal recommendation has been prepared for the organisation of catering services for higher education students. It is also suitable for planning the meals of staff members and other diners who eat in restaurants. The recommendation is intended as a tool for catering staff and those responsible for tendering catering services, and higher education institutions and as a source of information for students, student organisations and student health care. Eating in accordance with the recommendations during one's studies lays the foundation for eating habits that promote health and for well-being.

One of the tasks of higher education institutions and student restaurants is to promote and enable sustainable choices, as today's decisions have an impact on the future. A student's choices can be supported through communication and guidance. Eating-related choices are central to a sustainable lifestyle and the well-being of the environment. Shouldering social responsibility must be a common goal for all actors, and accountability includes making sustainable choices easy and possible for the individual.

There are a total of approximately 305,500¹ university and university of applied sciences students in Finland. There are around 156,500 university students and 149,000 university of applied sciences students. In addition to students, the high education institution's staff, stakeholder customers and other customers dine at the restaurants daily. The served meals support the health and well-being of both students and staff and other customers.

Higher education students are a diverse group of students of different ages, different backgrounds and different life situations. The majority of persons starting their higher education studies are young people who move out of their parents' homes and being to live independently for the first time, taking responsibility for their lifestyles. Their ability to take care of healthy eating habits may vary. When preparing the food recommendation, it has been taken into account that the everyday lives of students are diverse in nature. The economic and social situation of students can be very different. The study environment has become more diverse and, for example, the completion of distance studies has become more common. A large number of students go to work during their studies.

1.1 Objectives of the food recommendation

The aim of this meal recommendation is to define the guidelines for the implementation of meal-subsidised student meals and the minimum nutritional standards of the meals served. In addition, the aim is to promote the students' ability to study, their coping, health and well-being and to prevent nutrition-related chronic diseases.

1 Official Statistics of Finland (OSF): Students and qualifications of educational institutions [online publication]. ISSN=2737-0399, Laatuseloste: Oppilaitosten opiskelijat ja tutkinnot. Helsinki: Statistics Finland [viewed on: 21 September 2021]. http://www.stat.fi/til/opiskt/2018/opiskt_2018_2019-11-28_1aa_001_fi.html (The statistics are available in English)

The aim is to provide food service providers with a tool for planning student meals and making healthy choices easier. In addition, the recommendation aims to support the student's management of their life and taking care of themselves and to motivate and guide the students to adhere to health-promoting eating habits and to eat regularly. The aim is also to increase student participation in the organisation and development of student dining and to support social interaction through shared meals and to promote student engagement in the higher education community.

The food recommendation guides in putting together a nutritionally balanced, diverse and tasty student meal, from which the student will get energy and essential nutrients in accordance with recommendations. The recommendation will also guide the organisation of a comfortable and functional dining environment that promotes safe and healthy eating. In addition, student meals familiarise diners with national and international cuisine and provide them the opportunity to act in accordance with the principles of sustainable development. The recommendation also provides tips for healthy meals also during remote learning days and provides guidance choosing snacks that promote health. An affordable student meal is of great significance financially for students.

The aim of the recommendation for student meals is:

- to ensure consistent meals and equal opportunities for access to good, versatile meals that meet nutritional needs regardless of the diet or place of study
- to provide students with opportunities for communal meals and help them make health-promoting food choices and eat regular meals
- to describe how the served meals and snacks are put together and the minimum nutrition quality requirements for the implementation of meals and the competitive tendering of food services and foodstuffs
- to act as a quality recommendation for student catering providers in the planning, implementation and evaluation of activities
- to describe the good practices for student food services and give tips on preparing meals, developing activities and cooperation between stakeholders
- to provide information to student restaurants, higher education institutions, students, student organisations and student health care on meals and food that promote health and well-being
- to promote sustainable development by making recommendations on food choices and reducing food waste
- to promote knowledge of and appreciation for national and international cuisine
- to help familiarise the restaurant staff with student meals
- to act as a tool for developing cooperation between higher education institutions, food services, students and student health care as well as for promoting the health and well-being of the entire higher education community and individuals
- to describe the organisation of student dining and the regulations and recommendation it is based on.

1.2 Daily rhythm, life management skills, and eating habits of students

The start of higher education studies and a new life situation change a student's social situation. The student becomes a member of the higher education community, which includes new student friends, teachers and the staff of the educational institution. The start of studies, the new environment and community as well as the change in life situation are inspiring, but may also cause anxiety and stress and create uncertainty or fear that they will not find their place.

For some, getting a study place also means moving away from their childhood home. Becoming independent brings with it a greater responsibility for one's own daily life and finances. Moving means setting up a new household. The student may be in a situation where he or she must plan, acquire and prepare his or her own food and meals for the first time ever. Students may define their own meal rhythms and independently make their own food choices, which are influenced by many factors, such as the price and availability of food, taste preferences, attitudes, values, the perceived health of foods, and the ways in which their peer group eats.

Food choices can be an important part of each person's identity. In addition to taste, food choices are influenced by the health, ecology, ethics and cultural factors of food. Different ethnic groups are part of Finnish society and Finland's food culture. Some religions have rules concerning foods, which may restrict the use of certain raw materials or cooking methods. Multiculturalism can be promoted in student restaurants, for example by organising theme weeks.

Students themselves have a great responsibility for their own eating habits and choices. A higher education student can choose whether to eat in a student restaurant or elsewhere. Student restaurants serve complete healthy meals in accordance with the recommendation, but the final choice for making healthy choices remains with the student. For the purposes of this recommendation, a meal is defined as a main dish, salad, salad dressing, bread, spread and beverage. Among students, special wishes are increasing, and food selection is increasingly guided by the ethical and ecological nature of food, which is reflected in the increase in vegetarian meals, among other things. Maintaining one's own household gives students the opportunity to get to know new ingredients, try different recipes and build a diet that suits them.

However, organising one's own meals may become a challenge if the student has not previously adopted sufficient knowledge and skills for how to prepare food that is nutritious, health-promoting and suitable for his or her energy amounts. Students become worried about the healthiness of the food they eat or what they can purchase with their limited finances. Repeated unhealthy and one-sided food choices can lead to a variety of different health problems.

Significance of regular meal rhythm

A regular meal rhythm maintains the ability to study and facilitates coping. Setting up a daily rhythm supports well-being and facilitates alternation between work and rest during the study

day. Management of one's everyday life consists of the various functions of daily life and fitting them into the day. It is important to find a good rhythm for activities (such as studies, work, leisure, meals and sufficient sleep) so that there is enough time for each activity. Meal times promote recovery and are an important part of the course of the day. Eating slowly and calmly promotes a focus on eating and helps people eat according to their energy needs.

A regular meal rhythm means eating meals or snacks every three to five hours. Regular eating keeps a person's blood sugar level even, which maintains vigilance and functional capacity and reduces the need for snacking. Breakfast helps students have sufficient energy to study in the morning. A reasonably sized lunch provides suitable energy for afternoon work and does not cause fatigue. An afternoon snack provides refreshment and makes it possible to engage in physical activity before an evening meal. Dinner provides energy for evening activities, studies and work. An evening snack provides energy for the duration of the night. During sleep, the body recovers from the stress of the day and the brain's energy reserves are filled.

Higher education studies are diverse. Studies take place on weekdays, on weekends and increasingly in the form of online and distance studies. Students may not have contact teaching at universities every day. Students may also work alongside their studies. These also cause challenges for the planning of meals. It is important for the student to plan the course of the day so that there is enough time for regular meals. Student meals play an important role as part of the student's daily rhythm and a good diet. As distance studies have increased, it is important that a meal-subsidised student meal is an easily accessible and appealing option so that higher education students would also eat the student meal on remote days. Not all student restaurants need be on campus. For example, a restaurant close to student housing may apply for eligibility to a meal subsidy. This would enable the student to eat in a communal manner and to have an affordable, versatile meal that meets the nutritional recommendations also during distance learning days.

Meals at a student restaurant will help set a rhythm to the study day, promote daily coping and provide an opportunity for casual interaction with other students. The communality objectives set for student meals are realised when students have the opportunity to eat a student meal with other students and staff. A student restaurant is a shared place for both students and staff to enjoy and interact with one another. This strengthens their link to the higher education community. In order for their studies to progress smoothly, it is important that the student sleeps and rests sufficiently, maintains a healthy diet and eats at regular intervals, takes part in physical activity daily, including incidental physical activity, and encounters others in social situations.



It is a good idea for tutors to introduce new students to student meals and eat together with their own group.



1.3 Eating habits as a factor maintaining study ability and coping and promoting well-being at work

A healthy lifestyle promotes health, coping and study and work ability. Meals are an important part of well-being and coping at work. For this reason, important to adopt good eating habits and a regular eating rhythm already during one's studies.

Different professions and their characteristics may impose special requirements on eating. The timing meals and snacks as well as the quality of food and beverages have a significant impact on alertness, well-being and health. Regular meals that comply with recommendations help in weight management, reduce blood sugar fluctuations and prevent fatigue. In addition to problems related to alertness, shift work often involves stomach problems as well as the risk of cardiovascular diseases and problems with weight management². All of these can be influenced to some extent with eating habits. In physically strenuous work, a sufficient amount and a versatile range of food and regular liquid consumption promote work ability, coping and recovery from work. The importance of maintaining fluid balance is emphasised when working in hot working conditions.

Work may also complicate the maintenance of healthy habits. Mobile work, working outdoors in varying conditions or moving from one location to another in a customer's premises may make it difficult to organise meals during working hours. If it is not possible to eat in a restaurant, it is important to carry a packed meal with you.

Studies, working alongside studies and other factors may also cause stress and a rushed timetable for students. This may lead to the lack of everyday routines and unhealthy eating habits, such as eating products with high sugar content or consuming sugar-containing beverages such as energy drinks or alcoholic beverages. These habits can lead to health problems and weaken everyday coping as well as ability to study and work. Eating sensibly and drinking alcoholic beverages responsibly will affect one's health and well-being, so it is important to pay attention to these.

Learning and practicing basic skills related to maintaining work ability during studies will be of benefit throughout your life.

Tips for promoting well-being during studies and at work:

- eat healthy, balanced and diverse regular meals
- maintain a study and work rhythm and take regular breaks
- reserve enough time for rest, exercise and recreation
- take care of social relationships by meeting schoolmates and colleagues and study together
- create a pleasant learning environment
- take care of your own health and coping
- utilise student services (student guidance, student health care).

2 Työterveyslaitos. Sopeutuminen vuorotyöhön. <https://www.ttl.fi/tyontekija/tyoaika/vuorotyso/sopeutuminen-epatyypillisiin-tyoaikoihin/> (In Finnish)

1.4 Development needs related to eating habits

The health and lifestyles of students are regularly examined by means of the Finnish Student Health and Wellbeing Survey (KOTT). The next KOTT survey will be conducted in 2021 in cooperation between the National Institute for Health and Welfare and Kela. The health and lifestyles of students were last surveyed in 2016 in a KOTT survey carried out by the Finnish Student Health Service. The study was the first of its kind examining meals served in student restaurants. According to the results, one fifth of students do not use student catering services, one third eat daily at a student restaurant and one third eat there 3–4 days a week. (KOTT 2016³.)

Combining and reinforcing health and sustainability in food choices

70% of students often consider how healthy the food choices they make are (KOTT 2016). Student meals must be of high quality, healthy, affordable and versatile and produced in a sustainable manner. In addition, special diets must be taken into account.

More than half of the students ate vegetables every day or nearly every day, while less than half of the students ate berries or fruit. About one in ten students adhered to some form of vegetarian diet. Less than one in five students reported eating red meat six to seven days a week, while one in five students reported eating it less than once a week. There was a clear decrease in the use of dairy products compared to the previous report. The consumption of sugared beverages has decreased from 2008. The daily or nearly daily consumption of sugared beverages was rare. (KOTT 2016.)

The consumption of vegetables, berries and fruit is currently insufficient while meat consumption is high. At their best, student meals support public health and sustainable development. For this reason, it should encourage increased consumption of vegetables and replace meat products with protein-rich vegetables and fish at least partly, and reduce food loss. For example, selling surplus food to students will make the students' everyday lives simpler and reduce food loss. The popularity of vegetarian diets and the reduction in the consumption of meat foods are a growing trend. For this reason, it is important that student restaurants offer high-quality, nutritious and tasty vegetarian and vegan food.

Vegetarian and vegan alternatives can be designed as separate meals and new alternatives can be developed. They do not have to be similar to the available meat alternatives. If, for example, the restaurant is serving beef steak, the vegetarian option does not have to be a vegetarian "steak". Ideas for vegan recipes are available in the climate sustainable vegetarian recipe bank <https://ilmastoruoka.fi/> and the vegan challenge recipe bank <https://vegaanihaaste.fi/reseptit>. These are only available in Finnish.

3 Kunttu K, Pesonen T ja Saari J. Korkeakouluopiskelijoiden terveystutkimus 2016. Ylioppilaiden terveydenhoitosäätiön tutkimuksia 48/2016. https://1285112865.rsc.cdn77.org/app/uploads/2020/01/KOTT_2016-1.pdf (In Finnish)

It is recommended that fish be eaten at least twice a week, but according to the results of the KOTT 2016 study, the average amount of fish eaten was well below this target (only once 1.3 days a week). Student restaurants should also serve fish options, because fish contains healthy fat, numerous vitamins and minerals and an abundance of protein. Fish is a particularly good source of omega-3 fatty acids, vitamin D and iodine. Eating fish has been shown to reduce the risk of cardiovascular disease. Fish is a climate-friendly alternative due to its small carbon footprint, and by favouring, where possible, less exploited natural fish, the eutrophication of waters can also be reduced.

A growing number of students want to know the origin, nutrient content and carbon footprint of their food. This should be taken into account both in the procurement of raw materials and in the labelling of nutritional information. Sustainable choices should be favoured in the procurement of raw materials. There is already legislation on reporting the origin and nutrient content of food, but carbon footprint labelling is only just being developed. So far, there is no national or internationally harmonised calculation method for carbon footprint.

Makery Oy has conducted a survey⁴ to find out the views and ideas young people have on their future eating habits. According to the results of the survey, the majority of young people believe that they will eat more vegetables and foods containing plant proteins in the future. More than half of the respondents adhered to a mixed diet and ate vegetarian food regularly. Many people believe that on-the-go eating will increase, meaning eating on the way from one place to another. In this case, food choices can be based on the product being easy to eat and carry.

Eating option when participating in remote studies

52% of students eat subsidised meals. According to the KOTT 2016 survey, almost one fifth of students skipped lunch or dinner completely at least three days a week due to being too busy or some other reason. Foods that could be purchased and taken with from student restaurants would support ability to study and coping on remote study days, when there is no restaurant near a student's home where they could eat during the day. The possibility of take-away food and selling surplus food would also support the student in situations where the student is unable or too busy to eat at a student restaurant due to an internship or their study schedule. Students could also bring their own dishes for take-away food and surplus food. Food costs are the second largest cost for students, and subsidised meals are an important condition for ensuring healthy and diverse food.

Independent study is becoming increasingly common, and the students' possibilities of completing their studies online and remotely are constantly being developed. Student meals must be an accessible option for all students. More flexible practices would provide student restaurants with tools to meet the needs of modern students.

4 A survey carried out by Makery Oy as part of Natural Resources Institute Finland's ScenoPro project <https://www.luke.fi/sceno-prot/2019/02/28/nuoret-aikovat-muuttaa-ruokavaliotaan-terveellisempaan-ja-monipuolisempaan-suuntaan/> (In Finnish)

2 FINNISH NUTRITION RECOMMENDATIONS AS THE BASIS FOR ORGANISING STUDENT MEALS

The planning and implementation of meals and snacks served to students are guided by the current nutrient intake and food recommendations of the National Nutrition Council for the entire population and different target groups (see Chapter 4). Food that complies with nutrition recommendations promotes health and the principles of sustainable development (see *Terveyttä ruoasta – Suomalaiset ravitsemussuositukset 2014*⁵ dietary guidelines).

A regular meal rhythm – the foundation for good nutrition

It is a good idea to eat at regular intervals on a daily basis, for example a routine of breakfast, lunch and dinner, and, if necessary, 1–2 snacks. A regular meal rhythm maintains blood glucose at a stable level, reducing hunger and supporting weight management and protecting teeth from cavities. This will help you eat reasonably during individual meals and reduce snacking or binging. Setting a rhythm for meals as part of a day's routine is part of life management. Habits learned when young create a foundation for balanced and reasonable eating throughout life. A lunch break at noon promotes coping and maintains study and work alertness and provides an opportunity to interact with others.

Compiling a diet that promotes health and sustainability

The food triangle and plate models published by the National Nutrition Council illustrate the entirety of a health-promoting diet. (See pictures p. 20.)

The plate model illustrates a balanced meal in its entirety. It helps a person plan and put together a complete meal and food services to inform their customers. The plate model can be implemented in many different ways. The basic principle is that half of the plate is filled with vegetables fresh or cooked, a quarter with potatoes, whole grain additions or whole grain pasta, and the last quarter with dishes ranging from legumes or other sources of plant protein, fish⁶, eggs, poultry meat, red meat or nuts/seeds. The plate model is always illustrated as a complete model meal, which in addition to the main dish and vegetable and energy side-dishes, includes a beverage, whole grain bread, vegetable fat spreads and oil or oil-based salad dressing.

Non-fat milk, buttermilk or a plant-based drink are recommended as meal-time beverages. Liquid dairy products may be replaced with products of plant origin, such as soya or oat drinks, supplemented with calcium, vitamin B12, vitamin D and iodine. Tap water is the best beverage when thirsty. Sugary drink should not be consumed regularly. Some plant-based beverages contain

5 National Nutrition Council. Finnish nutrition recommendations for adults (*Terveyttä ruoasta – suomalaiset ravitsemussuositukset*). 2014. Version 5. https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/kuluttaja-ja-ammattilaismateriaali/julkaisut/ravitsemussuositukset_2014_fi_web_versio_5.pdf (In Finnish)

6 The Finnish Food Authority's guidelines on the selection of fish species and the frequency of their consumption by young people, women of fertile age, as well as pregnant and breastfeeding women and the general restrictions on the use of oil plant seeds must be taken into account. <https://www.ruokavirasto.fi/en/instructionsforsafeuse>



Foods at the bottom of the food triangle form the foundation for a daily vegetable-based diet that promotes health, which is then supplemented with whole grain cereals and fat-free and low-fat dairy products, as well as sources of good fats and varied legumes, fish, white meat, eggs or red meat. Sweets and fats at the top of the triangle (discretionary foods and drinks) are not part of a daily health-promoting diet.



The plate model is a guide for putting together a balanced and health-promoting meal. Portion sizes is unique to individuals and in accordance with the person's own energy needs.

7 Discretionary foods and drinks include products containing a great deal of hard fat, salt, added sugar or only low-fibre cereals, such as pastries, salty and fatty sausages, dairy products that contain a large amount of fat, salt or sugar, salty finger foods, sweets and chocolate, sugar sweetened drinks and alcohol.

sugars. The abundant and frequent consumption of such beverages between meals increases cavities. In terms of oral health, it is also advisable not to drink acidic, unsweetened beverages regularly (see oral health, p. 81). The recommendation is to use non-fat milk, low-fat milk or plant-based beverages in coffee and tea.

The recommendations for improving the diet of the general population are taken into account in the planning the ingredients for student meal (Table 1).

The recommended sources of protein in student meals are legumes, fish, poultry, eggs, milk/buttermilk and other dairy products. The meal's cereal side-dishes also contain protein. When a person adheres to a vegan diet with no meat, fish or dairy products, the supply of protein must be ensured with the versatile consumption of leguminous plants, cereal supplements, protein-rich plant-based drinks and small quantities of nuts and seeds. (See good sources of protein, Chapter 4 and Appendix 3).

At least 2/3 of fats contained in the meal should be unsaturated fats. Unsaturated fats contain fat-soluble vitamins and essential fatty acids, the intake of which is key to the well-being of the brain, nervous system, heart, vascular system and hormone functions, as well as a person's eyes, skin and hair. Soft fats improve blood lipid values, thus preventing adverse impacts such as cardiovascular diseases.

The share of saturated fat (saturated fatty acids) in a meal should be less than 10% of the meal's total energy (E-%). Saturated fats should be avoided, as they are harmful to the health of the heart, brain and blood vessels. To improve the quality of fats in diet, it is essential that foods containing hard saturated fats are replaced with foods that contain soft unsaturated fats. (see Chapter 4 and Appendix 4, Selection of raw materials). Coconut and palm oil contain an abundance of saturated fat. These fats are used in numerous products in the food industry. With these products, it is essential to check the saturated fat content of the product. If it meets the nutritional allowance for the product in question, the product is suitable for the recommended diet (see Appendix 1, Table 1a-c).

Carbohydrates are the main source of energy in a diet. High fibre foods are favoured as the source of carbohydrates and products with high sugar content are avoided. A high fibre diet has a favourable impact on the body's sugar and fat metabolism, helps in weight management and promotes bowel function. Whole grain products contain a great deal of fibre and the nutrient density of whole grain cereals is higher than that of refined grains. Fibre-rich grain products include an abundance of vitamins and minerals.

