## FOOD AND NUTRIENT INTAKE AMONG ADULTS

 IN EAST AND SOUTHWEST FINLAND- A DIETARY SURVEY OF

THE FINMONICA PROJECT IN 1982

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## 1. Background

Cardiovascular disease (CVD) mortality varies greatly in different countries. Clear differences have also been observed in many countries in time trends both for total mortality and for cardiovascular disease mortality. Although cerebrovascular disease mortality has decreased in most industrialized countries, changes in coronary heart disease (CHD) mortality have been considerably different across countries. In some countries CHD mortality has clearly started to decrease whereas in other countries it has increased. There are also countries where CHD mortality has remained the same. In most countries the changes for both men and women are similar and can be observed even in the youngest age groups.

The observed changes in mortality are based mainly on routine death statistics. Information on the changes in non-fatal disease is lacking. For this reason it cannot be said whether the change in mortality is related to a change in the incidence of the disease or to its prognosis. The factors explaining the clearly different development in CHD mortality in various countries are not known either.

In Finland CHD mortality in both men and women increased greatly from the 1950's to the mid-1960's and decreased in the 1970's. There are regional differencies in CHD mortality and morbidity with lower mortality rates in west and southwest Finland than in east Finland. The increase in coronary artery disease mortality until late 1960's seems to have occurred in a fairly parallel manner in the different areas.

WHO has launched an international MONICA study to extend the previous cross-sectional studies of differencies in acute myocardial infarction (AMI) and stroke morbidity into a longitudinal study. The aim of this project is to follow simultaneously CVD mortality and morbidity, population risk factor levels and health behaviour and medical care practices, in addition to certain potentially important psychosocial factors in defined populations.

Finland is a participant in the MONICA project. The aim of FINMONICA is to follow the trends in CVD and total mortality as well as AMI and stroke incidence rates in communities selected for the study in east and west Finland. A further goal is to investigate the degree to which these trends are associated with changes in known risk factors, the health behaviour of the population, medical care and the major socioeconomic factors.

The FINMONICA project can be devided into three main parts:

1) monitoring of incidence and mortality from $A M I$ and stroke by event registration and monitoring of deaths by death certification,
2) monitoring of the levels of CVD risk factors and some other parameters using randomized surveys of selected population samples in 1982, 1987 and 1992 and postal surveys annually, and
3) monitoring of acute coronary care in the treatment of acute myocardial infarction.

In connection with FINMONICA, additional information is collected and supplementary studies are performed as part of optional international MONICA studies and other studies.

One of the optional studies, called the nutrition study, aims at assessing the extent to which trends in coronary heart disease morbidity and mortality are related to changes in nutrient intake measured at the same time in defined communities in different countries.

As part of this dietary surveillance programme a dietary survey was carried out in the 1982 baseline survey on a subsample of the survey population. Since the last previous dietary survey of the Finnish population was carried out in 1973-76 by the Social Insurance Institution (Seppänen ym. 1981), information about the recent food consumption habits and nutrient intake of the population was needed also nationally. The 1982 FINMONICA dietary survey served these two purposes.

## 2. Monitoring areas

In east Finland the provinces of North Karelia and Kuopio are the monitoring areas. In these two provinces the survey was carried out in all municipalities. In southwest Finland the monitoring area includes the city of Turku and a group of rural municipalities in the Loimaa region. The total population covered by FINMONICA is given in table 1 and the locations of the monitoring areas are shown in figure 1.

Table 1. Mean population for the year 1981 in the total FINMONICA area (all ages 633 442).

| Age in years | Number of men | Number of women | Total |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| $25-29$ | 28264 | 25723 | 53987 |
| $30-34$ | 29426 | 25792 | 55216 |
| $35-39$ | 21137 | 19563 | 40699 |
| $40-44$ | 18539 | 17939 | 36478 |
| $45-49$ | 17567 | 17821 | 35608 |
| $50-54$ | 19088 | 20005 | 39093 |
| $55-59$ | 16374 | 20049 | 36423 |
| $60-64$ | 12640 | 17781 | 30421 |
| TOTAL | $\mathbf{1 6 3 0 3 5}$ | $\mathbf{1 6 4 6 7 3}$ | 327925 |



Figure 1. Finland and its 11 provinces and the three FINMONICA areas: North Karelia, Kuopio province and southwest Finland (Turku and Loimaa).

### 2.1. North Karelia

North Karelia province is situated in the eastern part of the country along the border between Finland and the Soviet Union. The total area includes land $17782 \mathrm{~km}^{2}$ and lakes 3 $803 \mathrm{~km}^{2}$. The population of North Karelia is about 177000 . The province is divided into 19 municipalities. The capital and the only major town, Joensuu, has a population of 43000 . About 40000 inhabitants live in the three other semi-urban areas and the rest in the rural districts. The mean population in North Karelia by age group for the year 1981 is given in table 2.

Migration out of the province, movement to urban areas and rapid change of the occupational structure took place during the 60's and 70's. A relatively low mean income level and high unemployment rate are still common features in North Karelia. Small scale farming and forestry are the main sources of livelihood although the proportion of service industries has rapidly increased. Forests cover 80 per cent of the land area. Industrialization is still in a low level and mainly based on farming and lumber industries.

Table 2. Mean population for the year 1981 in North Karelia (all ages 176 728).

| Age in years | Number of men | Number of women | Total |
| :--- | :--- | :--- | :---: |
| $25-29$ | 8078 | 6721 | 14799 |
| $30-34$ | 8047 | 6601 | 14647 |
| $35-39$ | 5838 | 5118 | 10956 |
| $40-44$ | 5171 | 4798 | 9969 |
| $45-49$ | 5012 | 4743 | 9755 |
| $50-54$ | 5359 | 5464 | 10823 |
| $55-59$ | 4652 | 5420 | 10072 |
| $60-64$ | 3631 | 4823 | 8454 |
| TOTAL. | 45788 | 43688 | 89476 |

### 2.2. Kuopio province

The province of Kuopio is the neighbouring province of North Karelia to the west. The total area of the province is $19980 \mathrm{~km}^{2}$ of which $16700 \mathrm{~km}^{2}$ is land. It is a typical lake district and 84 per cent of the land area is forest. The population of the province is about 250 000. The mean population in Kuopio by age group for the year 1981 is given in table 3.

The city of Kuopio is the provencial capital and there are three other towns and 20 rural municipalities. Half of the population is living in urban and half in rural areas. Forestry and lumber industries are the main sources of livelihood. The social, occupational and geographic features resemble closely those of North Karelia. The capital of the province, Kuopio, has about 73000 inhabitants, being the important administrative centre of the whole east Finland. Kuopio is also the economical and cultural centre of the area. The University of Kuopio, which has a medical faculty, was founded in 1972.