The intake of sugar⁸ added in the diet should be below 10% of energy (E%). Young people and young adults consume a great deal of sugar from soft drinks, candy, sugared dairy products and other small snacks. During the main meals, sugar is mostly consumed in the form or sugar-rich

8 According to the definition for nutritional recommendations, added sugars include sucrose, fructose, glucose, starch-based sweeteners (glucose syrup, glucose-fructose syrup) and other similar sugar products which are used as such or added to foods in food production.

Table 1. Recommended dietary changes to promote energy balance and health. Modified from the table in the National Nutrition Council 2014 recommendation.

ADD	REPLACE	CUT BACK ON
Legumes including vegetables, roots, berries, fruit and mushrooms	Low-fibre cereals → with whole grain cereals	Sugar Beverages and foods containing added sugar Sugar-rich products → with products that contain less sugar or are not sweetened
Oil Nuts, almonds Seeds	Butter and butter-based spreads → with vegetable fats and oils High-fat milk products → with fat-free or low-fat options	Coconut and palm oil
Fish and other seafood Peas, beans and lentils		Meat products and red meat Red meat → partly to poultry Animal protein → partly to plant protein
	Products rich in salt → with products that have less salt: breads, cheese, cold cuts	Salt Non-iodised salt → with iodised salt
		Alcoholic beverages

desserts. A diet that is high in sugar yields a high level of energy, but a low level of protective nutrients. A nutrient-poor diet is linked to obesity, cardiovascular diseases, some cancers and cavities. The amount of sugar contained in the packaged foods, including the natural sugar of the food (such as lactose in milk and fructose in fruit), can always be found in the nutrition value table on the product packaging⁹.

Nine out of ten adults and nearly all men in Finland consume too much salt (NaCl) (The National FinDiet 2017 Survey¹⁰). The average intake of salt for men is 9.5 g/day and that for women is 6.9 g/day (the maximum daily allowance is 5 g/day). Young men (aged 18–24) attain somewhat more salt from their food than men on average and young women slightly less than women on average. The majority of salt comes from industrial foods, especially meat foods and cereal products.

Sodium contained in salt is needed, for example, to regulate the body's fluid balance. However, the body's need for sodium is so small that a sufficient amount is easily consumed, even if one does not use salt at all. Many foods contain sodium naturally (e.g. dairy products, meat and fish). Excessive salt intake has many adverse effects. Salt increases blood pressure, which is a significant risk factor for many diseases. It may also increase the risk of osteoporosis and stomach

9 Finnish Food Authority. More information on sugars and labelling that applies to them. Information provided on food products/Nutritional content https://www.ruokavirasto.fi/globalassets/yritykset/elintarvikeala/toiminnan-aloittaminen/pk/pakkausmerkinnat/osa-8_ravintoarvoilmoitus2.pdf (In Finnish)

Finnish Food Authority. Nutrition claims. No added sugar. <https://www.ruokavirasto.fi/en/companies/food-sector/production/food-information/nutrition-and-health-claims/nutrition-claims/no-added-sugar/>

10 Valsta L ym. FinRavinto 2017, STN/JUST-FOOD-hanke. Written communication. 2020.

cancer and expose the patient to asthma, and in addition, salt will stress the kidneys and bind fluid to the body, cause swelling and increase the need for fluid.

Alcohol

Alcoholic beverages are not part of a health-promoting meal. Nutritionally, alcohol increases the energy content of beverages, but does not contain other nutrients. For more information on beverage recommendations, see Chapter 4.4, Beverages (p. 62) and Chapter 6.3, Nutrition and oral health (p. 81). For information on serving of alcoholic beverages at a student restaurant, see Chapter 3 (p. 35).

2.1 Several options for implementing a health-promoting diet

There are many ways to implement a health-promoting and balanced diet. It may contain plant protein sources, fish, poultry, eggs or red meat, or flexible combinations of these food ingredients. A person’s diet may contain meat or be semi-vegetarian, pescatarian, lacto-ovo-vegetarian, lactovegetarian or vegan (Table 2). Those who occasionally eat meat identify as flexible in their food selections, which favour a vegetarian-based diet but does not exclude meat (flexitarian). Serving meals that suit a vegan diet requires the inclusion of products that complement the food choices in the basic menu, such as plant-based drinks supplemented with nutrients, as well as vegan recipes, which ensure an adequate supply of energy and nutrients (see Vegan diet p. 24).

It is recommended that a vegetarian option that is available on the menu for everyone to choose on daily basis. It can be for example a lacto(-ovo) vegetarian option or a vegan option in accordance with the wishes and needs of the customer base. Adherence to a vegetarian diet has increased among both students and staff, as well as among those who eat vegetarian meals more often than before in addition to meat.

This recommendation provides a recommendation for the energy and nutrient content of a student meal **per meal for the purpose of menu planning** (Chapter 4.1, p. 53). The implementation of the recommendations can be ensured by observing the minimum nutritional requirements

Table 2. Different diets

Diet	Includes vegetable products	Includes milk products	Includes eggs	Includes fish	Includes white meat	Includes a moderate amount of red meat
Mixed diet	x	x	x	x	x	x
Semi-vegetarian	x	x	x	x	small quantities	
Pescatarian	x	x	x	x		
Lacto-ovovegetarian	x	x	x			
Lactovegetarian	x	x				
Vegan	x					



Broad bean and macaroni caserole and fish balls with mashed potatoes.

for each part of a meal (Appendix 1, Tables 1a-c). These recommendations are criteria for the nutrition quality of food, which are used when entering agreements on student food services and in the related competitive tendering. They are entered in service agreements, assessment and monitoring criteria are set for them, and reporting is agreed upon. (See also Appendix 5 Student Meal Nutrition Quality Assessment Tool.)

Table 3. Choices to ensure the nutrition quality of meals.

	Quality	Selections
Carbohydrates	Fibre sources Sugar-free and low-sugar products	Whole grain cereal, potato, vegetables, leguminous vegetables, berries, fruit, dairy products
Fats:	A sufficient amount of soft fats: 2/3 soft fats and at most 1/3 hard fats	Rapeseed/Canola/olive oil, vegetable fat spreads, nuts, seeds, fish
Protein	Versatile sources of protein	Legumes and other plant protein sources, fish, white/red meat, eggs, fat-free and low-fat dairy products, soya drinks, whole grain cereals and, to a lesser extent, low-salt nuts and seeds

A versatile, balanced vegan meal

Demand for vegan meals among young adults has increased. A vegan diet is considered an ethical choice and climate action, although it poses challenges from the viewpoint of both the environment and nutrition. The realisation of a versatile, balanced and tasty vegan meal requires a systematic approach and competence. The development of nutritionally balanced (a sufficient amount of energy and protein and rich in nutrients) and tasty vegan recipes is a prerequisite for good meals.

The preparation of vegan meals requires the sufficient and versatile use of plant protein sources to guarantee the balanced full amino acid composition of the meal. The protein content recommendation for all meals (at least 20 g / meal) should also be guaranteed in all vegan meal



Vegan model meal: 1/3 beans, peas, lentils or other plant protein source, 1/3 potatoes, cereal side-dish or root vegetables, 1/3 fresh or cooked vegetables and oil/oil-based salad dressing. A glass of plant-based drink, whole grain bread and vegetable oil-based fat spread.

options. This can be achieved by using a sufficient range of good quality plant protein sources as ingredients for meals. Meal salads must also contain diverse sources of vegetable protein. It must also be ensured that the energy content of each meal meets with the recommendation. A vegan diet is supplemented with vitamin B12, vitamin D and iodine using either supplemented foods or food supplements. The student is responsible for the use of the required food supplements. Calcium intake is usually sufficient when consuming foodstuff supplemented with calcium, such as plant-based beverages. Some plant-based beverages are also supplemented with vitamin B12, vitamin D and iodine.

The vegan plate model is used as an aid for planning a complete meal and to support the guidance of meals (see photo above).

Sustainability in the implementation of student meals

Sustainable development marks local and global societal change that is continuous and guided. Its aim is to ensure that future generations have the same or better opportunities as current generations. This also means that the environment, people and the economy are taken into

account equally in decision-making and activities.¹¹ The solutions implemented now will have an impact on the future. The perspectives and solutions related to sustainable development are relevant to the students' everyday life and choices. Choices related to what we eat are of key importance for a sustainable lifestyle. It is the responsibility of society's systems and production structures to make sustainable choices easy and possible for individuals. Sustainable choices and their significance must be communicated to students in a manner that does not guilt or pressure them. It is often more effective to give a small push towards good choices than to force someone to make them. Making sustainable solutions visible can reduce perceived conflicts between information and activities.

Through their activities and communications food services promote and support not only their own strategic goals but also the strategic and sustainable development objectives of the higher education institution. Sustainable development and environmental responsibility can be taken into account not only in the selection of raw materials but also by taking into account the production method of raw materials. Food services act in line with environmental and climate responsibility and promote sustainable development extensively in its different processes. The promotion of sustainable development and its solutions are apparent in food services, for example, in its business idea, values, communications, the planning of kitchen activities, the use of facilities and equipment, water and energy consumption, menu and product design, procurements, meal orders, food preparation, serving, packaging, food delivery, prevention of waste, waste management, cleanliness, the promotion of the well-being of employees and as well as in showing respect for one's own and other people's cultures.

The core task of food services is to produce good food that meets nutritional requirements and to promote regular eating. Promoting equal possibilities for good nutrition, good health and well-being will implement Agenda2030's¹² Sustainable Development Goals 2 (zero hunger, better nutrition, food security and sustainable agriculture) and 3 (health and well-being in all age groups). Society's Commitment to Sustainable Development is a national strategy decided on by the Finnish National Commission on Sustainable Development and a concrete instrument for facilitating the achievement of objectives. It is a shared long-term intent on the Finland of the future. The National Action Plan for Sustainable Development 2050 will implement objectives related to good health, quality of life and equality, which will also be produced by the subsidised student meal system.

The Nutrition Commitment¹³ is a Finnish operating model linked to Society's Commitment to Sustainable Development, which helps food service operators and stakeholders improve the nutrition quality of diets and to promote nutritionally responsible practices. A goal-oriented and measurable commitment to measures is a tool that will allow the educational institution, those

11 Prime Minister's Office. Programme for Sustainable Development. <https://kestavakehitys.fi/kestava-kehitys> (In Finnish)

12 Agenda2030. <https://kestavakehitys.fi/en/agenda2030>

13 Nutrition commitment. <https://www.ruokavirasto.fi/en/themes/healthy-diet/nutrition-commitment/>

responsible for its food service and the company that provides the service develop their own nutritional responsibility and make their activities transparent.

Finland's National Public Procurement Strategy¹⁴ emphasises taking the goals of sustainable development into account in public procurement and increasing the effectiveness of procurement. The public procurement strategy has its own objective for sustainable and responsible food and food service procurements. Procurement-related minimum requirements, contract terms, monitoring and other procedures can have positive impacts such as reducing the environmental impacts of procurement and promoting well-being, health and workers' rights.

Sustainable food choices and reducing food waste

According to the national nutrition recommendations (2014), the sustainable development aspect should be taken into account in dietary choices. A plant-based diet that complies with dietary recommendations reduces the environmental burden caused by food. An environmentally-friendly diet favours a versatile-range of seasonal vegetables, root vegetables, legumes, mushrooms and berries. The amount of red meat used as the main dish will be reduced, and plant proteins, fish (in particular sweet water fish^{15, 16}) and white meat will be served in its place more frequently. Other choices that support sustainable development include potato, cereal and a cereal side-dish instead of rice, rapeseed/canola oil, vegetable fat spread and tap water when thirsty.

In addition to making choices on ingredients, reducing food loss is a significant measure to prevent environmental loading resulting from food. The aim of the UN's Sustainable Development



14 Finland's National Public Procurement Strategy 2020. <http://urn.fi/URN:NBN:fi-fe2020090768680> (In Finnish)

15 The Finnish Food Authority's guidelines on the selection of fish species and the frequency of their consumption by young people, women of fertile age, as well as pregnant and breastfeeding women must be taken into account. <https://www.ruokavirasto.fi/en/instructionsforsafeuse>

16 Vältä WWF:n kalaoppaassa punaisella merkittyjä kalalajeja. <https://wwf.fi/kalaopas/> (In Finnish)

Goals (Agenda2030) and the European Commission's Circular Economy Package is to halve the amount of food loss at the distributor and consumer level by 2030¹⁷. Student restaurants play a major role in reducing waste and achieving this target.

Diners are guided to put their meal together according to the plate model and to take a suitable portion size for themselves, thus reducing plate waste. Food losses can be reduced in food production by means of a community plan and a good order, logistics and information system, which can be used to take into account fluctuations in the number of diners and larger absences that are known in advance. The surplus lunch concept allows restaurants to sell leftover food. The sale of leftover food (e.g. Leftover-Lunch, ResQ) can be supported and thus make evening meals for students simpler.

Good food hygiene can reduce food loss, for example by storing products at the temperatures specified for them, handling food hygienically and ensuring the cleanliness and condition of equipment and surfaces.



17 EU Circular Economy Package 2015. <https://ym.fi/en/eu-circular-economy-package>

Proposals for promoting sustainability in the implementation of student meals

- All student restaurants determinedly highlight greenhouse gas emissions caused by food production and the reduction of food losses and work together to come up with solutions for reducing food losses in line with the Agenda2030.
- The aim should be to find a way for everyone to make their own more sustainable food choices.
- Food that complies with sustainable development always also takes healthiness and versatility of the served food into account.
- The Sustainable Development Goals are emphasised in procurement. For example, products that are currently in season and local food products are favoured and, where possible, the carbon footprint¹⁸ of the food is taken into account when placing product orders.
- Students are provided information about choices in line with sustainable development.
- Vegetarian food will be better highlighted at student restaurants, for example by means of information boards.
- Vegetarian food will be served daily as a normal option alongside other alternatives.
- Vegetarian dishes are always served in the same serving line with meat dishes, and they are not separated from other foods on a side table.
- Vegetarian food is placed in the serving line at the beginning of warm food options.
- Add more foods made from sustainable domestic fish species (e.g. the carp family, smelt, vendace, herring) to the menu.
- The operating principles for sustainable development will be developed and functions will be innovated together with students and student organisations.
- Sustainable development is apparent in a comprehensive manner throughout the service chain in the form of:
 - jointly agreed policies for the promotion of sustainability for the implementation of student meals (sustainability goals, monitoring, evaluation, reporting, corrective and development measures, cooperation)
 - attention given to the environmental impact of raw materials in menu planning favouring sustainable alternatives
 - the planning of food to be served (product range, serving method, serving order)
 - menu design (e.g. taking advantage of the current season, local products, utilising diverse cuisines in diversifying the vegetarian foods served, moulding basic recipes into more vegetarian versions)
 - the presentation of options on a menu (promoting sustainable choices in the order in which the dishes are presented)
 - labelling that supports sustainable choices on the menu (carbon footprint and eco-labels)
 - seasonal vegetarian food listing to support procurements (seasonal calendar)
 - the size of serving dishes (proportional to the customer group and dish consumption; size of plates and use of trays, taking into account the impacts on the realisation of balanced meals)
 - packaging materials, sorting and recycling that support sustainability goals
 - regular monitoring of production, serving and plate waste
 - the use of a separate waste container for napkins and wrapping paper; no biowaste container is used so these can be separated from food waste
 - active, public reporting on measures aimed at reducing food waste and their implementation.

18 So far, there is no national or internationally harmonised calculation method for carbon footprint.

Food served once in a self-service line may not be served again the following day. If the food that has been kept hot in the kitchen is cooled quickly, in four hours to refrigerator temperature, it can be served for example the next day. Cooling or freezing of food is permitted. At the end of the serving period, the food served once may be sold to staff and customers. The Finnish Food Authority has provided instructions on the donation of food to food aid^{19,20}



TIPS AND IDEAS: Real-time monitoring of food waste. A scale will be obtained for monitoring food loss, which will be circulated at different sites during the academic year. Food loss amounts are monitored daily at each site. A scale shows each waste container user how much food waste has been accumulated that day and what it costs.

TIPS AND IDEAS: Food waste barometer, i.e. the results of monitoring the amount of food that ends up in waste from plates. The information from the waste barometer can be published at the station where dishes are returned, on the dining room wall or door. This is a concrete message to diners on what progress has been made in reducing waste and an incentive for taking personal responsibility to reduce food losses.

19 Food donated to food aid. https://www.ruokavirasto.fi/globalassets/tietoa-meista/asiointi/opaat-ja-lomakkeet/yritykset/elintarvikeala/elintarvikehuoneistot/eviran_ohje_16035_2_fi_ruokaapu.pdf (In Finnish)

20 Motiva 2020. Hävikki hyödyksi! publication. https://www.saasyoda.fi/sites/default/files/Ravintolan%20h%C3%A4vikki%20hy%C3%B6dyksi%20opas_marraskuu%202020.pdf (In Finnish)

3 ORGANISING STUDENT MEALS

3.1 Dining environment

The dining environment refers to a food-related habitat, including food availability, food selection, price, communication and marketing. Many eating-related choices are made routinely, and the choices are guided by many factors in the dining environment without the individual paying attention to them.

The dining environment as a whole affect food choices. Eating at a student restaurant is a holistic experience. The placement and visibility of different parts of food and meals, the appearance of the food, the visual appearance of the student restaurant, the effective functioning of the facilities, service, pricing, the snack selection and other measures can affect the food choices made by students. The choices can also be influenced, for example, by communication related to the food and dining, such as on the menu, serving line labels and labelling of options that are in line with recommendations.

The customer service skills of food service staff and their uniform, tidy clothing as well as the inviting nature of the space also affect the image of the student restaurant and the positive atmosphere. The language proficiency of student restaurant staff can also contribute to the promotion of an international and multicultural campus environment. The student restaurant must take into account the health and nutritional aspects in the serving and placement of foods. For this reason, it is a good idea to place the options that are in line with recommendations and vegetarian food first in the serving line. Customers who adhere to different diets should also be taken into account.

Portion size is one of the strongest factors that affects eating. Recommended portion sizes can be influenced, for example, by the choosing plate sizes or by limiting dishes by item number. The clear presentation and serving of food, for example salads as components in their own dishes, enrich and reinforce positive experiences of the food being served.

Higher education studies have become more diverse, and they are carried out both on the premises of the higher education institution and increasingly as distance studies. As distance learning becomes increasingly common, this may reduce the student's social contacts and make their meals less versatile. It is important for student restaurants to also be an attractive alternative for students completing distance studies, as visiting the student restaurant makes it possible to eat a balanced meal and also supports the student's social well-being. Eating is not only a situation where energy stocks are supplemented, but it also promotes the adoption of healthy eating habits, enables social interaction with other students, promotes the community spirit of the entire study community and helps students form a peer network. Eating also has its intrinsic value: It is part of the whole of life and a pleasurable experiences that is part of life.



- The sensory environment (e.g. visual identity and sound environment) should be taken into account in spatial design.
- The accessibility of facilities for different customer groups will be taken into account in design.
- The opening hours of a restaurant will take into account the students' meal needs and other use of the facilities.

The storage of clothing, toilet visits and hand washing are functions that must be planned as part of the whole not only from the service provider's perspective but also from the customer's. A significant factor affecting comfort and hygiene is the placement and number of coat racks and hand washing points. Hand disinfectant should be available when there is no hand washing point near the serving line. From the point of view of general cleanliness and hygiene, it is pleasant to enter the dining area with clean hands and with no jacket and hat. The task of the food service is to ensure that the serving lines and tables remain tidy during meals.

- **Coat racks can act as a meeting place. There are often table groups and lockers next to or near coat racks.**
- **A hand-washing basin with liquid soap dispensers and paper towel holders should be located next to the dining area.**
- **Hand disinfectant should be available if necessary.**

Acoustics play a major role in the noise prevention in a dining area, as the noise level in the large dining area can easily rise to 70–80 decibels. Noise is caused by the movement of furniture, chatter, the clanging of dishes, the humming noise that carries over from the dishwasher area and the movement of people. Various structures, surface materials (e.g. acoustic boards) and furniture selections can be used to effectively suppress the travel of sounds and to calm the dining environment.



Design and significance of serving lines

Healthy choices can be supported with the correct design of the serving line. Eating behaviour in accordance with the recommendation and putting together portions according to the plate model can be guided and promoted by building serving lines in such a way that the model portion or its image is placed at the beginning of the serving line and the vegetables and salads are placed at the beginning. In this way, the student will be provided immediate guidance on how to put together a full meal accordance with recommendations, when the empty plate can accommodate plenty of vegetables and salads. A versatile range of options and a salad table with the different components of the salad available separately will increase vegetable consumption. Food served as components also makes it easier for people with allergies or other factors that prevent them from eating a particular plant to make food choices. It's also a good idea to favour vegetables and fruit in the snack options available for sale. Better choices can also be promoted in the warm foods selection by placing vegetarian options and options that comply with recommendations at the beginning of the warm foods section, followed by other warm sides and, finally, bread, unless there is a separate bread table, and beverages. The design of serving lines must be such that it ensures the safety of special diets and prevents contamination of allergens.

It is easy to reorganise the serving lines, especially when renovating an old space, renewing equipment or designing and building a new student restaurant. If the restaurant so decides, meals can be served using a single plate model, with the exception of soups. If the restaurant follows a single plate model, it must ensure that students receive sufficient nutrients from the meal. Meals can also be served without the use of trays if this seems the best option. If the restaurant dispenses with the use of trays, consideration should be given to the spatial solu-

tions, the time available for meals, the presentation and moving around the dining area and ensuring the realisation of the meal according to the plate model (salad, main dish, bread and meal-time beverage). The use of a single plate supports reasonable eating and makes it easier to put together a portion in line with recommendations. Serving food without using trays can be environmentally friendly and produces energy and detergent savings and reduces food waste.

The correct serving temperature is important for the taste and microbiological safety of both warm foods and cold salads and drinks. The bread options that comply with the recommendation and vegan breads must be labelled clearly on the bread table and, if necessary, in multiple languages. Gluten-free bread must be provided separately with good protection. The serving line's furnishings of different heights and shapes add a unique aesthetic and make the dining area more pleasant.

Serving alcohol

The abundant consumption of alcoholic beverages causes health and social disadvantages and may hinder the success and progress of studies. The effects of alcohol are manifested, for example, in impaired memory and learning capacity and emotional difficulties. Alcohol also increases the energy content one gets from beverages. The risks related to alcohol use are emphasised in young people, as alcohol interferes with the brain development process, which continues many years into a young person's life.

The rules of conduct of higher education institutions may stipulate that the facilities of the higher education institution are intoxicant free areas and that no one may come on the premises of the educational institution under the influence of intoxicants. Sobriety may also be outlined in different higher education institution substance abuse programmes.

According to section 2, subsection 2 of Government Decree²¹, the condition for granting a meal subsidy to a restaurant for subsidising the meals of higher education students is that restaurant services be arranged in an appropriate manner. In addition, section 2, paragraph 3, provides that the student meal be of such quality that it meets general health and nutrition requirements. The aim of subsidising the meals of higher education students is to improve and maintain the students' health, well-being, coping and ability to study. The subsidising of meals also has public health objectives.

Serving alcohol at the same time as serving government-subsidised student meals does not support the set objectives for student meals and dining and is in direct conflict with the objectives of the subsidy scheme. In these cases, restaurant services have not been arranged in an appropriate manner for subsidised meals. It is recommended that alcoholic beverages not be sold during subsidised student meals, in which case students will be treated equally with other customers. Alcoholic beverages can be served after the sale of subsidised student meals comes to an end, if the restaurant is licensed to serve alcohol. Alcohol can be served in the sections of the restaurant not intended for student dining also when student meals are sold in their own

21 Government Decree on Principles of Subsidising Meals of Higher Education Students <https://www.finlex.fi/fi/laki/alkup/2020/20200375> (In Finnish)

section, if the sections where alcohol is sold have been approved for the serving of alcohol. Clear boundaries or symbols must be marked around the area in which alcoholic beverages are served unless the boundaries of the area can otherwise be clearly identified. Different sections include separate restaurant facilities, cabinets, conference rooms and conference halls, but in this context, not dining rooms separated by curtains, screens or partitions.

The effectiveness of the recommendation and compliance with it will be monitored and, if necessary, the Government Decree will be specified if the coordination of serving subsidised student meals and serving of alcoholic beverages proves to be ineffective.

.....
Student restaurants do not sell alcoholic beverages at the same time they sell student meals.
.....

3.2 Enforcing choices that promote health and sustainability

Student dining guidance

Students' food choices are influenced by a variety of factors, such as eating habits adopted in childhood and youth, taste preferences, cultural background, the selection of foods being served, previous eating experiences, the eating environment and experienced service. Food choices are also guided by health, quality and environmental awareness and the price of meals. Some choose their food only to gain enjoyment or to fill their stomach.

Students have information on the principles of healthy nutrition, but not everyone applies this information in their own food choices. Many students may also have come to believe incorrect nutrition-related information. In addition, financial considerations or the price of a student meal may affect the choice of foods or whether the student eats a meal in a student restaurant or not.

Objectives of student dining guidance

The majority of students leave the scope of influence of their parents' home and take responsibility for their lives as they begin their studies. For this reason, the years of study are still an excellent stage for influencing the students' eating habits when dining together. A student meal can also serve as a model for student food choices in their home and throughout their life after their studies.

The key objective of guidance provided in connection with dining is that the student gains positive experiences of eating, is motivated and becomes accustomed to selecting meals that are put together in accordance with recommendations and sufficient for him or her and comes to understand the significance of these and the dining situation for his or her own well-being (health, alertness, coping and communal interaction). Guidance and communication related to food can influence the student's regular meal rhythm, knowledge, skills and attitudes related to food, as well as their health-promoting and environmentally sustainable choices (see Information box p. 29).



4.3, p. 60.) Model meals can also be displayed in the student restaurant for different meal options, depending on what the restaurant serves (e.g. soup meal, vegetarian meal, vegan meal).

Menu entries

Clear menu entries show which meals meet the criteria for nutritional recommendations. This makes it easier for the student to select the option from the menu that is in line with the recommendation. Students are also interested in the origin and climate impacts of foods. The Ministry of Agriculture and Forestry Decree (154/2019)²² requires that also the country of origin of fresh, cooled or frozen beef, pork, mutton, goat meat and poultry used as an ingredient in meals be indicated in writing. Customers must be informed of the allergens and substances that cause intolerance laid down in legislation (EU No 1169/2011, Annex II)²³ that are used in the preparation of meals (see Chapter 4.5, Food intolerance, p. 65). At the moment, there are no feasible labels that could uniformly describe the sustainability of individual food portions. For this reason, no recommendation can be given on labelling, but a diet that complies with the food recommendations supports sustainability, in addition to which the development of labelling systems is underway.

All labels and symbols must be easy to understand and not misleading. Student restaurants can decide for themselves how to label meals that comply with recommendations on their menu

22 Ministry of Agriculture and Forestry Decree amending the Decree on the provision of food information to consumers. 154/2019 <https://www.finlex.fi/fi/laki/alkup/2019/20190154> (In Finnish)

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

Dissemination of information on the right to meal subsidies

A restaurant must display a notice describing how a higher education student can demonstrate his or her right to a meal subsidy at a student restaurant, for example with a valid student card entitling to a meal subsidy or a Kela-issued meal subsidy card²⁵.

Serving line labels

Healthy choices by students can be supported with the labelling of the serving line. Selecting a complete meal that is in accordance with the recommendation is easier when information on options that are in line with the recommendation is also available along the serving line. Main dishes that are in compliance with the recommendation must be labelled in the serving line next to the main dish in question or there must be a menu in the vicinity of the serving line from which diners can check the labelling while choosing their food. Other parts of the meal that comply with the recommendation (bread, spread, beverage and salad dressing) are labelled with the same principle as main dishes. For example, you can use a sign next to meals to indicate which option is recommended, or by marking the products with the same additional text or symbol on the menu.

If all other parts of the meal served, such as salad dressing, bread and spread, comply with the recommendation, these do not need to be labelled.

For more information on the reporting of allergens along the serving line and the availability of information, see the sections “Menu entries” (p. 38) and “Special diets” (p. 65).

3.3 Mealtimes, served meals and snacks

Student restaurants offer a wide range of meals and snacks during the study day in a manner that supports other food eaten during the day. As studies have become more diversified and can also be completed remotely, in the afternoon, evenings and at the weekend, student restaurants must also take into account evening and weekend meal arrangements and other possible special needs in the food they serve.

Mealtimes

Student restaurants can sell meal-subsidised student meals from 10 to 20 every day. The restaurant operator can decide when the restaurant will sell student meals within this given period. The restaurant may also be open during other hours than those during which it sells subsidised student meals. Student restaurants usually offer subsidised student meals on weekdays during lunch, but some restaurants also offer student meals after lunch and on weekends. In addition, many student restaurants also sell breakfast and snacks. Some student restaurants sell surplus

25 More information of the Kela-issued meal subsidy card: <https://www.kela.fi/yhteistyokumppanit-oppilaitokset-ja-opiskelijaravintolat-ateria-tuki-opiskelijan-oikeus> (In Finnish)



food daily, allowing the student to eat surplus food, for example, for their second meal of the day. The Kela meal subsidy is intended for one meal per day.

Student meal

A student meal refers to a complete meal consisting of the main dish, salad, bread, spread and drink. A student meal should cover about 1/3 of the daily energy requirement and contain at least 20 g of protein per meal. The amount of energy and protein is calculated on the basis of the entire meal, not just the main dish. For more detailed criteria, see Chapter 4.2 (p. 56).

There should be an adequate range of student meal options available to help students find the dish they like. The minimum amount is at least 2 student meal options of standard price²⁶. Special dishes made from more expensive raw materials may be offered if at least 2 standard-priced alternatives are available.

Student restaurants are encouraged to serve a vegetarian option on a daily basis, as this is in line with sustainable development and reduces the environmental load on food. A student restaurant can decide for itself the type of vegetarian food offered in the restaurant, taking customer demand into account.

Chapter 4.3 provides more information on complete meals, the daily number of meals that are labelled as being compliant with recommendations, and more detailed nutrition criteria for complete meals (p. 58).

26 If only one meal option is available each day (e.g. university research stations), it is acceptable that the majority of main dishes (at least 80%) comply with the recommendation.



Fat-free milk, buttermilk or plant-based drinks compliant with the recommendation are served as meal-time beverages according to local demand. Students cannot be charged an additional price for plant-based beverages. In addition, water must be available. At least one bread option and one spread must meet the minimum nutritional standards. Salad dressing or oil meeting the nutritional requirements must also be available. (For more detailed criteria, see Appendix 1, tables 1a-c.)

Student meal in compliance with recommendation

The meal options that a student restaurant has labelled as student meals must meet the criteria set out in the recommendation (see Chapters 4.2 and 4.3). Standard recipes should be drawn up on options that are in compliance with the recommendation and it should be ensured that the ready meal meets the given criteria. In addition, the student restaurant must prepare nutrient content calculations per 100 g for each option that complies with the recommendation. These calculations can be used to monitor compliance with the nutrition criteria.

Pricing criteria for a standard-priced student meal and special portion

Provisions on the content and pricing of student meals are laid down in the Government Decree on Principles of Subsidising Meals of Higher Education Students (375/2020; see Chapter 7). There are two maximum price categories, a student meal (in this context a standard-priced meal) and special meals made of more expensive raw materials. Raw material costs are used as the starting point for meal pricing. Both the price of the raw material and the amount used are taken into account: For example, for fish raw material, pricing may vary depending on availability, season and fish processing. The name of the meal or product does not determine which price category the meal belongs to.

A student meal of standard price includes:

- minced meat, chicken and sausage dishes, casseroles, main dish soups and salads (e.g. feta salad)
- filled baguettes, wraps, paninis, ordinary pizzas and savoury pies
- vegetarian dishes with more affordable raw materials (e.g. peas, beans, lentils, soya products and tofu)
- most pasta dishes and whole meat sauces
- more affordable fish foods.

Examples of more expensive special portions that can be served include:

- steaks and roasts, and ala carte fish dishes
- wok dishes with meat and more expensive vegetables
- Full beef steak (instead of ordinary minced meat patties), which is more expensive and larger than normal
- Preparations from broad beans, oats, wheat gluten, mushroom protein, and other plant protein, if its price per kilo is similar to that of fish or meat fillets and if the same amount is used as is in fish and meat speciality meal options.



Snacks

A student restaurant or café should sell various types of health-promoting snacks that are suitable for students' different tastes, are appealing and are easy to take with.

A snack is necessary if the time between the meals is too long. A healthy snack is nutritious and of appropriate size.

A snack can be put together conveniently using the plate model principle

Vegetable + cereal + protein source = versatile snack

- plant based = vegetables, root vegetables, berries, fruit
- cereals (whole grain cereals) = bread, porridge, cereals, muesli, rice, bran flakes
- source of protein = possible supplement; milk, buttermilk, viili (local soured milk product), yoghurt, quark, cheese, meat cut, tofu, soya yoghurt, nuts and other plant-based snacks

You can also put together other smaller meals such as breakfast and supper according to the principles of a good snack.



Example snacks for different situations

Light snack: Portion of fruit (banana, apple or orange), berry portion or smoothie and tea/coffee.

Versatile snack: Filled rye bread (salad, low-fat cheese and cucumber), nuts and water.

An ample snack: a sandwich with filling and overnight oats, quark or low-fat yoghurt, hot beverage and water.

Breakfast

Good experiences have been gained of serving breakfast in student restaurants and it is recommended that it be introduced more extensively. Breakfast, which includes porridge or a sandwich, gives the student an easy option to eat before they begin their daily studies.

Distance learning and meals

- It is worth keeping to a meal rhythm, as it is the basis of a healthy diet. The recommended meal rhythm is, for example, breakfast, lunch and dinner and, if necessary, 1–2 snacks at regular intervals.
- It is a good idea to anticipate, and plan breaks and cooking in advance.
- Recommendations on meals and snacks are also helpful in planning meals at home.
- Take breaks from studying and sometimes eat away from home. Dining at the student restaurant, allows you to eat a full meal and, at the same time, meet other students.
- Remember to drink enough water.
- Avoid consuming excess amounts of coffee and other products containing caffeine (see Beverages, p. 62).



3.4 Student participation and cooperation with student restaurants

Instructions on student meals, the operating methods agreed on with the higher education institution and the opinions of the customers form the foundation for student restaurant activities. Finnish school and educational institution meals have a good reputation by international standards. It is essential that the higher education institution, students, student union, food service and student health care work together in the organising and high-standard implementing of student dining. Cooperation should be developed so that it is interactive and inclusive of students. The views of students and staff on served meals should be monitored via the customer feedback system. Feedback can be collected at certain intervals by means of a repetitive customer satisfaction survey, and the restaurant must also provide an option for giving daily feedback. It is also a good idea to have discussions with students about meals served. On the basis of these discussion means to increase the appeal of student meals can be developed.

The popularity of student restaurant dining is increased by students feeling that they can influence different aspects of student dining, such as the range of meals served and the environment. The most important thing is that the possibilities of exerting influence are suitable for the higher education institution in question and that the students feel that the possibilities for



Table 4. Good practices for student engagement.

Method of inclusion	How and why?
Cooperation with the student union or board of the student organisation	In addition to the restaurant committee, cooperation with the student union or local student association board or their authorised student representatives lay the foundation for the successful participation of students. Cooperation with the student union can include discussions on how to include higher education students in the best possible manner. Discussions can be held with the student union or student association board on how to arrange regular meetings or they can appoint their own representatives to official bodies that make decisions on meals and dining.
Regular student meal survey and follow-up of KOTT surveys ²⁷	Collection of student feedback on meal-related matters, for example via a regular survey. Monitoring and processing the results of national surveys (KOTT) with student representatives.
Feedback systems open to all (e.g. electronic system or feedback box near restaurant)	The collection of feedback enables the development of food services as a collaborative effort. It is a good idea to collect feedback throughout the year and examine the results at regular intervals. Responding to feedback is an important part of effective interaction.
Reducing and monitoring food waste	Working with student representatives to develop effective practices for reducing food waste (e.g. monitoring of, reporting on and provision of information on food waste or selling surplus food in compliance with food legislation).
Theme weeks and campaigns organised together by the parties.	Different themes and campaigns can be brainstormed together with student representatives. These may include for example a most requested food day, a traditional food day or getting to know the cultures of different countries through food. Even in these cases, a sufficient number of options that comply with recommendations must be made available (with the exception of Christmas, Easter and 1 May).
Tutors take part in student dining	Tutors will help introduce new students to dining at the student restaurant by eating together with them during the first few weeks, showing the around the dining facilities and providing instructions on various practices, giving feedback and other matters related to student dining.
Providing information on food nutrient content and recipe tips to students	Students will be given information on nutrient content and recipes that students can utilise in their everyday lives.

exerting influence are meaningful. When requesting student feedback, it is a good idea to specify the service areas on which feedback is needed. This makes it easier to plan and implement possible changes, taking the students' wishes into account. Good experiences of opportunities to influence will strengthen students' motivation to commit to dining at student restaurants.

Customer / Restaurant Committee

The development of student food services will be promoted if a customer/restaurant committee has been appointed to promote cooperation between the higher education institution, students and the restaurant (see Table 4). The committee should comprise at least a student representative, representatives from the school's administration and staff, and representatives from student health care and the restaurant operator. Meetings should be held 3–4 times a year. Regular meetings facilitate fast and effective experimentation and application of good development proposals.

The task of the customer committee is to act both as a cooperation body and to support and develop student dining and meals. Its task is to process the feedback received from customers and to plan and develop activities based on the feedback received. For example, it can comment

27 Finnish Student Health and Wellbeing Survey 2016 https://1285112865.rsc.cdn77.org/app/uploads/2020/01/KOTT_2016-1.pdf (In Finnish)

on menus, snacks, drink vending machines, cooperation, themes and events, as well as influence the organisation of student meals, the comfort and pleasantness of restaurants and the monitoring and evaluation of activities. The customer committee may also act as an initiator in various health promotion campaigns.

It is a good idea to provide a description of the customer committee in food service agreements. This ensures the multidisciplinary nature of the group, its capacity to act, and its possibilities for exerting influence. This is particularly important in situations where food services are implemented as a purchased service and the operator is an external partner.

Cooperation with student health care

Student health care is an important partner in the implementation of student meals and dining. The competence of student health care representatives should be utilised in the customer committee as experts in health promotion. Forms of cooperation may also include various campaigns and themes to support health-promoting eating. Theme days on the effects of beverages and snacks on oral health can be organised in cooperation with oral health experts. It is also important to inform students about food services through student health care. Student health care can support students both individually and collectively as a community in the utilisation of student meals and in making healthy food choices. (See chapter 6 Student Health Care.)

.....

The way in which students' opinions or feedback have been processed and taken into account in the organisation of meals will be made visible. This will encourage students to participate in the development of meals and dining.

.....

3.5 Tendering of food services and procurement of food

Meal-subsidised student meals are sold in restaurants that have been granted the right to Kela's meal subsidy. Subsidised student meals are sold, for example, in restaurants operating in the school's premises, in restaurants in other educational institutions, in hospitals and in private restaurants close to campus areas, libraries or students' residential areas. The food services of higher education students may be provided by a private food service company, the higher education institution itself, another educational institution, the municipality or the joint municipal authority.

Most subsidised meals are sold in student restaurants located in the higher education institution's premises. Higher education institutions may tender their student food service provider as a single tender for all locations or individually by site. The selected food service provider will in turn conduct tendering for the foodstuff it needs. The Act on Public Procurement and Concession Contracts does not obligate a private service provider. Public procurement of food services and foodstuff must comply with the Act on Public Procurement and Concession Contracts (1397/2016²⁸).

28 Act on Public Procurement and Concession Contracts (1397/1397). <https://www.finlex.fi/fi/laki/ajantasa/2016/20161397> (In Finnish)

Tendering for food services

Tendering for food services has a significant impact on the realisation of the nutrition quality of food.

The procurement of food services for higher education students requires compliance with the nutrition quality criteria presented in this recommendation (see Chapter 4 and Appendix 1, Tables 1a-c) and the Government Decree on Principles of Subsidising Meals of Higher Education Students (375/2020). For more information on the legislation related to the meals of higher education students, see Chapter 7.

The food recommendation for higher education students defines the nutrition quality of student meals and the number of meals in compliance with this recommendation that must be served in the student restaurant. Government Decree 375/2020 provides that the student meal be of such quality that it meets general health and nutrition requirements. The decree also stipulates that a student meal must be a meal that contains a main dish, salad, beverage, bread and spread. The speciality meals for students are meals made of more expensive raw materials is otherwise similar to a student meal (see Chapter 3 and Chapter 7). A model meal and labelling in the menu or along the serving line should be used to direct students in putting together meals that comply with recommendations.

The pricing of the student meal must comply with Government Decree 375/2020. A student restaurant must serve at least two student meals at the standard price each day. Speciality dishes made from more expensive raw materials may be served if there are at least 2 meal options of standard price available. The non-discounted price of a student meal must not exceed the VAT free price charged from other customers of the restaurant for a similar meal. The pricing must also take into account the guideline²⁹ provided by Kela on the price of a student meal in relation to the pricing of meals for staff and other customers.

Tendering must include a clear description of the activities being tendered, the objectives of the service and how the scoring between different areas is emphasised. The party tendering the service must describe in as much detail as possible the target groups (higher education students, staff, potential other customers) and what meals, snacks and other food and service procurements are included in the invitation to tender.

The party responsible for tendering should also define the objectives of the service procurement and describe the service requirements, service content, quality and responsibilities. Factors that are especially important in the tendering of food services are those that determine the nutrition quality and environmental impacts of food as well as matters related to the provision of the food service and cooperation. The contracts and service descriptions are drawn up on the basis of the call for tender documents, which is why attaching a draft contract and the key issues of the service contract to the call for tender is recommended. A carefully prepared invitation to tender is a prerequisite for successful tendering.