Table 3. Mean population for the year 1981 in Kuopio province (all ages 252 387).

| Age in years | Number of men | Number of women | Total |
| :--- | :--- | :--- | :--- |
| $25-29$ | 11159 | 9762 | 20921 |
| $30-34$ | 11265 | 9729 | 20993 |
| $35-39$ | 8162 | 7546 | 15707 |
| $40-44$ | 7539 | 7302 | 14841 |
| $45-49$ | 7065 | 7065 | 14141 |
| $50-54$ | 7743 | 7867 | 15610 |
| $55-59$ | 6528 | 7772 | 14300 |
| $60-64$ | 4929 | 6776 | 11705 |
| TOTAL. |  |  | 128218 |

### 2.3. Southwest Finland

The monitoring area of southwest Finland consists of two parts: the city of Turku and a rural area consisting of 12 municipalities around L.oimaa.

Turku is the third largest city of Finland. It is located in the southwest corner of the country by the Baltic Sea. Turku is the former capital of Finland and the oldest city of the country. It is the administrative and economic centre of the Turku and Pori province. It has one of the biggest harbours of the country and is connected by several passenger ferries to Stockholm, Sweden. Turku has two universities and one medical faculty. The area of the city is $237 \mathrm{~km}^{2}$. There are about 175000 inhabitants comprising the urban population of the southwest Finland area. The city of Loimaa is the centre of this mainly agricultural area. About 43530 inhabitants live in this area which is located 65 km northeast of Turku and 160 km northwest of Helsinki. The mean population in the southwest area by age group for the year 1981 is given in table 4.

Table 4. Mean population for the year 1981 in the southwest area (all ages 204 327).

| Age in years | Number of men | Number of women | Total |
| :--- | :---: | :--- | :--- |
| $25-29$ | 9027 | 9240 | 18267 |
| $30-34$ | 10114 | 9462 | 19576 |
| $35-39$ | 7137 | 6899 | 19576 |
| $40-44$ | 5829 | 5839 | 11668 |
| $45-49$ | 5479 | 6013 | 11492 |
| $50-54$ | 5986 | 6674 | 12660 |
| $55-59$ | 5194 | 6857 | 12051 |
| $60-64$ | 4080 | 6182 | 10262 |
| TOTAL. | 52846 | 57166 | 110012 |

## 3. Study population

The 1982 survey concerned the adult population in the three monitoring areas. A randomized sample of 4000 persons $25-64$ years of age stratified by age and sex was taken from the national population register for each of the three areas. The total sample of all three areas was 12000 persons and the sample size in each sex and 10-year age group was about 500. There were additional samples of approximately 200 persons aged 15 to 24 from North Karelia and Kuopio provinces.

The total number of persons invited to participate in the survey was 12400 . Persons between ages 25 and 64 years and born between the 7th and 12th of each month were chosen to the sample of the dietary survey. Of the 2267 persons born between the 7th and 12th of each month (table 5), 1806 ( $80 \%$ ) participated in the FINMONICA project (table 6). The number of persons returning food recording forms was 1488 . Forms were not given to 65 subjects for unknown reasons, 12 persons were unable to fill the forms because of illness and seven subjects refused to take the forms. Some of the records had to be rejected because of inaccuracies in the records ( 62 men and 61 women) or serious abnormalities in eating habits during the recording days ( 4 men and 13 women, judgement based on self-reporting). The total number of acceptable three day food records was 1348. Thus the final response rate in the dietary survey was $60 \%$ (table 7).

To evaluate how well the final study group represented the total FINMONICA samples in each area, a comparison using $t$ and $x^{2}$-tests was made between the total sample and the final subsample concerning the following variables: age, years of education, weight, height, body mass index, systolic and diastolic blood pressure, serum cholesterol and high density lipoprotein and smoking (table 8). The participants in the dietary survey in North Karelia and the female participants in Kuopio province were significantly older than the corresponding participants of the total FINMONICA sample. Obviously young persons were less willing to keep food records. The other significant differencies (years of education, blood pressure and serum high density lipoprotein) seemed to be a consequence of the difference in age. The minor difference in age between the total sample and the subsample does not, however, seriously reduce the representativeness of the data.

The distribution of participants by occupation was similar for the dietary survey subsample and the total study sample. The percentage of farmers was smaller in southwest Finland than in the other areas (table 9), both for the dietary survey sample and the total FINMONICA study sample, both among the men and women, presumably as a consequence of the greater urbanization of southwest Finland (table 10).

The distribution of the subjects to urban and rural categories was made according to the municipality where the subject lived. The urban category included the cities of Joensuu, Lieksa, Nurmes and Outokumpu in North Karelia, the cities of Kuopio, Varkaus, Iisalmi and Suonenjoki in the province of Kuopio and the cities of Turku and L.oimaa in southwest Finland.

Table 5. Distribution of subjects in the dietary survey subsample by sex, age and monitoring area.

| Age in years | MEN |  |  |  | WOMEN |  |  |  | TOTAL. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NK | K | SW | Total | NK | K | SW | Total |  |
| 25-29 | 32 | 44 | 52 | 128 | 29 | 43 | 40 | 112 | 240 |
| 30-39 | 101 | 133 | 100 | 334 | 102 | 79 | 108 | 289 | 623 |
| 40-49 | 89 | 67 | 89 | 245 | 106 | 72 | 95 | 273 | 518 |
| 50-59 | 132 | 78 | 114 | 324 | 96 | 81 | 107 | 284 | 608 |
| 60-64 | 44 | 20 | 53 | 117 | 62 | 48 | 51 | 161 | 278 |
| Total | 398 | 342 | 408 | 1148 | 395 | 323 | 401 | 1119 | 2267 |

NK=North Karelia
K=Kuopio province
SW=southwest Finland

Table 6. Distribution of subjects in the dietary subsample participating in the FINMONICA survey by sex, age and monitoring area.

| Age in years | MEN |  |  |  | WOMEN |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NK | K | SW | Total | NK | K | sw | Total |  |
| 25-29 | 16 | 35 | 31 | 82 | 17 | 29 | 30 | 76 | 158 |
| 30-39 | 68 | 110 | 74 | 252 | 77 | 70 | 94 | 241 | 493 |
| 40-49 | 63 | 55 | 76 | 194 | 89 | 67 | 83 | 239 | 433 |
| 50-59 | 102 | 67 | 89 | 258 | 85 | 70 | 91 | 246 | 504 |
| 60-64 | 33 | 14 | 43 | 90 | 42 | 44 | 42 | 128 | 218 |
| Total | 282 | 281 | 313 | 876 | 310 | 280 | 340 | 938 | 1806 |
| \% of the subsample | 71 | 82 | 77 | 76 | 79 | 87 | 85 | 83 | 80 |

Table 7. Distribution of final participants by sex, age and monitoring area.

Table 8. Comparison of the data from the FINMONICA survey (FM) and the dietary survey (DS). The means of variables for men are given on the upper line and those for women on the lower line.

|  | North Kareilia |  |  | Kuopio province |  |  | Southwest Finland |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FM | DS | sign. of diff. | FM | DS | sign. of diff. | FM | DS | sign | diff. |
| Age, years | 43.7 | 46.1 | ** | 41.0 | 41.7 | n.s. | 45.1 | 46.6 | n.s. |  |
|  | 43.5 | 46.3 | ** | 43.3 | 45.6 | * | 45.2 | 45.2 | n.s. |  |
| Years of education | 8.4 | 8.3 | n.s. | 9.0 | 9.3 | n.s. | 9.5 | 9.4 | n.s. |  |
|  | 9.2 | 8.6 | * | 9.3 | 8.9 | n.s. | 9.9 | 10.0 | n.s. |  |
| Weight, kg | 78.3 | 78.5 | n.s. | 78.1 | 78.7 | n.s. | 80.6 | 81.4 | n.s. | - |
|  | 66.0 | 67.1 | n.s. | 65.4 | 66.5 | n.s. | 66.4 | 65.7 | n.s. |  |
| Height, cm | 173 | 172 | n.s. | 174 | 174 | n.s. | 175 | 175 | n.s. |  |
|  | 160 | 162 | n.s. | 160 | 160 | n.s. | 161 | 162 | n.s. |  |
| Body mass index, $\mathrm{kg} / \mathrm{m}^{2}$ | 26.2 | 26.5 | n.s. | 25.9 | 26.0 | n.s. | 26.3 | 26.6 | n.s. |  |
|  | 26.0 | 26.5 | n.s. | 25.6 | 26.1 | n.s. | 25.5 | 25.2 | n.s. |  |
| Systolic blood pressure, mmHg | 145 | 146 | n.s. | 146 | 148 | n.s. | 144 | 145 | n.s. |  |
|  | 141 | 144 | * | 143 | 147 | ** | 138 | 138 | n.s. |  |
| Diastolic blood pressure, mmHg | 86 | 86 | n.s. | 87 | 89 | * | 86 | 86 | n.s. |  |
|  | 83 | 84 | n.s. | 84 | 85 | n.s. | 81 | 82 | n.s. |  |
| Serum cholesterol, mmol/l | 6.2 | 6.2 | n.s. | 6.1 | 6.2 | n.s. | 6.0 | 6.1 | n.s. |  |
|  | 6.1 | 6.2 | n.s. | 6.0 | 6.0 | n.s. | 6.0 | 6.0 | n.s. |  |
| Serum high density lipoprotein, mmol/l | 1.2 | 1.2 | * | 1.2 | 1.3 | n.s. | 1.2 | 1.2 | n.s. |  |
|  | 1.5 | 1.4 | n.s. | 1.5 | 1.4 | * | 1.5 | 1.5 | n.s. |  |
| Smoking, times per day | 6.4 | 6.5 | n.s. | 7.7 | 6.6 | n.s. | 7.6 | 6.7 | n.s. |  |
|  | 1.6 | 1.5 | n.s. | 2.2 | 1.6 | n.s. | 3.0 | 3.2 | n.s. |  |

[^0]Table 9. Distribution of participants in the dietary survey by occupation.

|  |  | MEN |  |  | WOMEN |  |  |  |  | TOTAL. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | NK | K | SW | Total | NK | K | sw | Total |  |
| Farmers | $N$ | 54 | 50 | 18 | 122 | 37 | 35 | 18 | 90 | 212 |
|  | \% | 26 | 24 | 8 | 19 | 16 | 17 | 7 | 13 | 16 |
| Blue-collar | $N$ | 57 | 63 | 92 | 212 | 22 | 23 | 45 | 90 | 302 |
| workers | \% | 27 | 30 | 39 | 32 | 10 | 11 | 18 | 13 | 22 |
| White-collar | N | 56 | 70 | 95 | 221 | 99 | 86 | 122 | 307 | 528 |
| workers | \% | 27 | 33 | 41 | 34 | 42 | 41 | 49 | 44 | 39 |
| Housewives | N | - | - | - | - | 37 | 32 | 30 | 99 | 99 |
|  | \% |  |  |  |  | 16 | 15 | 12 | 14 | 7 |
| Retired | N | 35 | 16 | 17 | 68 | 33 | 30 | 24 | 87 | 155 |
|  | \% | 17 | 8 | 7 | 10 | 14 | 14 | 10 | 13 | 12 |
| Students | N | 1 | 2 | 3 | 6 | 1 | 1 | 1 | 3 | 9 |
|  | \% | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Unemployed | $N$ | 3 | 6 | 4 | 13 | 3 | - | 2 | 5 | 18 |
|  | \% | 2 | 3 | 2 | 2 | 1 |  | 1 | 1 | 1 |
| Occupation | N | 2 | 5 | 4 | 11 | 3 | 4 | 7 | 14 | 25 |
| unknown | \% | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 |
| Total | N | 208 | 212 | 233 | 653 | 235 | 211 | 249 | 695 | 1348 |
|  | \% | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Table 10. Distribution of participants in the dietary survey by place of living.

|  |  | MEN |  |  |  | WOM | IEN |  |  | TOTAL. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | NK | K | SW | Total | NK | K | SW | Total |  |
| Urban | N | 109 | 111 | 181 | 401 | 121 | 104 | 211 | 436 | 837 |
|  | \% | 52 | 52 | 78 | 61 | 51 | 49 | 85 | 63 | 62 |
| Rural | N | 99 | 101 | 52 | 252 | 114 | 107 | 38 | 259 | 511 |
|  | \% | 48 | 48 | 22 | 39 | 49 | 51 | 15 | 37 | 38 |
| Total | N | 208 | 212 | 233 | 653 | 235 | 211 | 249 | 695 | 1348 |
|  | \% | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| $\begin{aligned} & N K=N o \\ & K=K u o \\ & S W=s o u \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |

## 4. Dietary assessment method

Data on diet were collected by means of a three-day food record by which detailed information was obtained on the type and amount of food consumed by the subject during three successive days.

The data collection method was checked first in a group of 30 persons. The food record forms, model form and instructions (annexes l-3) were given randomly to 15 clients of an occupational nurse at the National Public Health Institute in Helsinki, and 15 clients of a health care nurse in Lieksa health center in North Karelia. The completed records were returned to the nutritionist who checked them.

All participants in the FINMONICA survey were invited to the examination at the local health center. During administration of the survey the participants belonging to the subsample received oral and written instructions on keeping the food record as well as model forms, blank forms for recording, and a return envelope. Completed records were to be sent to the National Public Health Institute. There the records were checked and coded by nutrition students under the supervision of a nutritionist. Tables especially made for FINMONICA were used for converting household measures into grams (Leino 1984). The food consumption data were analyzed using the food composition files and computer programmes developed for this purpose in the Department of Nutrition, University of Helsinki (Ahlström et al. 1972).

Data on the daily food consumption and on the intake of energy and 35 nutrients of each individual were then transferred to the National Public Health Institute, and further analysis was made using SAS programmes.

## Foods in 25 groups

1 - rye products

- wheat products
- other cereal products
- legumes and nuts

2 - potatoes

- roots
- other vegetables

3 - fruit and berries

4 - margarine and oils

- butter

5 - milk

- cheese
- other milk products (incl. sour milk)

6 - pork

- beef and other meat
- sausage
- inner organs and blood

7 - fish and other seafood

8 - eggs

9 - coffee

- tea
- alcoholic drinks
- soft drinks
- sweets, sugar, syrup and honey
- other foodstuffs


## Einergy and nutrients

- energy in MJ and kcal
- protein
- fat
saturated fatty acids monounsaturated fatty acids polyunsaturated fatty acids
- linoleic acid
- carbohydrate sucrose
- vitamin $A$ as retinol equivalents
- thiamin
- riboflavin
- niacin
- niacin, incl. equivalents
- vitamin C
- cholesterol
- ethanol
- 20 minerals (K, Ca, Mg, P, S, Fe, Cu, Mn, Zn, Mo, Co, Ni,

$$
\mathrm{Cr}, \mathrm{~F}, \mathrm{Se}, \mathrm{Si}, \mathrm{Hg}, \mathrm{As}, \mathrm{Cd}, \mathrm{~Pb})
$$

Daily nutrient intakes are also given per 1000 kcal. The ratio of polyunsaturated to saturated fatty acids ( $\mathrm{P} / \mathrm{S}$-ratio), the energy and nutrient intake from the nine main food groups and the percentage of energy from energy providing nutrients were computed.