29 Kela. Meal subsidy for student restaurants. <https://www.kela.fi/yhteistyokumppanit-oppilaitokset-ja-opiskelijaravintolat-ateriatuki-hinnoittelu> (In Finnish)

Factors taken into consideration in tendering

- A service description, i.e. how different areas of the food service will be implemented.
- How the service provider will take social, economic, ethical, and environmental responsibility as well as sustainable development into account. These factors may include the origin, nutrition quality, seasonal nature of the ingredients used, the degree of self-preparation, ecology and waste management.
- A description from the tenderer of how the model meal will be described to the customer.
- The menus must meet the criteria for the higher education students' meal recommendation (2021). For the comparison of tenders, tenderers must be asked for the model menus and for information on the principles and cycle of the menu. The model menu must show whether the meals on offer meet the minimum nutritional requirements by presenting the menu's nutrient content calculations. The tender must show how many food, salad, bread and beverage options are available and the price of meals offered to different target groups.
- Procurements are guided by such things as the strategies of higher education institutions, municipalities and student food service providers and the principles of sustainable development (for example, serving vegetarian food, the seasonal nature of raw materials, a reduction of food waste, local food, the utilisation rate of organic food). It is important to also highlight the desired minimum requirements governing the quality of the service, meals and ingredients in these respects in the tender.
- It is also advisable to set minimum requirements for the quality factors of the food service, related to such things as the raw materials used (e.g. domestic meat or source of plant protein, responsibly caught fish) or the organisation of the service.
- The quality of operations can also be assessed by requesting information on the number of personnel, their competence (training and work experience) and a development plan. Employees may also be required to complete, qualifications such a nutrition and environmental passports. A process description for food product development will also help the party putting out the tender to assess how the tendering parties will operate in the future. There must be a separate monitoring plan for nutritional standards.
- The establishment of customer/restaurant committees should also be entered into service agreements.
- Distribution of cost responsibilities. In accordance with established practice, higher education institutions have funded the facilities and fixed equipment needed for student meals and dining and have made them available to restaurant operators free of charge with the same principles that have been applied to personnel meals. Universities and universities of applied sciences are appropriated funding for their activities in the state budget.

The party procuring food services must also monitor that the agreed to quality and taste of the food are met and explain how this will be monitored in practice. When an invitation to tender

is sent, the food service provider is asked for a description of how they will ensure and monitor that the listed selection criteria will be met in their operations. Quality can be monitored by systematically collecting feedback and examining the actual menus and their nutritional content in relation to what was agreed, and by monitoring student participation in student dining at student restaurants. In addition, the appropriateness of operations, feedback received on the taste of food and sufficiency of the food, implementation of self-monitoring, number of deviations and corrective measures as well as active cooperation with clients and the activeness of the customer/restaurant committee will be assessed.

The party procuring the service must have the professional skills and competence needed to steer the food service and monitor the realisation of quality.

Kela supervises that student restaurants comply with the nutrition quality criteria specified in the meal recommendation for higher education students and the Government Decree on Principles of Subsidising Meals of Higher Education Students. If the meals served do not meet the criteria for granting the Kela meal subsidy, the food service provider is obliged to change the composition or pricing of the meals. Kela does not participate in the tendering process for student meal services.

An example of the structure of the invitation to tender or the tendering material is presented in Appendix 6.

Food procurement

A key aspect that needs to be taken into consideration in food procurement is good nutrition quality so that the recommended nutrition quality of meals can be achieved. The realisation of nutrition quality must also be ensured if the kitchen does not prepare dishes themselves.

In food procurement, particular attention should be paid to those foods that may contain plenty of saturated fat or salt and which are used frequently and in large quantities on a regular basis. The main thing is that when the meal has been prepared and is ready to be served, it meets the criteria for the nutrition quality of a student meal.

In the scope of foodstuff procurement and production, it is important to take into account matters related to the quality and origin of the foodstuff that must be communicated to customers as well as the freshness of raw materials, the principles of sustainable development and how the information needs of students can be met.

In accordance with Finland's National Public Procurement Strategy³⁰ and the Government resolution³¹ on the strategy, the state and municipalities must act in such a way that public procurement promotes the attainment of climate and sustainable development objectives. Foodstuff and food service procurements must promote a sustainable food system and use foodstuff produced in a

30 Kansallinen julkisten hankintojen strategia (National public procurement strategy) 2020. <http://urn.fi/URN:NBN:fi-fe2020090768680> (In Finnish)

31 Valtioneuvoston periaatepäätös kansallisesta julkisten hankintojen strategiasta (Government decision-in-principle on the national public procurement strategy).2020. <https://valtioneuvosto.fi/paatokset/paatos?decisionId=0900908f806d890d> (In Finnish)

sustainable and responsible manner. A sustainable food system is the foundation of food security. Even in Finland, food security can diminish significantly as a result of climate change, the depletion of diversity and crisis situations. Procurement criteria used in food and food service procurements must promote environmentally sound cultivation methods, food safety, nutrition, animal welfare and health, and at the same time sustainable food supply and ecological sustainability.

Motiva Oy has prepared a guide for responsible food procurement. It outlines criteria for tendering that increase responsibility for different product groups on two levels: standard level and forerunner level criteria. The criteria that correspond to the purchaser's procurement strategy and guidelines and otherwise support the quality and responsibility targets that have been set can be selected for the tendering process.

A target has been set for public food services to increase the proportion of both natural and organic food in food procurements. If a product is organic this in itself can be considered a quality criterion. Local food refers in particular to locally made food that promotes the region's economy, employment and food culture, which has been produced and processed from raw materials in its own region and is marketed and consumed in its own region. Own region refers to the county or an equivalent or smaller area. Organic production is a certified production method as defined in EU legislation.

Reducing food loss and plate waste are also economically viable measures that have a significant impact on the environment.

According to the National Nutrition Council's Finnish nutrition recommendations (2014)³², sustainable development should also be taken into consideration in food choices. Changing one's diet so it complies with the recommendations reduces the environmental load of food as such. In particular, Finnish crop vegetables, potatoes, peas and beans are environmentally friendly choices. Also the use of fish, rapeseed oil, margarine and tap water are choices that support sustainable development

Further information

Ministry of Agriculture and Forestry. A responsible food chain.

<https://mmm.fi/en/food-and-agriculture/responsibly-from-farm-to-fork>

Motiva Oy. Opas vastuullisiin elintarvikehankintoihin – suosituksia vaatimuksiksi ja vertailukriteereiksi. 2nd version Published December 2020.

https://www.motiva.fi/files/18215/Opas_vastuullisiin_elintarvikehankintoihin_-_suosituksia_vaatimuksiksi_ja_vertailukriteereiksi.pdf (In Finnish)

Ministry of Agriculture and Forestry. Local food – but of course!

<http://urn.fi/URN:ISBN:978-952-366-370-1>

EkoCentria. Lisää lähiruokaa julkisten keittiöiden asiakkaille -opas, 2017.

<https://sakky.fi/sites/default/files/2021-03/L%C3%A4his.pdf> (In Finnish)

32 National Nutrition Council. Terveyttä ruoasta – suomalaiset ravitsemussuositukset. Kestävät ruokavalinnat lautasella, p. 40. <https://www.ruokavirasto.fi/en/themes/healthy-diet/sustainable-food-choices-on-the-plate/>



A varied and versatile menu requires a sufficiently long menu cycle. A minimum four week menu cycle is sufficient to guarantee versatility. When planning the menu cycle, the entire food year is taken into account. Seasons, themes and holidays bring their own rhythm to the year, offer variation and familiarise students with the traditions of cuisine and customs in a natural way.

Meal composition

The served meal is health-promoting, diverse, tasty and appealing to eat. In addition to the main dish, a balanced meal includes vegetables, salad dressing, bread, spreads and beverages. It is possible to assemble a good meal in several different ways (Table 5).



Table 5. Examples of recommended meal options.

Main course	Energy-containing side-dish	Other sides
Vegetarian, fish or meat food (white meat is preferred, red meat less so)	Potatoes, barley, pasta, cereal blends, rice, etc.	Salad, bread, vegetable oil-based fat spreads, beverage* and vegetable oil-based salad dressing
Casseroles and stews		”
A main salad (legumes, bulb beans, tofu, fish, eggs, cheese or meat)	Pasta, cereal mix or potato should be available with salad if necessary	”
Soup (vegetarian soups should have beans or lentils as a protein supplement)		”
A bread-based meal (bread, sandwich, etc., high in fibre and with less salt, etc.)		”
Whole grain porridge prepared in milk or a milk-like plant-based beverage.		”

* Fat-free milk or buttermilk are recommended meal-time beverages. If necessary, liquid dairy products may be replaced by products of plant origin, such as soya or oat drinks, supplemented with calcium, vitamin B12, vitamin D and iodine.



4.2 Nutrient content of the meals served

Energy content

Energy needs vary individually depending on physical activity: The daily energy intake allowance for women aged 18–30, is 9.4–10.5 MJ/day (2,245–2,510 kcal/day) and for men 11.7–13.2 MJ/day (2,800–3,155 kcal/day)³³. The need for energy is lowest for small women who are not very physi-

33 National Nutrition Council Terveyttä ruoasta – suomalaiset ravitsemussuositukset. Version 5 https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/kuluttaja-ja-ammattilaismateriaali/julkaisut/ravitsemussuositukset_2014_fi_web_versio_5.pdf (In Finnish)

cally active and are in jobs requiring non-strenuous seated work and highest for large, physically active men, employed in manual labour.

Each meal is planned to give students the opportunity to meet about **one third** of their daily energy needs during the meal in question (Table 6). It is important to note that the individual energy needs of students and thus their portion sizes vary considerably. The recommendation will only be met when the student eats an entire meal including side-dishes.

Table 6. Reference values for energy content of a meal to be used in planning student meals.

Average	Minimum	Maximum
700–800 kcal (2.9–3.3 MJ) / meal	500 kcal (2.1 MJ) / meal	1,000 kcal (4.2 MJ) / meal

It is important to ensure that in student meals the fat content and quality and protein, carbohydrate and fibre contents are in balance and correspond with Finnish nutrition recommendations issued by the National Nutrition Council³³.

Energy nutrients

Table 7 shows the recommended values for the energy nutrients (fat, protein, carbohydrates) in student meals.

Table 7. Average shares of energy nutrients in a student meal accordance with the model meal (Expressed as per cent of energy content, E-%)

	% of energy (E-%)
Fat	30–40
Saturated fat	less than 10
Proteins	13–17
Carbohydrates	45–50

The aforementioned recommendations are realised when the meal component-specific minimum nutrition quality requirements are met (see Appendix 1, Tables 1a–c). These criteria ensure that the meal as a whole complies with recommendations.

The realisation of minimum nutrition quality requirements in served student meals can be assessed using the **student meal nutrition quality assessment tool** suitable for own-controls (see Appendix 5). The tool illustrates the likely nutrition quality of the meals served. The questions focus on food procurements and cooking methods in accordance with the recommendations, as well as on information provided on food choices and customer guidance. The tool is an aid for self-monitoring the nutrition quality of meals, but compliance with these alone will not guarantee the compliance with the criteria set out in this recommendation. The tool can be used in the planning of services when a restaurant is preparing to apply for the right to a Kela meal subsidy. In addition, the tool can be used for personnel training and orientation, in-house on-site inspection and preparation for Kela supervision and inspection visits.



It is good to have a varied selection of different unsalted basic spices, herbs and condiments for individual seasoning.

Iodised salt in the preparation of food

Products containing less salt are selected for meals (bread, other cereal products, cheese, cold cuts). The salt content of the meal in its entirety is most affected by salt content of the main dish (see Chapter 2, Salt, p. 22).

Attention must be given to the selection of raw materials to ensure that the salt criteria for parts of meals are met. Selecting raw materials with less salt makes it easier to achieve the criteria. The salt is always weighed and not added to the food according to taste. Taste can be added to food by using a wide variety of spices and herbs. Good customer service dictates that a restaurant place a spice table in the dining area, which contains a variety of salt-free additional spices.

Iodised salt is used in food preparation. The kitchen should check the salt packaging to ensure it contains iodine, as the product name does not always specify this. Iodised salt must be indicated on the ingredients list as such or as separate ingredients (salt, iodine).

By reducing salt in food preparation and selecting foodstuff with a lower salt content³⁴, the salt preferences of students can be influenced. This is important to note in nutrition education. People who have a preference for salty foods can become accustomed to low-salt foods. A person's sense of taste usually adapts to the new less salty taste within a few weeks after which food that has normal salt content may taste too salty.

³⁴ The Ministry of Agriculture and Forestry Decree (<https://www.finlex.fi/fi/laki/alkup/2014/20141010>, in Finnish) provides that if the salt content in certain foods that are significant for the intake of salt exceeds the permitted salt content, it must be indicated on the packaging as "strongly salted" or "high salt content". The strongly salted labelling is determined by the overall amount of salt in the food (both added and natural). The amount of sodium is converted into salt by multiplying it by 2.5 (e.g. 400 mg sodium = 1,000 mg or 1 g salt).

4.3 Supply of meals and their nutritional standard

The following factors must be realised when serving student meals entitling to the Kela subsidy:

1. The number of main dishes complying with the criteria (see Appendix 1, Tables 1a-c) that must be available daily is
 - at least 1 if there are 2 meal options
 - at least 2 if there are 3–4 meal options
 - at least 3 if there are 5 or more meal options

Please note! Also the energy-providing side-dish and additional sauce possibly served with a main dish must meet the nutrition criteria.

2. Description of the model meal (see Description of the model meal p. 60 and Chapter 3.2, p. 37)
 - A description or illustration of a model meal must be made available for students. It must include the recommended meal parts (main dish with warm side-dishes, milk/buttermilk /plant-based beverage, bread, fat, salad/vegetables and salad dressing).
 - The meal (or meals) that complies with recommendations must be indicated on the menu (see Chapter 3.2, p. 37).

3. Other parts of the meal (see Table 8, p. 62 and Appendix 1, Table 1c)

The following parts of a meal must be available every day to all students who wish to dine at the restaurant.

- At least one bread option containing high fibre content (at least 6 g/100 g) and no more than 0,9% salt (fresh bread) or no more than 1,2% salt (crispbread).
- A fat spread that complies with recommendations (the preferable option is a vegetable oil-based vegetable fat spread with at least 60% fat).
- Fat-free milk or buttermilk or water. If necessary, liquid dairy products may be replaced by products of plant origin, such as soya or oat drinks, supplemented with calcium, vitamin B12, vitamin D and iodine.
- Fresh vegetables or fresh salad, berries or fruit.
- Vegetable oil-based dressing or oil served separately with salad.

4. Number of fish dishes

- A fish dish that meets the criteria must be served at least twice a week in restaurants other than those that only serve vegetarian food^{35, 36}. At least one of the fish dishes must be of standard price.

Foods and meal components with the Better Choice label (Heart Symbol) that have compliant nutrient content are suitable as such as part of a meal that complies with the recommendation,

35 The recommendation is based on Finnish nutrition recommendations 2014.

36 The Finnish Food Authority-issued instructions on selecting fish species to eat and the frequency they can be eaten at for young, women of fertile age, pregnant and breastfeeding must be taken into account.
<https://ruokavirasto.fi/en/instructionsforsafeuse>



even though the criteria for some Heart Symbol products are slightly different than the criteria for the recommendation on higher education student meals. For example, the amount of fat or salt is higher in some Heart Symbol products.

Food meeting the criteria for meal subsidies may be:

- food prepared by the restaurant kitchen that meets the criteria of the recommendation
- a semi-finished product produced by the food industry or a finished product that meets the criteria for the meal recommendations of higher education students
- a product produced by the food industry that has been given the Heart Symbol.

In addition, all foods that meet the criteria for the Heart Symbol products but whose producer has not applied for a Heart Symbol for the product are accepted as part of a meal that complies with the recommendation.

Protein content of meals

Each meal as a whole must contain at least 20 g of protein (about 1/3 of the necessary daily intake). This is generally automatically the case for meals containing meat and fish. On the other hand, particular attention should be given to adequate and versatile protein intake with vegetarian diets, especially vegan meals (see Chapter 2, p. 24).

Protein sources for main dishes include legumes, other plant protein sources, fish, white meat, eggs, red meat, milk, buttermilk and other dairy products. Cereals are also a source of protein. In a vegan diet protein intake can be ensured by eating diversely leguminous plants and cereal products, while lactovegetarian diet contains also dairy protein (see Good sources of protein, Appendix 3).



Model meal

Student restaurants must display a model meal on a daily basis. It is a tool that guides in the selection of food and in portion sizes and illustrates how to compile a meal in accordance with recommendations.

A model meal can be, for example, a full meal served at the restaurant that day put together on a tray according to the plate model, which shows the different parts of the meal and their relative proportions. The model meal always contains a meal-time beverage, bread and spread as well as dessert when it is designed as part of the main meal. The model meal does not have to be an actual meal served at the restaurant, it can also be a paper image, written instructions or a digital picture presented in the mobile application with the menu.

If the restaurant wants to display written instructions for the model meal, it can be in the form of the following guidelines:

How do you put together a full meal according to the plate model?

- Fill half of your plate with vegetables (salad, fresh vegetables, cooked vegetables and/or berries and fruit).
- Fill 1/4 of your plate with potato, barley, cereal mix, whole grain pasta or dark rice.
- Fill 1/4 of your plate with legumes, other sources of plant protein, fish, poultry meat, eggs or red meat.
- Add oil or oil-based salad dressing in top of vegetables.
- In addition, select a whole grain bread with a vegetable oil-based spread (preferably with a fat content of at least 60%).
- Select fat-free milk or buttermilk or fat-free plant-based beverages, such as a soya or oat drinks.

A model meal of which 1/4 contains broiler-vegetable curry, 1/4 a barley side dish and 1/2 various vegetables: Oil-marinated white cabbage salad topped with seeds, and greed salad, tomato, cucumber and bell peppers. A glass of milk and water and a slice of rye bread topped with vegetable fat spread.



500 kcal (2,1 MJ)

A model meal of which 1/3 contains a lentil-bean curry, 1/3 a barley side dish and 1/3 various vegetables: Oil-marinated white cabbage salad topped with seeds, and greed salad, tomato, cucumber and bell peppers. A glass of oat drink and water and a slice of rye bread topped with vegetable fat spread.



500 kcal (2,1 MJ)



700–800 kcal (2,9–3,3 MJ)



700–800 kcal (2,9–3,3 MJ)



1000 kcal (4,2 MJ)



1000 kcal (4,2 MJ)

Table 8. Average portion sizes for different part of a meal (Using the sample portion sizes, the meal contains approximately 700–800 kcal in energy)

Main dishes	Portion size g
Soups	350–400
Main dish porridges	300–350
Casseroles, risotto, pasta dishes, Main dish salads* * * *, pizza	350–400
Main dish sauces, e.g. lentil-curry and chicken sauce	150–200
Food sold as items + sauce, e.g. meatballs, crepes, meatloaf, steaks, rolls and pieces of fish/broiler	170 (main dish 120 g, sauce 50 g)
Potato, pasta and rice sides to a main dish	Portion size g (when cooked)
Boiled potato	150–180
Other potato side-dish (e.g. mash, wedges and backed potato)	150–180
Pasta	140–170
Pearl barley, cereal grain mixes, whole grain rice, etc.	140–170
Other parts of meals	Portion size
Bread	30 to 35 g (= 1 slice), Soup-based meals 60–70 g
Bread fat	5–8 g (approx. 1–1,5 tsp), with a soup main dish 10–15 g (approx. 2–3 tsp.)
Milk and buttermilk Calcium, vitamin B12, vitamin D and iodine-supplemented soya or oat drink	1.7–2 dl (= 1 glass)
Vegetable side-dish, fresh salad, fresh and cooked vegetables	150–200 g
Oil-based salad dressing	15–20 g (n. 1–1.5 tbsp)

Please note! Energy demands are lower for small people or those who engage in little physical activity, so their portion sizes are often smaller than those shown in the table. Correspondingly, large people or those who engage in abundant physical activity have a higher energy demand and therefore their portions tend to be larger. However, the proportions of the different parts of the meal remain the same.

Portion sizes

The portion sizes illustrated in Table 8 ensure that the amount of energy in a meal meets approximately 1/3 of the average daily energy allowance of a moderately mobile person and that the meal specific recommendations on the quality and quantity of fat are met. It is recommended that the portion sizes listed in the table are used in putting together a model meal according to the plate model.

4.4 Beverages

People should drink 1–1.5 litres of different beverages throughout the day in addition to the fluid that comes with food. When selecting beverages, consideration should be given to their energy, sugar, acid, caffeine and alcohol content. Normal tap water is recommended as the beverage of choice when one is thirsty. It should be freely available at all times not only at mealtimes.