The results are represented by age, monitoring area, occupation, place of living and in addition, by the percentage of energy from fat. The distribution of food, energy and nutrient intakes is shown also in quantiles. Tables and figures are always given separately for men and women. In the tables concerning age categories the total values of the results are given as age-standardized by the whole population of the corresponding area. The values of the nutrient intake from the nine food groups are also presented agestandardized.

The food composition files used in this analysis did not include information about the nutrient losses in foods during preparation. Therefore, many values given in the tables and figures especially the amounts of watersoluble vitamins are overestimations. However, all the previous dietary surveys in Finland have been reported in this manner so that the results are comparable.

Vitamin A is given as retinol equivalents in all tables and figures. The niacin intake is presented both as the amount of absolute niacin and as niacin equivalents including niacin transformed from tryptophan.

Most of the wheat consumed in Finland in 1982 was imported and was thus much richer in selenium than the wheat grown in the Finnish soil. The selenium values for cereal products was dated according to the situation in 1982 (Varo 1987).

Since 1985 selenium has been added to the fertilizers and, consequently, the selenium intake has increased remarkably. Thus the selenium values in this report should be considered historical.
5. Food and nutrient intake data
5.1. Food and nutrient intake by sex, age and monitoring area
table 11. mean daily consumption of rye products by sex, age and area

|  |  | RYE PRODUCTS in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 188 | 86 | 13 | 123 | 65 | 25 | 95 | 56 | 18 | 129 | 75 | 56 |
|  | 30-39 | 161 | 80 | 56 | 147 | 65 | 84 | 91 | 62 | 53 | 136 | 74 | 193 |
|  | 40-49 | 157 | 75 | 45 | 133 | 72 | 41 | 89 | 49 | 55 | 124 | 71 | 141 |
|  | 50-59 | 155 | 80 | 68 | 128 | 65 | 49 | 105 | 65 | 69 | 129 | 74 | 186 |
|  | 60-64 | 128 | 50 | 26 | 99 | 61 | 13 | 110 | 59 | 38 | 114 | 57 | 77 |
|  | ALL 1) | 161 | 78 | 208 | 131 | 67 | 212 | 96 | 58 | 233 | 128 | 73 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 97 | 29 | 12 | 66 | 42 | 18 | 66 | 47 | 23 | 73 | 43 | 53 |
|  | 30-39 | 101 | 41 | 58 | 94 | 47 | 52 | 57 | 39 | 68 | 82 | 46 | 178 |
|  | 40-49 | 107 | 54 | 67 | 98 | 46 | 58 | 63 | 47 | 58 | 90 | 53 | 183 |
|  | 50-59 | 112 | 47 | 68 | 89 | 42 | 53 | 72 | 42 | 67 | 91 | 47 | 188 |
|  | 60-64 | 102 | 30 | 30 | 83 | 37 | 30 | 65 | 46 | 33 | 83 | 41 | 93 |
|  | ALL 1) | 104 | 43 | 235 | 88 | 45 | 211 | 64 | 44 | 249 | 85 | 47 | 695 |

1) standardized by age
table 12. mean daily consumption of wheat products by sex, age and area

|  |  | WHEAT PRODUCTS in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALl |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | AN | D | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 110 | 61 | 13 | 95 | 47 | 25 | 157 | 97 | 18 | 119 | 74 | 56 |
|  | 30-39 | 105 | 60 | 56 | 115 | 76 | 84 | 137 | 60 | 53 | 118 | 68 | 193 |
|  | 40-49 | 108 | 62 | 45 | 115 | 64 | 41 | 127 | 72 | 55 | 117 | 67 | 141 |
|  | 50-59 | 87 | 66 | 68 | 87 | 52 | 49 | 98 | 59 | 69 | 91 | 60 | 186 |
|  | 60-64 | 71 | 49 | 26 | 73 | 45 | 13 | 92 | 66 | 38 | 82 | 57 | 77 |
|  | ALL 1) | 100 | 61 | 208 | 102 | 62 | 212 | 126 | 74 | 233 | 110 | 67 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 111 | 53 | 12 | 113 | 89 | 18 | 93 | 67 | 23 | 104 | 72 | 53 |
|  | 30-39 | 97 | 55 | 58 | 94 | 49 | 52 | 108 | 59 | 68 | 100 | 55 | 178 |
|  | 40-49 | 84 | 45 | 67 | 87 | 40 | 58 | 96 | 47 | 58 | 89 | 44 | 183 |
|  | 50-59 | 83 | 52 | 68 | 82 | 49 | 53 | 91 | 49 | 67 | 86 | 50 | 188 |
|  | 60-64 | 75 | 50 | 30 | 70 | 43 | 30 | 89 | 50 | 33 | 78 | 48 | 93 |
|  | ALL 1) | 90 | 52 | 235 | 90 | 56 | 211 | 97 | 54 | 249 | 92 | 54 | 695 |

1) standardized by age
table 13. mean daily consumption of other cereal products by sex, age and area

|  |  | OTHER CEREAL PRODUCTS in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALI. |  |  |
|  |  | mean | STD | N | mean | STD | N | mean | STD | N | Mean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 50 | 73 | 13 | 29 | 32 | 25 | 18 | 26 | 18 | 30 | 44 | 56 |
|  | 30-39 | 30 | 32 | 56 | 28 | 33 | 84 | 28 | 31 | 53 | 29 | 32 | 193 |
|  | 40-49 | 21 | 18 | 45 | 26 | 38 | 41 | 22 | 26 | 55 | 23 | 28 | 141 |
|  | 50-59 | 24 | 26 | 68 | 33 | 37 | 49 | 21 | 20 | 69 | 25 | 28 | 186 |
|  | 60-64 | 23 | 21 | 26 | 37 | 28 | 13 | 27 | 35 | 38 | 28 | 30 | 77 |
|  | ALL 1) | 30 | 39 | 208 | 29 | 34 | 212 | 23 | 27 | 233 | 27 | 34 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 34 | 27 | 12 | 23 | 25 | 18 | 11 | 14 | 23 | 20 | 23 | 53 |
|  | 30-39 | 20 | 20 | 58 | 20 | 22 | 52 | 15 | 23 | 68 | 18 | 22 | 178 |
|  | 40-49 | 19 | 18 | 67 | 27 | 26 | 58 | 14 | 19 | 58 | 20 | 21 | 183 |
|  | 50-59 | 22 | 16 | 68 | 26 | 22 | 53 | 17 | 19 | 67 | 21. | 19 | 188 |
|  | 60-64 | 21 | 14 | 30 | 24 | 21 | 30 | 15 | 12 | 33 | 20 | 16 | 93 |
|  | ALl 1) | 23 | 20 | 235 | 24 | 23 | 211 | 15 | 19 | 249 | 20 | 21 | 695 |