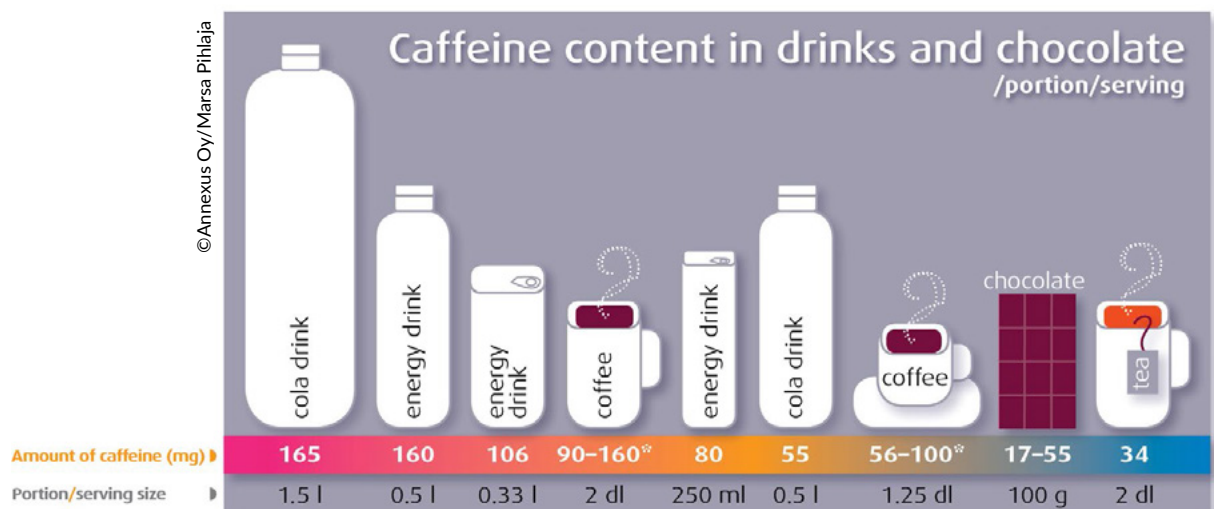
The portion sizes of energy-containing beverages should be kept reasonable. Most beverages do not contain a great deal of energy per decilitre, but even so they may provide an unnecessarily high amount of energy if they are consumed in abundant amount or often, or if sugar or cream



Care must be taken to ensure that water is also easily accessible so we can fill personal drink bottles.

is added to the beverage. However, drinks do not produce the same feeling of satisfaction and fullness as solid foods.

You can drink black coffee and tea without sugar on a daily basis, or with milk or a plant-based drink. The stimulant in coffee, tea, cola and energy drinks is caffeine. For those who are sensitive to caffeine, it may cause heart palpitations, tremors, sleep and concentration difficulties as well as addiction even in small amounts. In addition to coffee and tea, caffeine is also found in energy drinks and some chocolates such as dark chocolate (see drawing below).



* Light-roast Finnish coffee: caffeine 80 mg /100 ml.

Soft drinks (sugar-sweetened and artificially sweetened soft drinks, energy and sports drinks) should not be served with meals. They are not nutritionally recommended. Soft drinks containing acids and many flavoured bottled waters also cause erosion of dental enamel. Depending on the acidity of the beverages, beverages can be divided based on oral health as safe, recommended drinks and drinks that should be consumed rarely (see Chapter 6.3, Food and oral health, drawing p. 83). Some plant-based beverages contain sugars. The abundant and frequent consumption of such plant-based beverages between meals can increase cavities.

4.5 Special diets and special needs

When providing food services and planning food to be served, it is good to note that students are a diverse group with very different dietary needs. It is appropriate and cost-effective that the food listed in the menu is served to as many people as possible. Vegetarian meal options that are prepared in a diverse manner, are as a rule suitable for diets based on religious or ethical beliefs when the other foods served that day are not.

When a student needs a special diet due to a disease, food services will comply with the applicable Current Care Guidelines or Nutrition Care Recommendation (National Nutrition Council 2010)³⁷ or individual diet instructions prepared for the client by health care.

If the basis for a student's special diet is something other than an allergy, other medical reasons or religious and similar ethical reasons, the student restaurant is under no obligation to prepare a separate meal.

The most common special diets prepared in student restaurants are lactose-free and gluten-free diets. Diets that are less common are different allergy diets and diets that have been modified for religious reasons.

Student restaurants do not have separate diet kitchens. However, food suitable for people who need special diets can be prepared when it is made carefully, avoiding contact with other foods. Food service personnel must ensure sufficient and up-to-date expertise in the preparation of special diets.

The preparation of student meals suited for special diets makes it possible for all students to dine at the student restaurant daily and to maintain their ability to study and work.

The student restaurant should have a straightforward practice for how students can notify the restaurant of their special diet. Students must be provided information of how the notification is made. It is in the student's interest that the special diet related to the treatment of their disease has been medically determined and is thus justified. Unnecessary food restrictions may adversely

37 VRN. Ravitsemushoitosuositus, 2010 (Recommendation for Nutrition care), https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/ravitsemus--ja-ruokasuositukset/ravitsemushoito_netti_2.painos.pdf (In Finnish)

affect the nutritional balance and health of the diet if compliance with the diet leads to insufficient intake of nutrients.

Food hypersensitivities

Students may have a variety of food hypersensitivities. A student restaurant should have clear instructions on how hypersensitivities will be taken into account in the arrangements for safe meals. Hypersensitivities include food allergies, food intolerances and food hypersensitivities caused by a sensitive stomach such as irritable bowel syndrome (IBS) or gall bladder disorders. In general, small amounts of unsuitable food do not cause symptoms, but some of the food allergies are severe, and even a small amount of the food that causes symptoms, such as a drop of milk in the food of someone allergic to milk, may cause a life-threatening reaction. In this case, the spread of allergens in different ways (e.g. through air, via surfaces, people and tools) should be taken into consideration in both the preparation and serving of food.

Some of those who suffer from irritable bowel syndrome try avoiding FODMAP carbohydrates to alleviate symptoms. The person themselves knows best which foods cause symptoms and what they can eat without experiencing symptoms or only with minor symptoms. A student restaurant often has such an extensive and versatile salad table (raw materials as components) and selection of main dishes that a meal can be put together without special arrangements.

It is important that when notifying the restaurant of a food hypersensitivity, the student also specifies the severity of their symptoms so that the restaurant knows how precise and cautious they must be in avoiding contamination for the individual student. Where necessary, the student must acquire a medical certificate confirming the need for a special diet. By showing this, he or she can make arrangements with the restaurant manager for unique individual portions. The student and the restaurant will jointly agree on how the student will inform the restaurant of any necessary information. The student must undertake to notify the food service in advance of the days on which he or she will not eat at the student restaurant. The student restaurant staff have the right to refuse to prepare a special diet for the following reasons:

- The student is unable to commit to regular meals.
- The student's food allergy may lead to such violent and dangerous symptoms that restaurant staff cannot take on liability for preparing the particularly precise diet in normal professional kitchen conditions. The preparation of a demanding special diet also requires special professional competence.

Personnel working in food preparation and customer service must always have knowledge of all raw materials and ingredients in use and their suitability for different diets³⁸. The information

38 "May contain" labelling on product packaging. There are no EU level legislation, guidelines or limits for the "may contain" labelling related to allergens. The use of the phrase is the responsibility of the operator, and the operator decides whether or not to use the phrase on the basis of its risk assessment. For more information, see the Finnish Food Authority, Elintarviketieto-opas (Food Information Guide), p. 70–71. https://www.ruokavirasto.fi/globalassets/tietoa-meista/asiointi/oppaat-ja-lomakkeet/yritykset/elintarvikeala/elintarvikealan-oppaat/elintarviketieto_opas_fi.pdf (In Finnish).

should be readily available in the restaurant in written or electronic form, so it is accessible to staff and supervisory authorities.

Provisions on the provision of food information to consumers are laid down in the Regulation of the European Parliament and the Council on the provision of food information (EU No 1169/2011)³⁹ and nationally (Ministry of Agriculture and Forestry Decree 834/2014⁴⁰). The customer must be provided sufficient information on the raw materials used and information on any allergens and intolerance-causing substances defined in the legislation (EU No 1169/2011, Annex II) that have been used in the preparation of meals or foodstuffs. The information must be provided in writing. Information may also be provided orally if customers are clearly informed that they can obtain additional information about allergens and intolerants in meals from food service staff.

More information on food allergies:

- <https://www.ruokavirasto.fi/henkiloasiakkaat/tietoa-elintarvikkeista/ruoka-allergeenit/>
- <http://www.erimenu.fi/>

A lactose-free diet

When preparing a lactose-free diet, the following key issues must be taken into account:

- Lactose-free dishes must be available every day.
- Either lactose free milk or plant-based alternatives must be available as meal-time beverages.
- A lactose-free and non-dairy vegetable margarine or other plant-based alternative must be available every day as a spread for breads.

A dairy-free diet

- A dairy-free diet does not contain any of the ingredients in milk.
- A lactose-free product is not always dairy-free.
- Milk is replaced in food preparation and as a beverage with water or plant-based products.

A gluten-free diet

When preparing a gluten-free diet, the following key issues must be taken into account:

- The diet may contain both gluten-free (maximum gluten content 20 mg/kg) and very low gluten (maximum gluten content 21–100 mg/kg) foods. Labelling on packages must be read carefully.
- Sauces are thickened with maize or potato starch or other gluten-free thickeners.
- When preparing foods and setting food out to be served, care must be taken to ensure that the food does not come into contact with other foods containing gluten, and that gluten-containing food or its parts, such as flour dust from the surface of crispbread, will not mix with the gluten-free food. For this reason, for example, gluten-free bread and spreads should be placed far enough on the serving line from gluten-containing food that there is no fear of contamination.
- Potato, full-grain rice or gluten-free pasta are served as an energy-containing side-dishes (normal pasta and rice-cereal mixes are not suitable). The serving line must have sufficient space between gluten-containing and gluten-free products, as well as a sufficient number of serving utensils to prevent them from being moved between dishes, which ensures that e.g. rice is not contaminated.

39 Regulation on the provision of food information to consumers EU No 1169/2011
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R1169&from=FI>

40 Ministry of Agriculture and Forestry Decree 834/2014 on the provision of food information to consumers.
<https://fnlex.fi/fi/laki/alkup/2014/20140834> (In Finnish)



Athletes and otherwise mobile people and meals

The need for energy and some nutrients is higher for athletes who train and compete a great deal as well as for students in the fields of sports and police education than for other people of the same age. Sufficient energy availability is a prerequisite for general coping and development as well as for good performance regardless of the sport in question. An increased need for energy means larger food portions and/or more snacks depending on the individual energy needs of the athlete. This also poses challenges for student meals, especially in sports institutes. The plate model for athletes (1/3 of each section) usually takes into account the increased need for nutrients even for athletes in the sporting forms that are the physically most demanding. In some sports with high energy requirement (e.g. durability and ball sports), both the size of food portions and the share of carbohydrates in the plate model (bread, potato/ cereal side dish) may be even larger. Athletes do not routinely need nutritional supplements or sports products in addition to proper student meals and snacks. If the student restaurant limits the number of protein sources included in a meal (for example, the meal only includes a certain number of meatballs), the student should have the opportunity to buy a larger portion of protein rich component.

The basis of athlete nutrition is food that is balanced and complies with nutritional recommendations and covers both energy and protein needs. Athletes often consume high protein and carbohydrate-rich snacks, sports drinks and recovery drinks. From the perspective of an athlete, these too have their own purpose. However, they cannot replace normal meals. It must also be taken into account that some athletes train in the morning before and/or immediately after the study day. Breakfast service at student restaurants makes it easier for athletes who train in the morning to get a healthy morning meal. Lunch is also a particularly important meal between two training sessions and should ensure an adequate supply of energy and nutrients for the second training session in the afternoon. When necessary meals will be supplemented with smaller snacks closer to a training session. It is recommended that the snack selection at student restaurants include easy to carry products, such as sandwiches, dairy products and fruit.

More information on the nutrition of athletes at
www.terveurheilija.fi (In Finnish)

5 MONITORING AND EVALUATION OF STUDENT MEALS

It is important to monitor and evaluate the realisation of the nutrition recommendation for higher education students, the quality and versatility of student meals, the implementation of student food services and the popularity of meals in order to ensure quality and to develop operations. Both the higher education institution and the food service provider participate in monitoring and evaluation. The students participate in the evaluation through customer feedback and by acting as members of customer/restaurant committees. In addition, KELA carries out inspections at restaurants that have been granted the right to a meal subsidy for higher education students, food safety is overseen by food safety authorities, and Finnish Student Health Services carries out health, safety and wellbeing inspections at higher education institutions.

The higher education institution and food service provider should jointly agree on how student meals are monitored and evaluated. This should be specified already when tendering for food services. Monitoring can help in determining whether served meals meet the higher education institution's objectives for well-being and sustainable development and comply with the agreements concluded with the food service. In addition to meals meeting the nutrition quality, other matters that are important to monitor include whether dining has been arranged in a way that allows students to eat without a sense of urgency during their breaks, and how a restaurant's opening hours support the smooth flow of a study day and the student's meal rhythm, including the availability of snacks. The nutrition and well-being targets set for meals are only realised when a diverse meal meeting the criteria of the recommendation is eaten together with others without urgency and when the students also have the opportunity to buy healthy snacks.

It is recommended that student restaurants regularly monitor the customer satisfaction of students, staff and other customers, participation in meals, dish-specific consumption rates and food loss. The restaurant's activities and the nutrition quality of the food served are monitored and evaluated both in the manner specified in service agreements and internally as part of own checks by the food service, the self-monitoring of activities and quality control.

The implementation of student dining and food services can be reported in the following ways:

- food service quality system
- compliance with the nutrition quality of student meals (meeting minimum requirements)
- participation in student meals (% of students)
- customer feedback
- consumption of dishes, parts of meals and raw materials (including monitoring the use of vegetables)
- monitoring the use of local and organic food (according to set objectives)
- share of raw materials of domestic origin (%)
- monitoring of food loss and its results
- carbon footprint of served food

- how have students been involved in the development of dining and food services
- description of forms of cooperation and their implementation details
- themes, events and campaigns that have been implemented
- how have students been informed about meal and nutrition-related matters

Key measures and instruments for higher education institution-specific monitoring and evaluation

- The objectives for the realisation of meals at the higher education institution are outlined in a collaborative effort. Their realisation is monitored and evaluated annually together with the food service provider.
- Continuous feedback on the success of meals and the quality of food is collected using various feedback systems, for example a mobile app. Responses are sent to feedback in a manner that the parties have agreed on together.
- The high education institution has a customer/restaurant committee.
- Participation in meals is monitored as number of portions from the cash register systems.
- The realisation of meals is assessed by the consumption of each dish. The information is utilised in the development of recipes and in product design as well as in the monitoring of sustainable development objectives.
- The functional processes of the food service have been described and monitoring tools and methods have been defined together by the parties. Portions have been prepared and planned in accordance with nutrition recommendations and other quality criteria the parties have agreed on.
- The Student Meal Nutrition Quality Assessment Tool.
- Inspections carried out by Kela at student restaurants.
- Health, safety and well-being-related checks carried out by Finnish Student Health Services.



5.1 Participation in meals and student feedback

Monitoring of student participation in meals (daily/weekly/annual monitoring) is a key indicator of success. In addition to monitoring student dining, it is important to monitor the participation of the entire staff in the meals.

Feedback from students, staff and other diners is essential for the development of student meals and dining. Students and staff are encouraged to provide continuous feedback and development proposals on meal and dining-related issues. An immediate and interactive feedback system is the best method for supporting concrete improvement measures in the development of student meals and dining (e.g. electronic feedback system, feedback boxes/boards, feedback notebooks, feedback machines/QR code, social media channels). Feedback can be used to develop the restaurant's operations.

Feedback, the students' individual assessment of their participation in meals and development proposals for meals can be collected quickly and efficiently in cooperation between the food service provider and the higher education institution, for example through simple electronic surveys. Surveys can also be conducted by student unions and student associations. Feedback and electronic customer survey results and development proposals are discussed by each restaurant's own customer/restaurant committees.

5.2 Self-assessment and in-house own-check operations

The internal auditing or the quality assessment of the food service, at regular intervals such as once a year, is a recommended practice for self-assessment. The audit serves as an interactive guidance practice and promotes the realisation of student meals that are of consistent and high quality and comply with recommendations and agreements. The audit can be accompanied by cooperation meetings, in which case quality and realisation (quality of service, content of meals, actual portion sizes, customer satisfaction and food waste, etc.) will be assessed together with the higher education institution, student health care, students, staff and, for example, representatives of the customer/restaurant committee.

The responsible operation of food service companies is a key prerequisite for success in implementing recommendations. The nutrition quality of food and maintaining this must be taken into account in all activities, in the upkeep of staff competence and in own-checks. Own-checks play an important role, as student restaurants themselves are responsible for ensuring that meals also comply with recommendations regarding nutrition quality. Such things as compliance with standard recipes are monitored in own-checks.

Own-checks often focus on ensuring microbiological safety. Extensive quality control requires that food service providers also commit to nutrition quality. A restaurant's own-checks concerning nutrition quality can include for example the monitoring of salt content of soups. A salt

Table 9. Nutritional factors to be monitored.

Nutritional factors to be monitored	Unit
Energy	kJ/MJ, kcal
Carbohydrates	E-%
Proteins	g/meal, E-%
Fats:	g/ 100 g, g/meal, E-%
Saturated fat	g/ 100 g, g/meal, E-%
Fibre*	g / 100 g
Sugar*	g / 100 g
Salt*	g / 100 g

* A meal-specific calculation for fibre, sugar and salt is not required, but the meal components must meet the minimum nutrition quality requirements set for these nutrition factors.

meter may be used to measure salt content, which is suitable especially for the measurement of salt content in soups, sauces and other liquid foods.

Nutrition quality of food served

Monitoring the nutrition quality of the student meal is a continuous process by which the food service provider ensures that the food meets the recommendations. Monitoring covers all stages: Planning of the menu and food procurements, the development of productisation and recipes, and food preparation and serving.

The contract documents between the higher education institution and the food service provider describe in concrete terms what is meant by implementing meals in accordance with the student meals recommendation. The implementation of nutrition recommendations can be monitored and the nutrition quality of food can only be ensured if the documents contain a precise description of the menu, the types of meals offered, the minimum nutrition quality requirements per meal part and the calculation of nutrient content (see Table 9). In addition, the monitoring interval and methods as well as the reporting method and the cooperation related to monitoring with the customer of the food service will be determined. It is also important to agree on means for providing feedback and the procedures undertaken when deviations arise.

Detailed monitoring of nutrient content requires meal and dish level nutrient content calculation (see Table 9). The calculation of nutrient content is a practical tool used by the food service for the development of recipes and meals.

For monitoring the implementation of nutrition quality criteria, the kitchen must include descriptions of how the nutrition quality is ensured.

The nutrition quality of meals can be ensured with the following methods:

- calculations of nutrient content by production control systems used by food services
- menu design and standard recipes for meals that comply with recommendations and have been developed or tailored to suit your own production and customer base

addressed, and the restaurant's processes and food supply must be developed. Waste is a new indicator of profitability and responsibility in restaurants.

5.4 Official oversight

Supervision and inspections conducted by Kela

The meals of higher education students are supported by meal-specific financial assistance (a meal subsidy), which is paid to restaurants as a discretionary government transfer. Legislation on discretionary government transfers stipulates that the granting party ensures appropriate and adequate supervision of the discretionary government transfer by acquiring information on its use and monitoring as well as other information and by carrying out inspections if necessary. As the payer of the discretionary government transfer, Kela carries out inspections at restaurants that have been granted the right to sell subsidised meals.

The inspections carried out at student restaurants by Kela monitor whether the preconditions for the payment of the meal subsidy are met, whether the restaurant has charged the correct amount of the meal subsidy, the manner in which the restaurant complies with the criteria for the meal recommendation for higher education students and how the meal and dining has been arranged. The realisation of the recommendation's criteria will also be supervised at the time a restaurant is granted of the right to a meal subsidy. If necessary, Kela will also be in contact with the student restaurant on the basis of customer feedback. For the purpose of the inspection, information is collected both in advance and on-site at the restaurant.

An audit report is written on the inspection, in which any deviations are noted, and the deadlines agreed upon during the inspection to correct them are specified. The audit report shall be sent to the participants to inform them of the results and for possible measures. Kela will monitor that any irregularities found during the inspection are corrected by the deadline.

Own-checks required by food legislation

Food legislation stipulates that a food business operators carry out own-checks as the operator is responsible for food safe as part of the business they operate. Own-checks are a system with which the operator aims to ensure that foodstuff is safe and in compliance with food legislation. The operator must be able to identify factors related to their own activities and foodstuff they handle that are hazards to food safety and ensure that these are under control.

Good food hygiene is an important part of the student food service and supports compliance with nutrition recommendations. It includes, for example, the tidiness of the meal environment, the cleanliness of the serving line and equipment and cutlery, and high-quality and safe foods that affect the appeal of the meal.

Skilled and professional food service personnel can ensure good food hygiene. Good hand hygiene, protective clothing, food temperature management, prevention of cross-contamination and the cleanliness and maintenance of facilities and equipment are key parts of the personnel's activities. By following good food hygiene, operators can serve safe food and prevent food poisoning.

Oiva system as a part of food control

The Oiva emoticon in visible place at the student restaurant's door indicates that matters related to food safety are in order at the restaurant and the correct information is provided on the meal. Oiva is a national food control system⁴² coordinated by the Finnish Food Authority. The Oiva system involves on-site inspections by local food supervisors and the use smiley face emoticons to assess the food safety of restaurants, shops and food business companies, such as their own-checks, food hygiene and product safety. Compliance with food legislation is required in order to obtain the best smile.