1) standardized by age
table 14. mean daily consumption of legumes and nuts by sex. age and area

|  |  | legumes and nuts in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | Mean | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 10 | 16 | 13 | 4 | 8 | 25 | 8 | 12 | 18 | 7 | 12 | 56 |
|  | 30-39 | 8 | 14 | 56 | 10 | 18 | 84 | 1.1 | 16 | 53 | 10 | 16 | 193 |
|  | 40-49 | 10 | 15 | 45 | 6 | 12 | 41 | 15 | 22 | 55 | 11 | 18 | 141 |
|  | 50-59 | 8 | 15 | 68 | 14 | 20 | 49 | 15 | 30 | 69 | 12 | 23 | 186 |
|  | 60-64 | 15 | 29 | 26 | 18 | 28 | 13 | 9 | 14 | 38 | 12 | 23 | 77 |
|  | ALL 1) | 10 | 17 | 208 | 9 | 17 | 212 | 12 | 20 | 233 | 10 | 18 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 8 | 17 | 12 | 6 | 11 | 18 | 16 | 27 | 23 | 11 | 21 | 53. |
|  | 30-39 | 6 | 11 | 58 | 7 | 13 | 52 | 8 | 16 | 58 | 7 | 14 | 178 |
|  | 40-49 | 3 | 8 | 67 | 6 | 10 | 58 | 5 | 8 | 58 | 4 | 9 | 183 |
|  | 50-59 | 9 | 16 | 68 | 6 | 10 | 53 | 5 | 10 | 67 | 7 | 12 | 188 |
|  | 60-64 | 5 | 16 | 30 | 8 | 13 | 30 | 6 | 14 | 33 | 6 | 14 | 93 |
|  | ALL 1) | 6 | 13 | 235 | 6 | 11 | 211 | 8 | 16 | 249 | 7 | 14 | 695 |

[^1]table 15. mean daily consumption of potatoes by sex, age and area

|  |  | potatoes in grame |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALt |  |  |
|  |  | MEAN | STD | N | mean | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 155 | 97 | 13 | 167 | 101 | 25 | 169 | 109 | 18 | 165 | 101 | 56 |
|  | 30-39 | 170 | 93 | 56 | 184 | 104 | 84 | 170 | 104 | 53 | 176 | 100 | 193 |
|  | 40-49 | 153 | 94 | 45 | 174 | 85 | 41 | 188 | 126 | 55 | 173 | 106 | 141 |
|  | 50-59 | 168 | 101. | 68 | 175 | 84 | 49 | 168 | 79 | 69 | 170 | 89 | 186 |
|  | 60-64 | 136 | 81 | 26 | 211 | 117 | 13 | 175 | 76 | 38 | 168 | 88 | 77 |
|  | ALL 1) | 159 | 94 | 208 | 179 | 96 | 212 | 174 | 104 | 233 | 171 | 98 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 99 | 67 | 12 | 117 | 95 | 18 | 99 | 73 | 23 | 105 | 79 | 53 |
|  | 30-39 | 101 | 61 | 58 | 99 | 71 | 52 | 105 | 73 | 68 | 102 | 69 | 178 |
|  | 40-49 | 91 | 70 | 67 | 113 | 70 | 58 | 119 | 81 | 58 | 107 | 74 | 183 |
|  | 50-59 | 108 | 68 | 68 | 106 | 61 | 53 | 128 | 74 | 67 | 115 | 69 | 188 |
|  | 60-64 | 116 | 61 | 30 | 123 | 75 | 30 | 111 | 58 | 33 | 116 | 64 | 93 |
|  | ALL 1) | 101 | 66 | 235 | 110 | 73 | 211 | 114 | 74 | 249 | 108 | 71 | 695 |

1) standardized by age
table 16. MEAN dAILY CONSUMPTION OF ROOTS by SEX, AGE AND AREA


[^2]table 17. MeAN daily consumption of other vegetables by sex, age and area

|  |  | OTHER VEGETABLES in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALI |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age | 21 | 21 | 13 | 56 | 50 | 25 | 89 | 79 | 18 | 59 | 62 | 56 |
| MEN | 25-29 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30-39 | 63 | 71 | 56 | 72 | 82 | 84 | 68 | 56 | 53 | 68 | 72 | 193 |
|  | 40-49 | 66 | 68 | 45 | 48 | 51 | 41 | 75 | 66 | 55 | 64 | 63 | 141 |
|  | 50-59 | 37 | 43 | 68 | 44 | 49 | 49 | 56 | 47 | 69 | 46 | 47 | 186 |
|  | 60-64 | 29 | 32 | 26 | 39 | 33 | 13 | 56 | 60 | 38 | 44 | 49 | 77 |
|  | ALI 1) | 48 | 58 | 208 | 54 | 60 | 212 | 70 | 63 | 233 | 58 | 61 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 78 | 68 | 12 | 79 | 65 | 18 | 54 | 35 | 23 | 68 | 55 | 53 |
|  | 30-39 | 71 | 61 | 58 | 80 | 52 | 52 | 85 | 70 | 68 | 79 | 62 | 178 |
|  | 40-49 | 62 | 48 | 67 | 62 | 61 | 58 | 70 | 55 | 58 | 68 | 54 | 183 |
|  | 50-59 | 54 | 51 | 68 | 68 | 57 | 53 | 60 | 55 | 67 | 60 | 54 | 188 |
|  | 60-64 | 34 | 32 | 30 | 41 | 38 | 30 | 53 | 58 | 33 | 43 | 45 | 93 |
|  | ALL 1) | 62 | 55 | 235 | 68 | 57 | 211 | 67 | 50 | 249 | 66 | 57 | 695 |

1) standardized by age
table 18. mean daily consumption of fruit and berries by sex, age and area


TABLE 19. MEAN DAILY CONSUMPTION OF MARGARINE AND OILS BY SEX, AGE AND AREA


1) standardized by age

TABLE 20. MEAN DAILY CONSUMPTION OF BUTTER BY SEX. AGE AND AREA

|  |  | BUTTER in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |  | D | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 57 | 42 | 13 | 30 | 24 | 25 | 30 | 29 | 18 | 36 | 32 | 56 |
|  | 30-39 | 43 | 29 | 56 | 49 | 43 | 84 | 24 | 25 | 53 | 41 | 36 | 193 |
|  | 40-49 | 41 | 35 | 45 | 46 | 25 | 41 | 30 | 30 | 55 | 38 | 31 | 141 |
|  | 50-59 | 37 | 29 | 68 | 40 | 31 | 49 | 26 | 24 | 69 | 33 | 28 | 186 |
|  | 60-64 | 38 | 24 | 26 | 32 | 24 | 13 | 30 | 21 | 38 | 33 | 23 | 77 |
|  | ALL 1) | 44 | 33 | 208 | 41 | 32 | 212 | 28 | 27 | 233 | 37 | 31 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 34 | 20 | 12 | 29 | 25 | 18 | 9 | 12 | 23 | 21 | 22 | 53 |
|  | 30-39 | 29 | 24 | 58 | 29 | 19 | 52 | 17 | 19 | 68 | 24 | 21 | 178 |
|  | 40-49 | 23 | 19 | 67 | 30 | 21 | 58 | 15 | 14 | 58 | 23 | 20 | 183 |
|  | 50-59 | 28 | 24 | 68 | 26 | 21 | 53 | 19 | 15 | 67 | 24 | 21 | 188 |
|  | 60-64 | 29 | 17 | 30 | 23 | 21 | 30 | 11 | 16 | 33 | 21 | 19 | 93 |
|  | ALL 1) | 28 | 22 | 235 | 28 | 21 | 211 | 15 | 16 | 249 | 23 | 21 | 695 |

1) standardized by age
table 21. MEAN dAILY CONSUMPTION of MIlk by SEx, Age and area

|  |  | MILK in milliliters |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | mean | STD | N | EAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 998 | 412 | 13 | 656 | 451 | 25 | 646 | 345 | 18 | 732 | 430 | 56 |
|  | 30-39 | 572 | 327 | 56 | 587 | 439 | 84 | 495 | 315 | 53 | 557 | 377 | 193 |
|  | 40-49 | 607 | 352 | 45 | 581 | 321 | 41 | 513 | 316 | 55 | 563 | 330 | 141 |
|  | 50-59 | 520 | 298 | 68 | 654 | 419 | 49 | 497 | 320 | 69 | 547 | 346 | 186 |
|  | 60-64 | 537 | 273 | 26 | 630 | 446 | 13 | 494 | 272 | 38 | 531 | 307 | 77 |
|  | ALL | 646 | 377 | 208 | 615 | 407 | 212 | 528 | 320 | 233 | 594 | 371 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 441 | 198 | 12 | 332 | 337 | 18 | 318 | 266 | 23 | 351 | 279 | 53 |
|  | 30-39 | 365 | 303 | 58 | 382 | 270 | 52 | 275 | 243 | 68 | 336 | 274 | 178 |
|  | 40-49 | 359 | 224 | 67 | 356 | 259 | 58 | 246 | 180 | 58 | 322 | 228 | 183 |
|  | 50-59 | 408 | 251 | 68 | 411 | 246 | 53 | 309 | 216 | 67 | 374 | 241 | 188 |
|  | 60-64 | 415 | 210 | 30 | 306 | 201 | 30 | 362 | 239 | 33 | 361 | 220 | 93 |
|  | All | 392 | 246 | 235 | 365 | 266 | 211 | 293 | 227 | 249 | 348 | 249 | 695 |

1) standardized by age
table 22. MEAN dAILY CONSUMPTION OF ChEESE by sex, age and area

[^3]TABLE 23. MEAN DAILY CONSUMPTION OF OTHER MILK PRODUCTS BY SEX, AGE AND AREA


TABLE 24. MEAN DAILY CONSUMPTION OF PORK BY SEX, AGE AND AREA

## PORK in grams

Area


|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 18 | 48 | 13 | 14 | 20 | 25 | 32 | 34 | 18 | 21 | 33 | 56 |
|  | 30-39 | 28 | 40 | 56 | 32 | 33 | 84 | 43 | 52 | 53 | 34 | 41 | 193 |
|  | 40-49 | 30 | 37 | 45 | 38 | 44 | 41 | 34 | 35 | 55 | 34 | 38 | 141 |
|  | 50-59 | 31 | 38 | 68 | 35 | 41 | 49 | 40 | 46 | 69 | 35 | 42 | . 186 |
|  | 60-64 | 40 | 54 | 26 | 52 | 69 | 13 | 39 | 53 | 38 | 42 | 56 | 77 |
|  | ALL 1) | 28 | 42 | 208 | 33 | 41 | 212 | 38 | 44 | 233 | 33 | 42 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 23 | 24 | 12 | 25 | 39 | 18 | 31 | 35 | 23 | 27 | 34 | 53 |
|  | 30-39 | 26 | 32 | 58 | 35 | 46 | 52 | 29 | 36 | 68 | 30 | 38 | 178 |
|  | 40-49 | 24 | 33 | 67 | 17 | 24 | 58 | 21 | 30 | 58 | 21 | 29 | 183 |
|  | 50-59 | 21 | 25 | 68 | 26 | 39 | 53 | 25 | 37 | 67 | 24 | 33 | 188 |
|  | 60-64 | 12 | 19 | 30 | 21 | 25 | 30 | 15 | 22 | 33 | 16 | 22 | 93 |
|  | ALl 1) | 22 | 28 | 235 | 25 | 36 | 211 | 25 | 33 | 249 | 24 | 33 | 695 |

[^4]table 25. mean daily consumption of beef and other meat by sex, age and area

|  |  | beef and other meat in grame |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | N | Mean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 63 | 79 | 13 | 52 | 44 | 25 | 88 | 70 | 18 | 66 | 63 | 56 |
|  | 30-39 | 78 | 68 | 56 | 70 | 73 | 84 | 62 | 56 | 53 | 70 | 67 | 193 |
|  | 40-49 | 75 | 75 | 45 | 62 | 68 | 41 | 52 | 51 | 55 | 62 | 65 | 141 |
|  | 50-59 | 61 | 53 | 68 | 50 | 55 | 49 | 55 | 50 | 69 | 56 | 53 | 186 |
|  | 60-64 | 62 | 51 | 26 | 57 | 54 | 13 | 59 | 48 | 38 | 60 | 49 | 77 |
|  | ALL 1) | 70 | 67 | 208 | 60 | 62 | 212 | 63 | 57 | 233 | 64 | 62 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 39 | 39 | 12 | 55 | 47 | 18 | 64 | 56 | 23 | 55 | 50 | 53 |
|  | 30-39 | 49 | 47 | 58 | 50 | 68 | 52 | 46 | 46 | 68 | 48 | 53 | 178 |
|  | 40-49 | 44 | 49 | 67 | 57 | 41 | 58 | 43 | 43 | 58 | 48 | 45 | 183 |
|  | 50-59 | 44 | 43 | 68 | 52 | 45 | 53 | 46 | 42 | 67 | 47 | 43 | 188 |
|  | 60-64 | 50 | 49 | 30 | 34 | 39 | 30 | 41 | 42 | 33 | 42 | 44 | 93 |
|  | ALL 1) | 45 | 45 | 235 | 51 | 50 | 211 | 48 | 46 | 249 | 48 | 47 | 695 |