Emoticons are the evaluation results used in the Oiva system. The food service provider must make the assessment results available to customers. The results of the inspection visit are also published as Oiva reports on the internet. When the Oiva emoticon is a smiley face (☺), the diner can be assured that everything is in order. On the other hand, if the emoticon's lips are in a straight line or curved down, this indicates that there is something to correct or that the situation is poor.



<https://www.oivahymy.fi/yriyksille/kuvapankki/>

Inspecting the health, safety and wellbeing of the educational institution

The inspection of an educational institution to ensure the environment and community is compliant with the Health Care Act (1326/2010, section 17)⁴³ applies to all higher education institutions. The inspections are carried out once every three years and they are carried out by student health care in cooperation with other welfare actors, i.e. representatives of the educational institution, students, health inspectors, the personnel's occupational health care representatives, occupational safety and health delegates, the municipality's technical services and other relevant experts. The aim of the inspection is to guarantee the students a healthy, safe and healthy learning environment and community.

Student meals play an important role in supporting health-promoting eating habits and maintaining study capacity and daily coping. Student meals and their implementation are their own entity in the inspections. It is important that the student restaurant's representatives are involved in the assessment group on the health and safety of the study environment.

42 Oiva system <https://www.oivahymy.fi/en/front-page/>

43 Health Care Act 1326/2010. <http://www.finlex.fi/fi/laki/ajantasa/2010/20101326> (In Finnish)

The following factors regarding meals and food services will be taken into account in inspections:

- Do higher education institutions have a customer/restaurant committee?
- Are student dining and meals planned and developed in as a collaborative effort between the higher education institutions, food service providers, student health care and students?
- Will the minimum requirements specified in the nutrition recommendations be taken into account as absolute selection criteria in the tendering process for student restaurants?
- What were the results of the latest customer satisfaction survey at the student restaurant?

The survey gives students questions on the following points concerning student dining facilities and the effective flow of student meals:

- Does the order of the serving line support healthy eating?
- Is the student restaurant pleasant?
- Does the student restaurant sell health-promoting snack options?
- Do students at student restaurants receive information on the healthiness of meal alternatives?

In higher education institutions, inspections are agreed on locally. The responsibility for coordination lies with student health care. Student participation in inspection activities is considered important at higher education institutions to facilitate the collection of the necessary knowledge base on the health of student meals and the implementation of meal recommendations.

Audits of the study environment and community are part of the comprehensive development of student food services. The audit consists of background information collected from several parties, observations made during inspection rounds and surveys sent to students and other actors.

The collected information is analysed, and activities are evaluated on its basis. A report is prepared on the audit to which the observed required changes are recorded. The identified required changes are prioritised, and a possible plan is made to correct them. The task of the higher education institution and student health care is to monitor the process of correcting the shortcomings and required changes that emerge in the audit annually. The report and its conclusions will be sent to all parties involved in the audit visit to inform them of the results.

Higher education institutions are shared place of study and workplace of students and staff, whose healthy and safe study and work environment comprises good physical, psychological and social conditions. These together create the prerequisites for the health and well-being of the study community and for maintaining ability to study and work.

Sources:

Tuovila, T, Seilo, N and Kunttu, K. Opiskeluterveydenhuollon opas 2020. Publications of the Ministry of Social Affairs and Health 2020: 14. <http://urn.fi/URN:ISBN:978-952-00-9886-5> (In Finnish)

THL 2015. Marke Hietanen-Peltola & Ulla Korpilahti (ed.). Terveellinen, turvallinen ja hyvinvoiva oppilaitos: Opas ympäristön ja yhteisön monialaiseen tarkastamiseen. <http://urn.fi/URN:ISBN:978-952-302-505-9> (In Finnish)

6 STUDENT HEALTH CARE AS A PROMOTER OF GOOD NUTRITION

The aim of student health care is to promote the health, well-being and ability to study of students. Its task is to ensure, in accordance with the content described in the Health Care Act (1326/2010), that health care and medical care services are provided to students. Operating forms used by student health care include work in the study environment and the student community. Nutrition is related to all of these. For example, higher education meals organised according to the recommendations are part of study environment and student community work that promotes health. In addition, health guidance also covers nutritional counselling, and nutrition therapy is part of medical services in primary health care. All these operating forms also include mental health promotion and substance abuse prevention, promotion of sexual health and promotion of oral health, and oral care (see Table 10).⁴⁵

Table 10. Forms of operation and services provided by student health care.

Forms of operation	Key services
Work related to the study environment and study community	<ul style="list-style-type: none"> - Regular stakeholder cooperation, especially with educational institutions and student organisations (student welfare services in secondary studies) - Expert activities - Health-promoting communication - Student environment inspections every 3 years and monitoring every year.
Health care services Individual monitoring and promotion of health, welfare and study ability	<ul style="list-style-type: none"> - Health guidance individually and in groups * - Periodic health checks <ul style="list-style-type: none"> - Checks by public health nurses and doctors - Oral health examinations and preparation of a treatment plan - Preventive oral health measures - Prevention of communicable diseases (health checks, vaccinations in accordance with the national vaccination programme) - Family planning - Other examinations, certificates and statements related to studies as required in the Communicable Diseases Act and other legislation - Guidance related to travel, including student exchange. The student must acquire any travel-related vaccines himself or herself, but they can be administered by student health care. - General psychological examinations, it is good for student welfare and the student health care psychologists for secondary students to decide on the division of labour.
Medical services Primary health care medical and oral health services	<ul style="list-style-type: none"> - Assessment of the need for treatment - Non-urgent care, incl. treatment that must be provided within 1 to 7 days - Treatment that requires the expertise of specialist doctor or a specialist dentist, but the patient does not belong to specialised medical care according to tiered treatment - Primary health care laboratory and imaging services related to the diagnostics and treatment of diseases - Physiotherapy - Nutritional therapy - Speech therapy related to the field of study (preliminary examination of voice disorders for students graduating with a qualification in speech work)

* Legislation (section 13 of the Health Care Act and Government Decree 337/2011) refers to health counselling, which has increasingly been referred to as health guidance and patient guidance.

The operating principles of student health care are a student-centred approach, early intervention and multidisciplinary cooperation. Finland's legislation requires that student health care is a cohesive entity that must promote health, well-being and study ability and, if necessary, work in seamless cooperation with specialised medical care and the welfare service providers at educational institutions. The Act on Student Health Care for Higher Education Students (695/2019)⁴⁶ contains provisions on Kela's obligation to organise and the Finnish Student Health Service's obligation to provide student health care to students of higher education institutions (as of 1 January 2021).

Health counselling in student health care is the responsibility of all health care professionals. It must be active and goal-oriented in order to promote the student's holistic well-being. Health counselling includes an assessment of the need for support and is based on professionalism and expertise. Counselling aims to increase the student's health awareness in a student-oriented manner, and if necessary, the student is supported in a lifestyle change and self-care. One of the key methods for implementing health guidance in the student health care is health surveys and, if necessary, subsequent medical examinations, which under legislation (Health Care Act 1326/2010, Government Decree 338/2011) must be carried out for all first-year students. The purpose of the information collected through the health surveys and medical examinations is to gain an overall understanding of the student's health, well-being and ability to study. In feedback given on the health survey and in medical examination, the student is guided to take responsibility for his or her own health and to make choices that promote their health.

All first-year higher education students will be sent an electronic health survey with targeted questions also related to nutrition. The survey examines, for example, the quality of the student's diet, their number of meals, the student's relationship with food and the student's weight. All respondents to the survey will receive personal feedback, on the basis of their answers, which will also provide nutrition counselling, if necessary. Students who, based on the survey, need a health check or express their willingness to it will be invited to a personal health appointment.

When a student is directed from student health care services to other services, this must always be done in cooperation with the student and with the student's consent. Student health care services are bound by the obligation of confidentiality and secrecy (Act on Health Care Professionals 559/1994, Act on the Openness of Government Activities (621/1999), Data Protection Act 1050/2018, EU General Data Protection Regulation 679/2016).

Student health care services also carries out health promotion work, which is a statutory, planned and organised activity that aims to promote the student's health, well-being and ability to study. In the area of health promotion, student nutrition related matters are of key importance. Student health care services provides information to student on nutrition that maintains their ability to study, for example in the form of a nutrition information package compiled on

46 Act on Healthcare for Students in Higher Education 695/2019. <https://www.finlex.fi/fi/laki/alkup/2019/20190695> (In Finnish)

their website and digital nutrition groups. The know-how of nutrition therapists and other multiprofessional competence in student health care must be utilised in building the digital services and contents of student health care related to nutrition.

6.1 Nutrition counselling in student health care

Nutrition counselling is part of health promotion and the prevention and treatment of chronic diseases. Student health care services provides nutrition counselling when necessary in connection with all appointments, taking into account the students' special needs, such them being overweight or underweight, their food allergies, special diets and eating disorders and other diseases. It is important to determine the student's special diet, as it may also have an impact on the examination of the student's health and the treatment of diseases. The student should notify food services of their special diet themselves using a separate form as agreed at each student restaurant. A medical certificate for a special diet for medical reasons can be provided by the treating physician or, if necessary, by student health care. If necessary, the student can be referred to the clinical nutritionist.

The aim of nutrition counselling is to provide students with nutritional information that promotes their health, wellbeing, study ability and functional capacity, alertness and learning. Nutrition counselling can support the student's well-being, weight management and the prevention of chronic diseases. Regular and sufficient eating supports a healthy relationship with food and prevents the development of excess weight and eating disorders. Student health care provides active and goal-oriented health counselling in nutrition-related matters. Nutrition counselling and the services of a clinical nutritionist are provided equally to all students regardless of their place of study and residence.

During a medical examination or an appointment focusing specifically on nutrition counselling in particular, the student's eating habits, such as their meal rhythm, how regularly they eat, the versatility of the food they eat and possible food restrictions, the size and quality of food portions, the consumption of beverages and the proportion of different foods in their diet in relation to the student's estimated energy needs are all discussed. Issues such as alcohol use and its harmful effects are also discussed with the student. It is important to listen to the student's own information needs and their own perception of how they eat and their relationship with food and to address any concerns he or she has raised. Problems related to eating may also be related from social or psychological reasons, which should be acknowledged and taken into account.

From a nutritional standpoint, factors that need to be assessed in a student's diet include quality of the fats used, the use of salt and sugar as well as an adequate intake of fibre, vitamin D, folate and iron (see Appendix 8 for more information). For students who follow a special diet due to food allergies, a disease or for other reasons, it is particularly important to assess the nutritional content of their specific diet and the possible need for food supplements. Those who follow a vegan diet

should always ensure the sufficient intake of vitamin B12, calcium, iodine and vitamin D by eating fortified foods or taking food supplements. When anaemia is diagnosed the student's diet in its entirety must be checked including sources of iron (see iron sources, Appendix 8).

Nutrition counselling provided by student health care services is based on official Finnish nutrition recommendations (see Chapter 2). The student health care services' professionals have access to support material for guidance and counselling, including materials from the Terveyskylä weight management service and the Finnish Heart Association's TOTA materials. A wide range of nutrition counselling are available for students. More detailed information on nutrition counselling possibilities for higher education students at <https://www.yths.fi/terveystieto/ravitsemus/ruokailutottumukset-ja-painonhallinta/> (In Finnish). The student health care service engages in cooperation with higher education institutions and food service providers, for example by participating in various working groups and committees. The cooperation is described in more detail in Chapter 6.

6.2 Most common challenges and diseases related to eating

Overweight and obesity

Excess body weight can have many adverse effects on health and well-being. If the student feels that he or she needs help in weight management or in losing excess weight, he or she can apply for a student health care professional's appointment. Where necessary, they will also encourage students to seek nutrition advice.

The foundation for the treatment of overweight and obesity at student health care services is the identification of the need for change. A health care professional will sit down with the student to consider their eating and physical activity habits, their relationship with their body and food, and life situation as a whole. For example, a digital photo-based food diary can be used to assess a student's eating habits and any issues with them that may require a change. Students can also be advised to join online groups that encourage their participants to eat healthily, where students can mirror their own eating habits with instructions that comply with nutrition recommendations.

Eating disorders

Eating disorders are common mental health disorders, which involve not only abnormal eating behaviour but also the disruption of mental, physical and social functional capacity. The patient's attitude to food, weight and physical activity is usually distorted. There are several types of eating disorders, and they are classified as behavioural syndromes associated with physical factors. The most common are anorexia nervosa characterised by limiting what one eats, bulimia nervosa characterised on limiting what one eats, the loss of control and compensation, and atypical eating disorders characterised on uncontrolled binge eating, most commonly BED. However, the thoughts and emotions that control the patient's eating and life are even more relevant than food quantities consumed and weight.

Student health care services is tasked with identifying students who have symptoms that indicate an eating disorder. Student health care services works to improve the sick student's motivation for seeking treatment, carries out primary health care level treatment of eating disorders and directs the patient to specialised medical care if necessary. The treatment of eating disorders is usually based on a regional treatment chain, the aim of which is to ensure cohesive and flexible practices in the treatment of patients with eating disorders. Cooperation takes place between student health care, primary health care in the area and specialised medical care.

Functional disorders of the digestive tract

Functional disorders of the digestive tract are fairly common among students. The most common of these is irritable bowel syndrome. The symptoms of functional disorders of the digestive tract typically include swelling of the abdomen, gas and abdominal pain, and various types of problems regarding bowel function, such as constipation, loose faeces, or the fact that the bowel is not emptied properly. The range of symptoms varies, and stress usually exacerbates the symptoms. In addition, other psychological factors and everyday routines (sleep, meal rhythm, exercise and recovery) may have an effect. The guidance and treatment provided to students who suffer from functional disorders of the digestive tract is different for each individual and requires the guidance of a professional who is familiar with the matter. Materials distributed to students to support guidance can be found in the Terveyskirjasto service (<https://www.terveyskirjasto.fi/terveyskirjasto/tk.koti>, in Finnish).

Directing students experiencing challenges in eating to student health care services

A student may seek help from student health care services in matters related to eating via numerous different channels. The most common of these are an electronic health survey, a call to the phoneline for assessing the need for treatment, or a contact via electronic service channels. Problems related to eating may also be brought up during any appointment. As a rule, the need for treatment and its urgency are assessed on the telephone or in the online service channel used. Based on the information collected in the assessment of the need for treatment and the degree of difficulty of symptoms, the student is directed either to emergency care outside student health care services or to student health care for an urgent appointment within 1–7 days or a non-urgent appointment.

6.3 Oral health as part of student health care

Oral health care is part of student health care implemented under the Health Care Act. An electronic health survey will be sent to all students during the first year of studies, which also maps out the factors affecting the student's oral health and on the basis of which individual feedback will be provided on oral health. Based on the survey responses, the student is directed to an oral health examination or treatment if necessary.

Students are instructed to go to an oral health examination at least once during their studies. This will include examining the health of the student's mouth and teeth and the risk factors, eating habits and changes in oral health caused by possible other diseases that might affect oral health. The need for health advice and other services will be assessed in connection with the examination. The oral health care professional and the student will together draw up a care plan and specify the time of the student's next oral health examination according to their individual treatment interval.

Oral health examinations can also be performed by an oral hygienist according to the treatment interval specified by the dentist. The oral hygienist can assess whether there is a need for treatment by a dentist and provides instructions for oral self-care. If necessary, they also clean the teeth, remove tartar, and provide guidance in oral and dental care, paying particular attention to healthy food and drinking habits.

Nutrition and oral health

Food may contain factors that impair oral health by causing cavities, tooth erosion (chemical dissolution of the tooth surface) and mucous membrane diseases. Tooth surfaces are exposed to acids whenever a person eats energy-rich or sour/acidic food. Tooth erosion is a growing problem especially among young people.

Eating sweets or chips between meals and abundant and frequent use of products containing sugar will expose the teeth to cavities. Cavities are a local infection caused by bacterial growth attached to the surface of the teeth, such as dental plaque together with easily fermented carbohydrates suitable for feeding of sugars or other caries bacteria. The accumulation of plaque can also cause periodontal disease.

Tooth surfaces may also be damaged without being affected by bacteria, in which case it happens due to erosion. Acids in food, drink or those that rise from the stomach dissolve minerals on the tooth surface causing the surface to dissolve. Erosion begins when the pH in a person's mouth falls below 4. If the pH falls to 3, the erosion will increase tenfold. If the pH changes from 4 to 2, erosion will increase by a hundredfold. The pH of soft drinks, juices, including natural fruit juices, energy drinks, ciders and wines typically varies between 3 and 4, but the pH of individual products may be less than 3 (see drawing p. 83). Advanced erosion causes tooth sensitivity and pain. Treating erosion damage is demanding and expensive if the amount of lost dental tissue is high.

All acidic foods and beverages as well as sweets, such as fruit candy, can cause tooth erosion when they are repeatedly consumed. Erosion is when the tooth surface dissolves in acidic liquid, but also softens and is thus exposed to mechanical wear. For example, chewing hard food or grinding one's teeth can cause wear to the softened surface.

Erosion can be prevented by avoiding repeated consumption of sour foods and snacking on acidic products as well as by following a regular meal rhythm. Foods or beverages containing calcium, such as cheese, milk or a calcium-supplemented plant-based beverages that does not contain sugars, reduces erosion when eating a meal containing acidic food.

pH

Acidity of drinks

7

These you can drink daily

Water
- tap water
- unflavoured bottled water

Milk
Buttermilk/kefir
Oat, soya and other vegetable-based drinks
Milk-based drinks

Coffee *

Tea *
- green
- black
- white

4

Drink these only with meals and just one glass per day, not constantly sipping.

Flavoured bottled waters *

Juice
- juice (not-from-concentrate)
- fruit drinks
- homemade juice
- nectar
- smoothies

Artificially sweetened soft drinks

Soft drinks with added sugar

Energy drinks
Sports drinks

2

* The acidity of flavoured and aromatised drinks (including alcoholic beverages) varies. In addition, adding sugar or honey to drinks exposes your teeth to an acid attack caused by bacteria.

Acidic soft drinks, energy drinks and sports drinks containing sugar cause both cavities and erosion. Also sugar-free, artificially sweetened drinks and various flavoured waters, so-called welfare or flavoured waters also expose teeth to erosion, as most of these, just like some herbal teas, are acidic. Sour milk products such as buttermilk and unflavoured yoghurt do not cause erosion because they contain calcium. Also milk, coffee or non-flavoured black, green or white tea or non-flavoured mineral waters containing only carbonic acid do not cause erosion.

Some diseases, such as eating disorders and reflux disease, may also cause erosion when the mouth is repeatedly exposed to acids due to either vomiting or the back flow of gastric acid. Many medicines may cause a reduction in saliva excretion and thus causes a dry mouth. When the saliva does not rinse the mouth, the acid remains in the mouth for a longer period of time. In this case, it is very important that the saliva that protects the teeth is not replaced by sweet or acidic drinks; instead, the person should use water, food oil or pharmacy-available sprays and gels to moisten their mouth. In addition, the use of full xylitol products is recommended as they activate saliva secretion and reduce the effect of acids and cavities.

Oral diseases are prevented with healthy eating habits including

- regular meals
- the use of xylitol products after meals or snacks
- water as a drink to quench thirst
- avoiding snacking and sipping beverages between meals and snacks

Xylitol products, either pastilles or chewing gum, are recommended after meals and snacks. These should be used regularly at least three times daily after eating. The recommended daily amount of xylitol is at least 5 g per day. The recommended dose is 6 to 10 pieces of xylitol chewing gum or pastilles.

In addition to healthy eating habits, the promotion and maintenance of oral health requires that teeth are brushed thoroughly twice a day with fluorine paste, daily cleaning of gaps between teeth and the reasonable use of alcohol and avoiding the use of tobacco products.

<https://ilovesuu.fi/omahoito/miten-voin-ehkaista-hampaiden-reikiintymista/> (In Finnish)

Sources:

Karies (hallinta). Current Care Guidelines. Working group appointed by the Finnish Medical Society Duodecim and Finnish Dental Society Apollonia. Helsinki: Finnish Medical Society Duodecim, 2020 (15 September 2020). Available online: www.kaypahoito.fi (In Finnish)

Suusyöpä 2019. Current Care Guidelines. Working group appointed by the Finnish Medical Society Duodecim and Finnish Dental Society Apollonia. Helsinki: Finnish Medical Society Duodecim, 2019 (15 September 2020). Available online: www.kaypahoito.fi (In Finnish)

Eating disorders, Current Care Guidelines. Working group appointed by the Finnish Medical Society, Suomen Lastenpsykiatriyhdistys (Finnish Children's Psychiatric Association) and Finnish Psychiatric Association. Helsinki: Suomalainen Lääkäriseura Duodecim, 2014 (15 September 2020). Available online: www.kaypahoito.fi (In Finnish)

Reddy A, Norris DF, Momeni SS, Waldo B, Ruby JD. The pH of beverages in the United States. J Am Dent Assoc 2016; 147 (4): 255–263. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc4808596/>.