1) standardized by age
table 26. mean daily consumption of sausage by sex, age and area

|  |  | SAUSAGE in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | mean | STD | N | mean | STD | N | AN | T | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 101 | 88 | 13 | 74 | 56 | 25 | 69 | 60 | 18 | 79 | 66 | 56 |
|  | 30-39 | 104 | 85 | 56 | 97 | 83 | 84 | 81 | 68 | 53 | 95 | 80 | 193 |
|  | 40-49 | 53 | 48 | 45 | 55 | 51 | 41 | 68 | 57 | 55 | 59 | 53 | 141 |
|  | 50-59 | 57 | 64 | 68 | 37 | 38 | 49 | 61 | 58 | 69 | 53 | 57 | 186 |
|  | 60-64 | 28 | 35 | 26 | 28 | 37 | 13 | 40 | 39 | 38 | 34 | 37 | 77 |
|  | ALI | 74 | 74 | 208 | 64 | 64 | 212 | 68 | 60 | 233 | 68 | 66 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 54 | 60 | 12 | 48 | 59 | 18 | 50 | 44 | 23 | 50 | 52 | 53 |
|  | 30-39 | 45 | 50 | 58 | 38 | 34 | 52 | 53 | 50 | 68 | 46 | 46 | 178 |
|  | 40-49 | 37 | 39 | 67 | 32 | 38 | 58 | 41 | 36 | 58 | 36 | 38 | 183 |
|  | 50-59 | 32 | 37 | 68 | 17 | 25 | 53 | 37 | 42 | 67 | 30 | 37 | 188 |
|  | 60-64 | 26 | 36 | 30 | 16 | 24 | 30 | 15 | 18 | 33 | 19 | 27 | 93 |
|  | ALL | 39 | 45 | 235 | 31 | 39 | 211 | 41 | 42 | 249 | 37 | 43 | 695 |
| ) stan | by age |  |  |  |  |  |  |  |  |  |  |  |  |

[^5]TABLE 27. MEAN DAILY CONSUMPTION OF INNER ORGANS AND blood by SEX, Age and Area

|  |  | INNER ORGANS AND BLOOD in grame |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | mean | STD | N | mean | STD | N |  | D | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 4 | 10 | 13 | 11 | 18 | 25 | 9 | 25 | 18 | 9 | 19 | 56 |
|  | 30-39 | 9 | 18 | 56 | 7 | 16 | 84 | 9 | 19 | 53 | 8 | 17 | 193 |
|  | 40-49 | 6 | 15 | 45 | 4 | 9 | 41 | 4 | 8 | 55 | 5 | 11 | 141 |
|  | 50-59 | 1 | 4 | 68 | 5 | 18 | 49 | 3 | 11 | 69 | 3 | 12 | 186 |
|  | 60-64 | 1 | 3 | 26 | 3 | 5 | 13 | 3 | 6 | 38 | 2 | 5 | 77 |
|  | ALL 1) | 5 | 13 | 208 | 6 | 15 | 212 | 6 | 16 | 233 | 6 | 15 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 3 | 11 | 12 | 12 | 15 | 18 | 5 | 13 | 23 | 7 | 14 | 53 |
|  | 30-39 | 10 | 22 | 58 | 6 | 14 | 52 | 4 | 11 | 68 | 6 | 16 | 178 |
|  | 40-49 | 4 | 13 | 67 | 5 | 13 | 58 | 10 | 17 | 58 | 6 | 14 | 183 |
|  | 50-59 | 7 | 13 | 68 | 5 | 13 | 53 | 6 | 17 | 67 | 6 | 14 | 188 |
|  | 60-64 | 8 | 15 | 30 | 2 | 8 | 30 | 3 | 9 | 33 | 5 | 11 | 93 |
|  | ALL 1) | 6 | 16 | 235 | 6 | 13 | 211 | 6 | 14 | 249 | 6 | 14 | 695 |

1) standardized by age

TABLE 28. MEAN DAILY CONSUMPTION OF FISH AND OTHER SEAFOOD BY SEX, AGE AND AREA

|  |  | FISH AND OTHER SEAFOOD in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | MEAN | STD | N | mean | STD | N | mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 38 | 66 | 13 | 19 | 32 | 25 | 21 | 31 | 18 | 24 | 42 | 56 |
|  | 30-39 | 42 | 66 | 56 | 33 | 65 | 84 | 33 | 57 | 53 | 36 | 63 | 193 |
|  | 40-49 | 47 | 78 | 45 | 61 | 72 | 41 | 43 | 59 | 55 | 50 | 69 | 141 |
|  | 50-59 | 44 | 72 | 68 | 60 | 94 | 49 | 49 | 75 | 69 | 50 | 79 | 186 |
|  | 60-64 | 67 | 72 | 26 | 52 | 77 | 13 | 31 | 44 | 38 | 47 | 62 | 77 |
|  | ALL | 45 | 70 | 208 | 45 | 72 | 212 | 36 | 57 | 233 | 42 | 67 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 21 | 29 | 12 | 8 | 13 | 18 | 18 | 36 | 23 | 15 | 28 | 53 |
|  | 30-39 | 27 | 37 | 58 | 32 | 45 | 52 | 28 | 35 | 68 | 29 | 39 | 178 |
|  | 40-49 | 35 | 42 | 67 | 25 | 27 | 58 | 29 | 37 | 58 | 30 | 36 | 183 |
|  | 50-59 | 36 | 39 | 68 | 24 | 25 | 53 | 34 | 57 | 67 | 32 | 44 | 188 |
|  | 60-64 | 31 | 34 | 30 | 36 | 43 | 30 | 29 | 40 | 33 | 32 | 39 | 93 |
|  | ALL | 30 | 37 | 235 | 25 | 33 | 211 | 28 | 42 | 249 | 28 | 38 | 695 |

[^6]table 29. mean daily consumption of eggs by sex, age and area


1) standardized by age
tABLE 30. MEAN DAILY CONSUMPTION OF COFFEE by SEX, AGE AND AREA

|  |  | COPFEE in milliliters |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO | PROVINCE |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | MEAN | STD | N | mean | STD | N | Mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 797 | 412 | 13 | 634 | 323 | 25 | 788 | 661 | 18 | 721 | 473 | 56 |
|  | 30-39 | 665 | 382 | 56 | 664 | 448 | 84 | 628 | 472 | 53 | 654 | 435 | 193 |
|  | 40-49 | 653 | 340 | 45 | 649 | 407 | 41 | 658 | 367 | 55 | 654 | 368 | 141 |
|  | 50-59 | 630 | 321 | 68 | 598 | 320 | 49 | 616 | 382 | 69 | 616 | 343 | 186 |
|  | 60-64 | 645 | 342 | 26 | 565 | 364 | 13 | 551 | 251 | 38 | 585 | 303 | 77 |
|  | All 1) | 677 | 362 | 208 | 632 | 382 | 212 | 656 | 457 | 233 | 655 | 404 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 775 | 441 | 12 | 571 | 324 | 18 | 575 | 406 | 23 | 619 | 391 | 53 |
|  | 30-39 | 680 | 345 | 58 | 611 | 342 | 52 | 569 | 396 | 68 | 617 | 366 | 178 |
|  | 40-49 | 570 | 334 | 67 | 616 | 291 | 58 | 618 | 344 | 58 | 600 | 323 | 183 |
|  | 50-59 | 555 | 259 | 68 | 640 | 309 | 53 | 546 | 339 | 67 | 576 | 305 | 188 |
|  | 60-64 | 507 | 223 | 30 | 623 | 556 | 30 | 517 | 267 | 33 | 548 | 375 | 93 |
|  | ALL 1) | 620 | 337 | 235 | 614 | 349 | 211 | 571 | 357 | 249 | 600 | 348 | 695 |