7 LEGAL BASIS FOR HIGHER EDUCATION STUDENT MEALS

The importance of meals for higher education students and the purpose of subsidising meals

A healthy, diverse meal eaten during the study day and in accordance with nutrition recommendations supports the students' ability to study, coping, health and well-being, maintains social interaction and sets a rhythm to the study day. Students are encouraged to eat regular meals by subsidising meals with a meal subsidy paid from state funds. Students can buy an affordable meal from a student restaurant that is eligible for the meal subsidy. The system therefore also supports the student's income.

Regulatory basis and funding

Student Financial Aid Act (65/1994)

Under the Student Financial Aid Act⁴⁷ (65/1994, section 49) the Social Insurance Institution (KELA) shall see to granting the meal subsidy to student restaurant operators within the confined of that the appropriations set aside in the State budget and other related administration.

Act on Discretionary Government Transfers (688/2001)

The Act on Discretionary Government Transfers⁴⁸ (688/2001) contain provisions on the grounds for granting discretionary government transfers. Further provisions on the grounds for assistance can be laid down with a government decree (section 8).

Discretionary government transfers may be granted within the limits of the state budget or the funds of a state fund outside the budget. One of the prerequisites for granting discretionary government transfers is that the purpose of the financial assistance is socially acceptable and it is justified in terms of the objectives set for its use. It is also essential that providing financial assistance is necessary, taking into account the other public funding received by the applicant and the quality or the scope of the project or activity that is being granted the discretionary government transfer. The granting of a discretionary government transfer should also not distort competition. (section 7).

The discretionary government transfers authority must ensure the appropriate and adequate supervision of the discretionary government transfer by acquiring information on the government transfer's use and monitoring as well as other information and by carrying out inspections if necessary. (section 15).

47 Student Financial Aid Act 65/1994 <https://www.finlex.fi/fi/laki/ajantasa/1994/19940065#a11.6.2020-451> (In Finnish)

48 Act on Discretionary Government Transfers 688/2001 <https://www.finlex.fi/fi/laki/alkup/2001/20010688> (In Finnish)

Government Decree on Principles of Subsidising Meals of Higher Education Students (375/2020)

The Government Decree on Principles of Subsidising Meals of Higher Education Students⁴⁹ (375/2020) contains provisions on the conditions for granting a discretionary government transfer, on the meals entitling the operator to the subsidy, maximum meal prices and on the higher education students entitled to a meal-specific discount.

Act on Public Procurement and Concession Contracts (1397/2016)

The Act on Public Procurement and Concession Contracts⁵⁰ obligates higher education institutions to tender restaurant services. According to the Act, the contracting unit must treat the participants of the procurement procedure and other suppliers equally and in a non-discriminatory manner and must act in a transparent manner taking into account the requirements of proportionality (section 3)⁵¹.

Value Added Tax Act (1501/1993)

Restaurant or meal services provided for students studying in educational institutions are not subject to taxes, when the service happens in connection with studies and service is related to the studies (section 39 subsection 3)⁵².

Act on the Social Insurance Institution (731/2001)⁵³

Kela decides on the inclusion of a student restaurant in the scope of the meal subsidy and makes a decision that is eligible for appeal. A decision issued by Kela may be appealed to the Administrative Court as provided in the Administrative Judicial Procedure Act⁵⁴ (586/1996).

Meal subsidy for higher education students in the state budget

The purpose and amount of meal subsidy are confirmed annually in the state budget (item 29.70.57 meal subsidy for higher education students). In the 2020 budget, an estimated appropriation of EUR 31,620,000 has been reserved for meal subsidies. The meal-specific subsidy paid to a student restaurant per meal is EUR 1.94. The amount of the additional government transfer per meal is at most EUR 1, but no more than the amount of facility and equipment costs caused by student meals.

49 Government Decree on Principles of Subsidising Meals of Higher Education Students 375/2020 <https://www.finlex.fi/fi/laki/alkup/2020/20200375> (In Finnish)

50 Act on Public Procurement and Concession Contracts (1397/2016). <https://www.finlex.fi/fi/laki/ajantasa/2016/20161397> (In Finnish)

51 Finnish Competition and Consumer Authority. Supervision of public procurements. <https://www.kkv.fi/en/facts-and-advice/competition-affairs/supervision-of-public-procurement/>

52 Value Added Tax Act (1501/1993). <https://www.finlex.fi/fi/laki/ajantasa/1993/19931501> (In Finnish)

53 Act on the Social Insurance Institution (731/2001). <https://www.finlex.fi/fi/laki/ajantasa/2001/20010731> (In Finnish)

54 Administrative Judicial Procedure Act 586/1996. <https://www.finlex.fi/fi/laki/alkup/1996/19960586> (In Finnish)

Actors

Ministry of Education and Culture

The meal subsidy is part of the student financial aid. Pursuant to section 8 of the Act on Student Financial Aid the Ministry of Education and Culture is responsible for the overall management, steering and development of student financial aid activities. The ministry is thus responsible for preparing the legislation and budget related to the meal subsidy.

Role of the higher education institution

Higher education institutions organise student meals in accordance with established practice within the framework of their budgets by making the facilities and fixed equipment needed for student meals available to the restaurant operator on the same principles as for personnel meal services.

When tendering restaurant services, higher education institutions define the requirements to be used in tendering. These specifications guide the restaurant service provider in the provision of student meals. The higher education institution monitors the implementation of the requirements by means of agreed procedures, for example, in a customer committee.

Social Insurance Institution KELA

Kela's task is to pay and supervise the subsidy granted to student restaurants and to provide instructions and training related to the subsidy.

A student restaurant may be granted meal-specific assistance (a meal subsidy) on application, in which case the higher education students will receive a discount on the price of the meal when they eat in the restaurant. The meal subsidy is paid to the restaurant on the basis of documents provided by the restaurant to Kela. Restaurants located outside the premises of higher education institutions may also apply for an additional government transfer to cover the costs of facilities and fixed equipment. For example, many hospital cafeterias have a right to a meal subsidy, which makes it possible to eat affordably during a university traineeship.

Kela supervises the use of the of the government transfers granted to student restaurants under the Act on Discretionary Government Transfers (688/2001), as well as how well the restaurant complies with the Government Decree on Principles of Subsidising Meals of Higher Education Students (375/2020). In the scope of supervision, attention is also paid to the implementation of the criteria for the meal recommendation for higher education students.

Student restaurant

Student meals are sold in student restaurants of higher education institutions and also in restaurants located outside the higher education institution's premises.

The task of the student restaurant is to serve students a full meal that meets general health and nutritional requirements and that consists of a main dish, salad, beverage, bread and spreads. The restaurant ensures that the pricing of meals complies with the maximum prices laid down in the decree. The restaurant must inform the students that they must show a student card in order to be given the subsidised student meal price. The restaurant checks the right of higher education students to a subsidised meal before the price of the meal is reduced by the amount of the meal subsidy.

The student restaurant search for restaurants entitled to a meal subsidy is available on the Kela website (<https://www.kela.fi/ateriatuki-opiskelijaravintolahaku>, in Finnish).

The right of higher education students

A meal subsidy may be granted to reduce the price of meals eaten by students, who, under the Universities Act⁵⁵ (558/2009), the Universities of Applied Sciences Act⁵⁶ (932/2014) or the Police University College Act⁵⁷ (1164/2013), are completing a Bachelor's or Master's degree or continuing education or specialisation training that entitles them to study grant in Finland (Government Decree 375/2020, section 1).

However, the subsidy cannot be used to lower the price of meals for students taking part in commissioned studies pursuant to section 13 of the Universities of Applied Sciences Act, section 9 of the Universities Act, and section 20 of the Police University College Act. If a foreign student comes to complete a degree at a Finnish higher education institution, they are entitled to a meal subsidy. The same applies to exchange students.

A higher education student receives a discount on the price of a student meal in restaurants that have been granted the right to Kela meal subsidies. Students are given the discount when they show restaurant staff a valid student card, a Kela meal subsidy card, another document approved by Kela or a digital application that entitles them to a meal subsidy.

7.1 Organising food services and the content of a student meal

A prerequisite for granting meal-specific financial assistance (a meal subsidy) is that restaurant services are available as these are necessary for arranging adequate meal opportunities for students (Government Decree 375/2020, section 2). The necessity is assessed by the higher education institution in a statement it submits to Kela. In the statement, the higher education institution justifies the need for restaurant activities in order to organise sufficient meals by highlighting what kind of teaching is organised at the unit in question and how many students study at the unit. If the restaurant applying for the subsidy is located outside the school's premises,

55 Universities Act 558/2009. <https://www.finlex.fi/fi/laki/ajantasa/2009/20090558> (In Finnish)

56 Universities of Applied Sciences Act 932/2014. <https://www.finlex.fi/fi/laki/ajantasa/2014/20140932> (In Finnish)

57 Act on the Police University College 1164/2013. <https://www.finlex.fi/fi/laki/alkup/2013/20131164> (In Finnish)



in its statement the higher education institution gives grounds for why it is necessary to grant the subsidy to a restaurant operating outside the higher education institution. The grounds may include securing traineeship opportunities, the location of teaching facilities or the number of users in the current restaurant.

In addition, restaurant activities must be organised in an appropriate manner (Government Decree 375/2020, section 2). This means that the restaurant's facilities and functions must be appropriate for organising student food services and dining. This means the meal environment promotes and supports public health objectives aimed at the health and well-being of student food services. Students must have the opportunity to collect food efficiently and dine without urgency during breaks between their studies. It is a good idea to monitor the waiting time in line at student restaurants and, if necessary, the restaurant representative can negotiate corrective measures with the higher education institution. The student should have access to as many options as possible based on different diets.

A student meal must be of such quality that it meets general health and nutritional requirements (Government Decree 375/2020, section 2). A student meal is a full meal containing the main dish, salad, a beverage, bread and spread. (Government Decree 375/2020 section 4). The aim is for a student meal provide an adequate amount of energy for the duration of the study day. More detailed instructions and criteria concerning the content of a student meal are specified in the meal recommendation for higher education students.

7.2 Pricing principles

Meal-specific subsidy and maximum price of meals

A meal subsidy is paid to the student restaurant for meals sold to higher education students, if the pricing of meals is in accordance with the decree and if the price charged from students for the meal has been reduced by the amount of the meal subsidy (Government Decree 375/2020, section 2 subsection 1, paragraph 4). The sum of the meal-specific subsidy is decided in the state budget.

The non-discounted price of a student meal must not exceed the VAT free price charged from other customers of the restaurant for a similar meal (Government Decree 375/2020, section 2, subsection 1, paragraph 5).

There are two maximum price categories (section 4 of Government Decree 375/2020). From 1 August 2020, the maximum price for a student meal entitling to the subsidy is EUR 5. The minimum price for a speciality dish made from the most expensive raw materials is EUR 6.30 and its maximum price is EUR 7.65.

The speciality dishes are full meals made of more expensive raw materials that are otherwise similar to a student meal. Whether a meal in the price of a standard student meal or a more expensive speciality dish is assessed on the basis of the raw material costs of the meal. The assessment can be based for example, on the price of the protein side-dish or the total cost of raw materials for the main dish and side-dish salad.

The assessment method is described in more detail in Chapter 3.3 (p. 40), which also contains examples of meals belonging to different price categories.

The maximum prices for subsidised meals are periodically reviewed on the basis of relevant cost developments. Taking costs into account ensures that the student meals meet the quality requirements set for them, the range of foods served is versatile and that student restaurants can prepare the meals in accordance with the criteria described in the meal recommendation for higher education students. Restaurant service providers can themselves decide on pricing and how to increase this within the framework of regulated price frameworks. Increasing the maximum price will not mean that the price of a meal should be increased immediately, but that the increase can be made as necessary, taking into account the cost structure of the student restaurant.

Provision of additional discretionary government transfer for the costs of premises and fixed equipment

An additional discretionary government transfer may be granted for the costs of student restaurant facilities and fixed equipment located outside premises owned or managed by the higher education institution or its administrator (Government Decree 375/2020 section 1). The sum of an additional discretionary government transfer is decided in the state budget.

The preconditions for granting an additional discretionary government transfer are as follows (Government Decree 375/2020, section 3):

- 1) the student restaurant operator has been granted a meal-specific subsidy pursuant to section 2.
- 2) the costs of student restaurant facilities and fixed equipment are not financed for the most part from public funds
- 3) student meals account for at least 10 per cent of the restaurant's turnover.

Other use of the facilities and income from this use are taken into account when determining the amount for the additional discretionary government transfer.

The additional government transfer is not intended to replace other public funding. The current practice is that with regard to the additional government transfer, facilities and fixed equipment are considered to be financed from public funds if the property is at least 50% publicly owned.

When calculating the amount of the additional government transfer, only the costs of facilities and fixed equipment resulting from student meals are taken into account based on the percentage of the restaurants turnover student meals and other sales account for.

Statistics

In 2019, KELA paid a total of EUR 30.1 million in meal subsidies for higher education students, and this covered approximately 14.4 million meals (see Figure 1). In 2019, 94 companies or parties operating restaurants and 313 restaurants were in the scope of the meal subsidy.

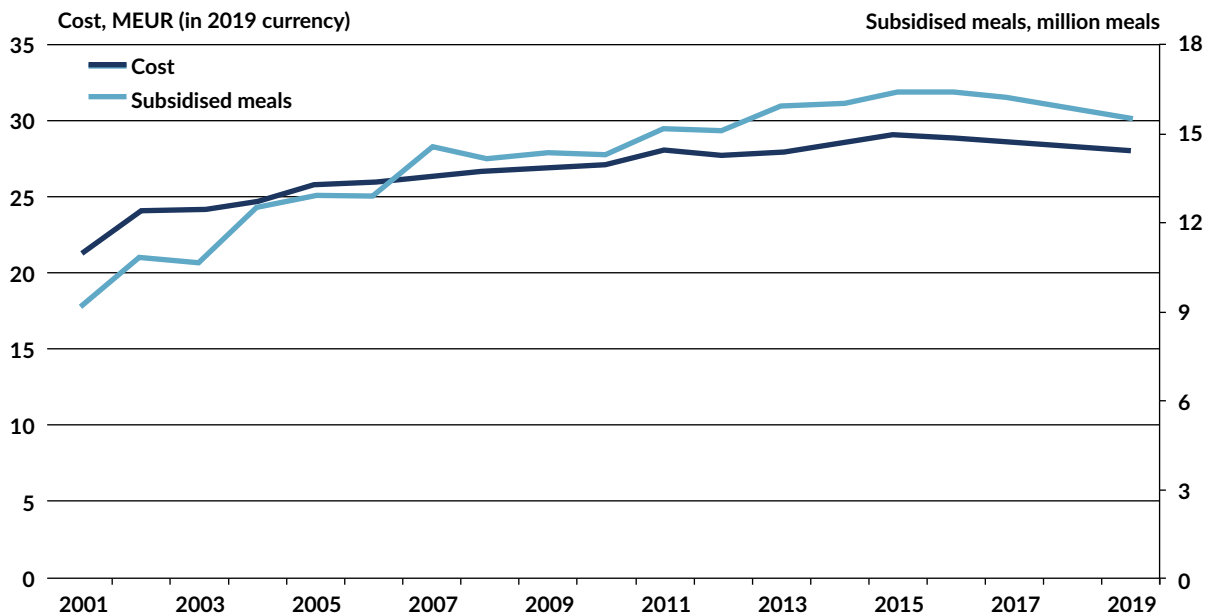


Figure 1. Costs of meal subsidy for higher education students and the number of meals subsidised between 2001 and 2019.



Appendices

Appendix 1 Minimum requirements for nutrition quality

The minimum nutrition quality requirements for meals are based on the currently valid nutrition criteria for the Heart Symbol meal.

In addition to meal component-specific criteria, all products meeting the Heart Symbol criteria are recommended as such as meal components, even if the nutrient content of the product does not correspond to the figures presented in the tables below. The criteria for Heart Symbol products are based on a “better choice” comparison of the products available for sale in each product group.

If only one meal option is available each day for example at research stations and other very small units, it is acceptable that the majority of meals (at least 80%) comply with the recommendation. When more meals are served (breakfast, lunch, snack, dinner, evening snack), the meal entity for the entire day must be taken into account in menu planning.

Table 1a. Main courses.

Type of main dish	Nutritional content / 100 g, maximum		
	Fat, g	Saturated fat, g	Salt, g
Main dish porridges* Minimum fibre in flakes, etc.6 g/100 g.	3	1	0.5
Soups*	3 (5)**	1 (1.5)	0.5***-0.7
Casseroles, risotto, pasta dishes, Main dish salads* * * *, pizza	5 (7)	2 (2)	0.6***-0.75
Main dish sauces (e.g. vegetable curry, chicken sauce, etc.)	9 (11)**	3.5 (3.5)	0.9
Food items with or without sauce	8 (12)**	3 (3.5)	0.9
Layered sandwich / baguette / hamburger or other bread-based meal At least 6% fibre in bread	8 (12)**	3 (3.5)	0.75

* If toppings for bread (such as cold cuts or cheese) are served in conjunction with soup or porridge meal, the criteria for Heart Symbol products should be used.

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

*** Range of salt, where the lower number is the longer-term objective.

**** Vegetables must account for a least 150 g/portion in a main dish salad

Table 1b. Potato and cereal side dishes served with a main dish.

Type of side dish	Nutritional content / 100 g			
	Fat, g	Saturated fat, g	Salt, g	Fibre (dry weight) g
Pasta	-*	Max. 0.7	Max. 0.3	Min. 6
Barley groats, cereal/cereal-vegetable mixes, etc.	-	Max. 0.7	Max. 0.3	Min. 6
Whole grain rice, rice vegetable mix	-	Max. 0.7	Max. 0.3	Min. 3
Boiled potato	No added fat	-	No added salt	-
Other potato side dish (e.g. mash, wedges, potato vegetable mix)	-	Max. 0.7	Max. 0.3**-0.5	-

*(-) No applicable criteria.

** Range of salt, where the lower number is the longer-term objective.

Table 1c. Other meal components.

Meal component	Nutritional content / 100 g			
	Fat, %	Saturated fat, %	Salt, g	Fibre, g
Bread	-	-	Fresh bread not exceeding 0.9 Crispbread, max. 1.2	Min. 6 Min. 10
Bread fat	Min. 60	Max. 30	Max. 1.0	-
Milk or buttermilk Plant-based beverages	Max. 0.5 Max. 2	- **	-	-
Vegetable side dish - fresh vegetables	-	In marinade, max. 20	No added salt	-
Vegetable side dish - cooked vegetables	-	In marinade, max. 20 *	Max. 0.3	-
Salad dressing	Preferably 25 or more	Max. 20	Max. 1.0	-
Oil for salad		Max. 20		

* In cooked vegetables, any fat meeting the Heart Symbol criteria can also be used (for example, oil, packaged margarine or a liquid vegetable fat product).

** Plant-based beverages must have no more than 2% fat, with at most 0.4 g/100 g hard fat.

Appendix 2 Salad bar in compliance with nutrition criteria

Part of salad portion	Minimum number of options that meet various criteria served*	Criteria
Fresh vegetables and fruit	2	No added salt or fat
Fresh or cooked vegetable	1	Fresh: No added salt, no more than 20% hard fat in marinade Cooked: Not more than 0.3% salt, no more than 20% hard fat in marinade
Protein side-dish (plant based, fish, eggs, cheese, meat)	1	A product that meets the Heart Symbol criteria. Check the criteria depending on the product, e.g. main dishes, the criteria for food sold as items or foodstuffs: hard cheese: a maximum of 17% fat and 1.2% salt ham: a maximum of 4 % fat, 2.0 % salt smoked fish: a maximum of 1.38% salt fried chicken: no more than 8 % fat with a maximum of 3 % saturated fat and no more than 0.9 % salt.
Oil-based salad dressing	1	At most 20 % hard fat, and 1 % salt

* The components of the salad bar that meet the nutrition criteria are labelled to inform the diners. In addition to a salad portion, the diner must have the possibility to choose bread, bread fat and a meal-time beverage that comply with the nutrition criteria (see Appendix 1, Table 1c).

Appendix 3 Sources of protein in different types of diets

Diet	Protein g / 100 g	Energy kcal / 100 g
Vegan diet		
Soya meal, low-fat	45	390
Soya meal, high fat	35	466
Soya beans, boiled	16	170
Textured soy protein, boiled	19	127
Bean, long, green	2	40
Beans, cooked	10–16	–
Broad beans, cooked	8	102
Lentils, cooked	7–8	100
Peas, dried	19	245
Peas, fresh and cooked	6	85
Chickpea, cooked	8	137
Almonds	24	600
Walnuts	15	665
Cashew nuts	20	570
Hazelnuts	14	640
Peanuts	26	550
Sunflower seeds	24	620
Quinoa, cooked	5	140
Oatmeal (cooked in water)	2	60
Whole grain pasta, cooked	3.5	90
Plant-based and fermented products (vitamin-fortified)		
Soy-based snacks (alternative to yoghurt)	3.6	85
Oat-based snacks (alternative to yoghurt)	Approx. 1	80
Soya and oat-based food preparation products		
Oat-based fermented creme fraiche	1	180
Oat-based cooking cream	Approx. 1	150
Soy-based cooking cream	0.8–2	150–175
Soy-based whipped cream	1	252
Soy drink	3	40
Oat drink	0.6–1.1	45
Almond drink	0.4	10
Rice drink	0.1	50
Bread	5–10	Approx. 250
Tofu, solid (soy product)	17	155
Tofu, soft (soy product)	8	20
Fermented soybean product	18	200
Wheat gluten preparation	20–30	150–300
Prepared broad bean preparation	17	210
Oat protein preparation	30	200
Oat crumble/mince	20	235

Diet	Protein g / 100 g	Energy kcal / 100 g
Lactovegetarian diet		
In addition to the above:		
Milk, buttermilk, yoghurts, etc.	3	35-55
Hard cheese, squeaky cheese	20-30	280-380
Hard cheeses, light	16-30	170-260
Cottage cheese	16	90
Quark	10	65
Milk-based food protein bobbles	14	90
Milk-based strips and crumble mix	24	165
Pearl barley porridge (made with milk)	4.4	95
Lacto-ovovegetarian diet		
In addition to the above:		
Eggs, boiled	13	135
Preparation of mushroom protein, contains eggs	14	110
Mixed diet		
In addition to the above:		
Meat	20-30	160-260
Cold meats (smoked ham, turkey cuts, etc.)	10-30	90-110
Sausage	10-13	165-250
Fish	10-25	100-150

Sources: www.fineli.fi, food labelling and manufacturers' websites.

Appendix 4 Selection of raw materials

Foodstuff group / foodstuff	Recommended choices and serving options
Vegetables, fruits and berries	<p>Every meal should have a wide range of seasonal products both fresh and as cooked side-dishes.</p> <p>The salad table should include several different components separately, including products marinated in oil. Salty side-dishes and canned goods are rarely served.</p> <p>Fruit and fresh berries will be served as such. Berry dishes can be sweetened lightly (5 g of added sugar per 100 g of food).</p>
Legumes (peas, beans and lentils), other sources of protein of plant origin (broad bean-pea-oat -based products, tofu, textured soy protein and soy chunks, seitan etc.)	<p>In the daily vegetarian food as the main raw material and/or as a side-dish.</p> <p>Pastes made from legumes, other vegetables and oil intended to be spread on bread will be served.</p>
Potato	<p>By alternating the potato option served as a side to the main dish, as various potato dishes, and as a raw material in soups, casseroles and stew dishes. Side potatoes are served salt-free.</p>
Cereal foods and side-dishes	<p>In addition to potato, a versatile assortment of whole grain sides (barley, oats, rye, cereal mixes, whole grain pasta, dark rice) and whole grain porridges (e.g. breakfast porridge).</p> <p>Cereal sides are served salt-free or with very little salt (at most 0.3 g of salt per 100 g of food).</p>
Bread	<p>Each meal has a wide range of less salt (up to 0.9 g / 100 g for soft bread, up to 1.2 g / 100 g for crispbread) whole grain options (minimum 6 g / 100 g for fibre, minimum 10 g / 100 g for crispbread). The bread selection will vary: In addition to the basic range, there should be local products and rolls baked on site, etc.</p>
Milk, lactose-free or low-lactose milk drink or buttermilk	<p>Each meal must have a fat-free, vitamin D-fortified product.</p>
Other liquid dairy products/ sour dairy products	<p>Non-flavoured yoghurt, viili (local sour milk product) or quark should be favoured. Options that are selected should be fat-free or have no more than 1% fat, sugar-free or contain only small amounts of added sugar. No more than 10 g of sugar per 100 g of yoghurt or quark and no more than 12 g of sugar in 100 g of viili.</p>
Plant-based beverages and ready-made snacks and food preparation products used like dairy products	<p>Select supplemented (calcium, vitamin D, vitamin B12, iodine), unsweetened plant-based drinks (oat, soya, etc.). The selection and availability of plant-based beverages will be agreed on locally. It should be noted that a plant-based beverage is not directly comparable to milk or buttermilk (e.g. protein content of the product).</p> <p>Plant-based beverages should contain no more than 2% fat with a maximum of 0.4% saturated fat and no more than 5% sugar.</p> <p>Plant-based products eaten with a spoon should contain no more than 5 % fat with a maximum of 1 % saturated fat and no more than 10 % sugar.</p> <p>Plant-based flavoured beverages should contain no more than 3 % fat with a maximum of 0.4% saturated fat and no more than 6 % sugar.</p>
Cheese	<p>Options that are low-fat (at most 17% fat) and have less salt (no more than 1.2 g salt per 100 g of cheese).</p> <p>It should be noted that cheese-like products used as part of vegetarian diets often contain a great deal of saturated fat.</p>
Fish*	<p>Varying fish species. Served during at least 2 meals per week. Sustainable fisheries, environmental systems and certified fish are favoured in procurements (e.g. WWF/MSC**)</p>
Broiler and turkey	<p>White poultry meat is preferred in meat dishes.</p>

Foodstuff group / foodstuff	Recommended choices and serving options
Red meat (beef, pork, sheep) and minced meat	Red meat is used on the menu less often than white meat.
Meat products and sausages	Dishes containing sausage or other meat products are not served every week. Cold meats are served during the meal at most once a week. Meat products containing less fat and salt should be selected. Cold meats and food sausage: No more than 12 g of fat per 100 g and no more than 40 % hard fat of fat content. No more than 1.5 g of salt per 100 g. Meat products: Max. amount of fat 4g/100g. Max. amount of salt 2.0g/100g.
Egg	Used in foods, as cold cuts and as a side dish.
Fats: (Bread spread, cooking and baking)	Serve a vegetable fat for breads containing at least 60% fat with a maximum saturated fat content 30% of total fat. Vegetable oil, liquid vegetable oil products or margarine containing at least 60% fat are used in food preparation.
Salad dressing	Rapeseed/Canola and olive oil will be served as such or as part of a salad dressing.
Nuts and seeds***	Serve unglazed but and seed products with no added sugar or salt alternating types. Daily allowance at most 30 g.
Beverages	Water must be made available throughout the day to drink when thirsty and with meals. Soft drinks, energy drinks and other sugar-sweetened or acidic drinks will not be served with meals (see Acidity of drinks, drawing p. 83). Fruit juice can be served for example with breakfast or snacks (daily allowance at most one glass a day).

* Recommendations for eating fish: <https://www.ruokavirasto.fi/henkiloasiakkaat/tietoa-elintarvikkeista/elintarvikkeiden-turvallisen-kayton-ohjeet/turvallisen-kayton-ohjeet/kala/> (In Finnish).

The Finnish Food Authority's guidelines on the selection of fish species and the frequency of their consumption by young people, women of fertile age, as well as pregnant and breastfeeding women must be taken into account.

<https://www.ruokavirasto.fi/en/private-persons/information-on-food/instructions-for-safe-use-of-foodstuffs/safe-use-of-foodstuffs/>

** WWF Finland's fish guide: <https://wwf.fi/kalaopas/> (In Finnish)

*** This quantity limit is justified, in particular because nuts, almonds and seeds contain high levels of energy due to their high fat content. The seeds of some oil plants (such as flax, sunflower, pumpkin, sesame, hemp and chia) absorb heavy metals from the soil. For this reason, the recommendation is to consume a maximum of 2 tablespoons (15 g) of oil plant seeds per day.

Appendix 5

Student Meal Nutrition Quality Assessment Tool

The tool is used to assess the nutrition quality of the food served. If the indicator's four criteria (basic, salt, fat and information provision criteria) are well-implemented by a restaurant, the food served likely complies with recommendations. The tool can be used to assess whether a diner has the opportunity to select a meal that complies with recommendations on a daily basis. Each criterion is scored separately and the number of points scored shows how well they are realised. The aim is for all four criteria to be met.

Check option for each criterion that best meets the situation at your restaurant. Add the points corresponding to your check marks and compare them with the interpretation of the criterion in question.

BASIC CRITERION

Does your restaurant serve these with meals every day?	Yes	No
Bread with a fibre content of at least 6 g per 100 g and a salt content of no more than 0.9%, 1.2% for crisp bread	<input type="checkbox"/> 1 pts.	<input type="checkbox"/> 0 pts.
Fat-based spread with at least 60% fat, with hard fat making up no more than 30% of total fat and at most 1% salt	<input type="checkbox"/> 1 pts.	<input type="checkbox"/> 0 pts.
Fat-free milk or buttermilk (no more than 0.5% fat) or plant-based drink containing no more than 2% fat (no more than 0.4 g saturated fat per 100 g of beverage), and no more than 5 g sugar	<input type="checkbox"/> 1 pts.	<input type="checkbox"/> 0 pts.
Salad (fresh vegetables, berries, fruit)	<input type="checkbox"/> 1 pts.	<input type="checkbox"/> 0 pts.
Oil or vegetable oil-based salad dressing with a minimum fat content of 25 g per 100 g, Saturated fat at 20% of total fat content and at most 1% salt?	<input type="checkbox"/> 1 pts.	<input type="checkbox"/> 0 pts.

My Points	_____
Interpretation:	
5 points:	The basic criterion is met
0-4 points:	The basic criterion is not met

FATS CRITERION

- Do the foods you serve per number of items (e.g. steaks, meatballs, rolls) that are labelled as complying with the recommendation contain at most 8% fat (fish products 12%)*?
 - 2 pts Always
 - 0 pts Most often
- Do the foods you serve that are labelled as complying with the recommendation (e.g. casseroles, risottos, pasta dishes, main dish salads and pizzas) contain at most 5% fat (fish products 12%)*?
 - 2 pts Always
 - 0 pts Most often
- Do the soups you serve that are labelled as complying with the recommendation contain at most 3% of fat (fish soup 5%)*?
 - 2 pts Always
 - 0 pts Most often
- Do the main dish sauces you serve that are labelled as complying with the recommendation contain at most 9 % of fat (fish sauces 11 %)*?
 - 2 pts Always
 - 0 pts Most often

5. How often do you serve cheese with salad and bread meals with more than 17% fat?
 - 1 pts At most twice a week
 - 0 pts More than twice a week
6. How often do you serve side-dishes for main dishes that have more than 0.7 g of saturated fat per 100 g of food* (E.g. fried potatoes/vegetables, cream potatoes, French fries)?
 - 2 pts Not more than once a week or not at all
 - 0 pts More than once a week
7. How often do you serve fish food? (The question does not apply to restaurants that only serve vegetarian food.)
 - 2 pts At least twice a week
 - 1 pts Once a week
 - 0 pts Less often

* All Heart Symbol products or products produced by industry in accordance their criteria are acceptable regardless of deviating criteria.

** In practice, for example, about 50 g of oil per 1 kg of product.

My Points	_____
Interpretation:	
10-13 points:	The fats criterion is well realised
7-9 points:	The fats criterion is realised in a satisfactory manner
0-6 points:	The fats criterion is realised poorly

SALT CRITERION

1. Do you monitor the salt content of the foods you prepare (analyses, salt meter)?
 - 2 pts Yes, regularly as part of own checks, based on which the salt content is reduced if necessary
 - 1 pts Yes, occasionally
 - 0 pts Not monitored
2. Are there standard recipes for options that are labelled as complying with the recommendation for which salt content has been calculated?
 - 2 pts Yes, for all
 - 1 pts Yes, but only for some
 - 0 pts No
3. How do you add salt, spices containing salt or mineral salt to food?
 - 2 pts Measured and, at most, according to the recipe
 - 0 pts According to the taste of the person preparing the food
4. Do you use iodised salt for cooking?
 - 2 pts Yes
 - 0 pts No
5. Do individual foods sold per item that are labelled as complying with the recommendation contain at most 0.9 g salt per 100 g of food* (e.g. steaks, meatballs, rolls)?
 - 2 pts Always
 - 0 pts Most often
6. Do foods that are labelled as complying with the recommendation (e.g. casseroles, risottos, pasta dishes, main dish salads and pizzas) contain at most 0.75 g of salt per 100 g of food*?
 - 2 pts Always
 - 0 pts Most often
7. Do the soups that are labelled as complying with the recommendation contain at most 0.7 g of salt per 100 g of soup*?
 - 2 pts Always
 - 0 pts Most often

8. Do the main dish sauces that are labelled as complying with the recommendation contain at most 0.9 g of salt per 100 g of food*?
- 2 pts Always
 0 pts Most often
9. Do the meal's side-dishes (pasta, cereals and cooked vegetables) contain at most 0.3 g salt per 100 g of food?
- 1 pts Always
 0 pts Most often
10. Do the potatoes served as a side-dish (e.g. potato puree, wedge potatoes, fried potatoes, potato casserole) contain at most 0.5 g salt per 100 g of potatoes? (No salt in steamed/boiled potatoes.)
- 1 pts Always
 0 pts Most often

* All Heart Symbol products or products produced by industry in accordance their criteria are acceptable regardless of deviating criteria.

My Points	_____
Interpretation:	
12-18 points:	The salt criterion is well realised
7-11 points:	The salt criterion is realised in a satisfactory manner
0-6 points:	The salt criterion is realised poorly

INFORMATION PROVISION CRITERION

1. Has a description of the model meal been made available to customers (image or written instructions)?
- 2 pts Always
 0 pts Less frequently or not at all
2. Are the options that comply with the recommendation listed on the menu and along the serving line making them available to customers (meal options, meal-time beverage, bread fat, bread, salad dressing)?
- 2 pts Always indicated on both the menu and along the serving line
 1 pts Always indicated on the menu only
 1 pts Always indicated along the serving line only
 0 pts There are no labels indicating this

My Points	_____
Interpretation:	
3-4 points:	The information provision criterion is implemented well
1-2 points:	The information provision criterion is implemented in a satisfactory manner
0 points:	The information provision criterion is not met

This set of criteria is based on the Heart Association's Arkilounas (Weekday lunch) criteria. The criteria are based on the meal-specific minimum requirements for nutrition quality adopted by the National Nutrition Council (https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/kuluttaja-ja-ammattilaismateriaali/julkaisut/ravitsemussuosituksset_2014_fi_web_versio_5.pdf) (in Finnish) and the Heart Symbol criteria (<https://www.sydanmerkki.fi/en/>).

Appendix 6 Example of the correct structure for an invitation to tender or tendering material

Main document: Invitation to tender, which includes the procurement technicalities, e.g. requirements concerning the tenderer's background and comparison criteria

- Appendix 1 to the Invitation to Tender: Service description
- Appendix 2 to the Invitation to Tender: Draft agreement
- Other Appendices to the Invitation to Tender

The Service Description is the most important document and contains the following key elements:

- service name
- service location and customer groups
- objective of the service
- content of the service
 - o nutritional recommendation and nutrition quality
 - o customer policies on the content of the meal
 - o parts of meals
 - o a model menu with special diets, options that comply with recommendations and fish dishes that comply with recommendations
 - o nutrient content
 - o description of a model meal (image or written instructions to be made available in the dining area)
 - o variation and occurrence of main raw materials on the menu
 - o other quality requirements set for raw materials
 - o selection of dishes
 - o principles for menu design
 - o a description of the realisation of standard recipes and nutrient content calculations from the options that comply with the recommendation
 - o portion size, meal energy amount according to the criterion
 - o special diets
 - o snacks
 - o holidays, themes
 - o own-checks and food safety
 - o maintaining product information
 - o customer menu
- food distribution, meal times and serving
- other meals and services
- ordering
- delivery

- facilities, equipment, containers and dishes
- pricing (pricing pursuant to Decree 375/2020) and invoicing
- environmental issues/responsibility criteria
 - o monitoring of food waste, targets and measures for preventing food loss
- objectives for responsible activities, monitoring and timetable
- cooperation between the parties and its forms (customer/restaurant committee)
- collection of customer feedback
- table on responsibility for costs
- quality monitoring, implementation of nutrient calculations (programme) and reporting
- the service provider's personnel and substitutes
- exceptional arrangements
- reporting.

Appendix 7 How food recommendations are implemented

When a diet is compiled in accordance with food recommendations and consumed in accordance with energy requirements, the diet is balanced and contains enough essential nutrients.

However, according to the results of the National FinDiet 2017 Survey⁵⁸, the average Finnish diet is in many respects far from what is recommended. In particular, the use of vegetables (including berries and fruit) does not meet the recommended 500 g per day. More than 80% of young people aged 18–24 eat less vegetables than this. On average, young women consume around 350 g of vegetables per day and men around 300 g per day. On the other hand, the use of red meat and meat products is abundant, especially for men (on average almost 900 g per week), and exceeds the weekly recommendation (no more than 500 g of cooked meat per week). Women consume an average of 400 g of meat each week. However, when interpreting the results for young people, it should be noted that there was a low participation rate in this age group, which makes it difficult to draw generalisations from the results.

There is still room for improvement in the **quality of fat in Finnish diets**: On average, the intake of saturated fat is 14% of energy intake for women and 15% for men (E-%), while the recommendation is less than 10% E-%. The **intake of soft fats**, on the other hand, remains at the low end of the recommendation. **Fibre intake** is also well below the recommended (3.0 g/MJ) for both men and women. **Protein intake** is on average high (women 18 E-% and men 19 E-%, while the recommended intake is 10–20 E-%).

Reducing the consumption of red meat and meat products and replace these partly or entirely with plant protein sources would improve the quality of fat acquired from diets, increase the amount of fibre people consume and promote a sustainable lifestyle. The amount of protein per dry weight is the same in many leguminous plants as in meat. The sufficient intake of essential amino acids can be ensured by combining a diverse range of plant protein sources at meals such as beans and cereal products. The use of legumes as a source of protein reduces the carbon footprint of a diet and contributes to mitigating climate change and promoting the preservation of biodiversity. Many legumes contain an abundance of water-soluble vitamins and minerals.

58 Valsta L et al. The National FinDiet 2017 Survey, STN/JUST-FOOD project. Written communication. 2020.

Appendix 8 Securing adequate intake of folate, vitamin D, iodine and iron

The lower consumption of vegetables than recommended is evident at the nutrition level as low fibre intake, as well as the lower **intake of folate** than recommended (women 225 µg/day and men 263 µg/day, National FinDiet 2017 Survey⁵⁹). Improve the intake of folate by increasing the consumption of both vegetables and whole grain cereals. Folate (a water-soluble vitamin B) is an important nutrient for women of fertile age and especially for those planning to become pregnant. Adequate intake of folate is necessary for normal foetal development. The highest levels of folate are acquired from dark green vegetables, legumes, fruit, berries and whole grain (rye bread)⁶⁰.

The average **vitamin D intake** for young women is 8 µg/day and 15 µg/day for men (FinRavinto 2017). Sufficient intake requires that the diet contains daily vitamin D supplemented liquid dairy products or plant-based drinks and fat spreads and that a person eats fish weekly⁶¹. If a diet does not contain the aforementioned vitamin D-fortified foods and fish, a vitamin D supplement of 10 micrograms per day is recommended during winter. A dose higher than this is of no use.

Low **iodine intake** has proved to be a problem in Finnish diets in the 2000s. The situation has gradually improved when a new recommendation on the use of iodised salt was issued in 2015. In order to ensure iodine intake, both consumers and food services have been advised first and foremost to use iodined salt⁶² when preparing foods. The recommendation also applies to student restaurants. When selecting bread and other foods, it is advisable to prefer those made with iodised salt (see list of ingredients on the package label). It is important that the plant-based beverage served with meals is also iodised. The main sources of iodine are dairy products, fish and iodised salt⁶³. However, the use of salt should not be increased just because it contains iodine.

Iron is an important nutrient, and one's entire diet is important in securing its adequate intake. Iron deficiency anaemia occurs in part of the population, especially among women of fertile age and athletes, where the need for iron or iron loss (e.g. during menstruation) is higher than usual.

The recommended iron intake for men is 9 mg/day. Because of menstruation, the need for iron is higher for women until they reach menopause. The recommended iron intake for women is 15 mg/day. According to the National FinDiet 2017 Survey, the intake of iron by men between the ages of 18 and 24 is on average sufficient, but it is clearly below average intake needs for women of the same age (10 mg/day). The best sources of iron are meat and meat products and whole grain products, especially fermented rye bread. The most important sources of iron in non-meat diets are whole grains and legumes. The high intake of vitamin C contributes to the absorption of plant-based iron; it is therefore important to combine fresh vegetables, berries or fruit with meals. The absorption of iron is impaired by tannins found in tea and coffee, by phytates found in cereals including bran consumed as such, and to a certain extent by milk products consumed at the same time as iron. Attention should be given to these issues in particular in the treatment of anaemia.

59 Valsta L et al. The National FinDiet 2017 Survey. <http://urn.fi/URN:ISBN:978-952-343-238-3> (In Finnish)

60 Folate. <https://www.ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/ravintoaineet/folaatti-ja-foolihappo/> (In Finnish)

61 Vitamin D. <https://www.ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/ravintoaineet/d-vitamiini/> (In Finnish)

62 National Nutrition Council recommendation for measures to improve the iodine intake of the population, 2015. https://www.ruokavirasto.fi/globalassets/teemat/terveytta-edistava-ruokavalio/ravintoaineet/vrn_jodi_toimenpidesuositus_10_2.2015_english.pdf

63 Iodine <https://www.ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/ravintoaineet/jodi/> (In Finnish)