1) standardized by age

TABLE 31. MEAN DAILY CONSUMPTION OF TEA BY SEX, AGE AND AREA


1) standardized by age

TABLE 32. MEAN DAILY CONSUMPTION OF ALCOHOLIC DRINKS BY SEX, AGE AND AREA

|  |  |  | ALCOHOLIC DRINKS in milliliters |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | AN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 |  | 84 | 148 | 13 | 218 | 282 | 25 | 185 | 282 | 18 | 176 | 259 | 56 |
|  | 30-39 |  | 136 | 236 | 56 | 209 | 565 | 84 | 212 | 337 | 53 | 189 | 431 | 193 |
|  | 40-49 |  | 119 | 238 | 45 | 87 | 227 | 41 | 148 | 300 | 55 | 121 | 260 | 141 |
|  | 50-59 |  | 84 | 309 | 68 | 131 | 250 | 49 | 176 | 399 | 69 | 131 | 333 | 186 |
|  | 60-64 |  | 46 | 124 | 26 | 16 | 34 | 13 | 91 | 162 | 38 | 63 | 137 | 77 |
|  | ALL | 1) | 104 | 231 | 208 | 146 | 359 | 212 | 172 | 318 | 233 | 142 | 309 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 |  | 68 | 159 | 12 | 33 | 72 | 18 | 61 | 130 | 23 | 53 | 120 | 53 |
|  | 30-39 |  | 26 | 79 | 58 | 45 | 144 | 52 | 63 | 118 | 68 | 46 | 116 | 178 |
|  | 40-49 |  | 15 | 47 | 67 | 36 | 123 | 58 | 120 | 332 | 58 | 55 | 205 | 183 |
|  | 50-59 |  | 8 | 34 | 68 | 2 | 15 | 53 | 47 | 139 | 67 | 20 | 88 | 188 |
|  | 60-64 |  | 0 | 0 | 30 | 3 | 18 | 30 | 18 | 86 | 33 | 8 | 52 | 93 |
|  | ALL | 1) | 23 | 81 | 235 | 26 | 100 | 211 | 68 | 199 | 249 | 40 | 141 | 695 |

[^7]TABLE 33. MEAN DAILY CONSUMPTION OF SOFT DRINKS BY SEX, AGE AND AREA

|  |  | SOFT DRINKS in milliliters |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 80 | 211 | 13 | 83 | 125 | 25 | 82 | 138 | 18 | 82 | 150 | 56 |
|  | 30-39 | 79 | 124 | 56 | 116 | 204 | 84 | 82 | 145 | 53 | 96 | 169 | 193 |
|  | 40-49 | 63 | 107 | 45 | 68 | 135 | 41 | 108 | 184 | 55 | 82 | 150 | 141 |
|  | 50-59 | 49 | 113 | 68 | 34 | 96 | 49 | 96 | 156 | 69 | 62 | 129 | 186 |
|  | 60-64 | 44 | 190 | 26 | 47 | 140 | 13 | 37 | 113 | 38 | 41 | 145 | 77 |
|  | ALL 1) | 66 | 143 | 208 | 75 | 151 | 212 | 87 | 154 | 233 | 77 | 150 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 93 | 167 | 12 | 59 | 77 | 18 | 30 | 51 | 23 | 54 | 98 | 53 |
|  | 30-39 | 58 | 175 | 58 | 46 | 89 | 52 | 66 | 148 | 68 | 58 | 143 | 178 |
|  | 40-49 | 39 | 74 | 67 | 28 | 66 | 58 | 59 | 99 | 58 | 42 | 81 | 183 |
|  | 50-59 | 26 | 63 | 68 | 44 | 117 | 53 | 71 | 186 | 67 | 47 | 134 | 188 |
|  | 60-64 | 20 | 36 | 30 | 57 | 103 | 30 | 20 | 46 | 33 | 32 | 69 | 93 |
|  | ALL 1) | 47 | 120 | 235 | 44 | 91 | 211 | 54 | 129 | 249 | 49 | 116 | 695 |

1) standardized by age
table 34. mean daily consumption of sweets, sugar, syrup and honey by sex, age and area

|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |  | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| men | 25-29 | 49 | 29 | 13 | 44 | 25 | 25 | 59 | 46 | 18 | 50 | 34 | 56 |
|  | 30-39 | 58 | 41 | 56 | 46 | 29 | 84 | 49 | 32 | 53 | 50 | 34 | 193 |
|  | 40-49 | 45 | 30 | 45 | 50 | 26 | 41 | 41 | 23 | 55 | 45 | 27 | 141 |
|  | 50-59 | 33 | 22 | 68 | 39 | 26 | 49 | 35 | 21 | 69 | 35 | 23 | 186 |
|  | 60-64 | 35 | 17 | 26 | 48 | 24 | 13 | 41 | 27 | 38 | 40 | 24 | 77 |
|  | ALL 1) | 46 | 32 | 208 | 46 | 27 | 212 | 45 | 32 | 233 | 46 | 30 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 46 | 28 | 12 | 35 | 35 | 18 | 43 | 27 | 23 | 41 | 30 | 53 |
|  | 30-39 | 35 | 21 | 58 | 42 | 27 | 52 | 32 | 21 | 68 | 36 | 23 | 178 |
|  | 40-49 | 35 | 24 | 67 | 38 | 25 | 58 | 29 | 20 | 58 | 34 | 23 | 183 |
|  | 50-59 | 35 | 25 | 68 | 30 | 19 | 53 | 27 | 17 | 67 | 31 | 21 | 188 |
|  | 60-64 | 34 | 22 | 30 | 27 | 19 | 30 | 31 | 23 | 33 | 31 | 21 | 93 |
|  | ALL 1) | 37 | 24 | 235 | 35 | 26 | 211 | 32 | 22 | 249 | 35 | 24 | 695 |

1) atandardized by age

TABLE 35. MEAN DAILY CONSUMPTION OF OTHER FOODSTUFFS BY SEX, AGE AND AREA

|  |  | OTHER FOODSTUFFS in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | StD | $N$ | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 2 |  | 213 | 1 | 3 | 25 | 6 | 12 | 18 | 3 | 7 | 56 |
|  | 30-39 | 3 |  | $6 \quad 56$ | 4 | 7 | 84 | 2 | 4 | 53 | 3 | 6 | 193 |
|  | 40-49 | 1 | 3 | 345 | 1 | 2 | 41 | 1 | 3 | 55 | 1 | 3 | 141 |
|  | 50-59 | 1 | 7 | 768 | 1 | 4 | 49 | 1 | 4 | 69 | 1 | 5 | 186 |
|  | 60-64 | 1 |  | 326 | 0 | 1 | 13 | 1 | 2 | 38 | 1 | 2 | 77 |
|  | ald 1) | 2 |  | 5208 | 2 | 5 | 212 | 2 | 6 | 233 | 2 | 5 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 1 |  | 112 | 1 | 2 | 18 | 2 | 6 | 23 | 2 | 4 | 53 |
|  | 30-39 | 1 |  | 258 | 1 | 2 | 52 | 1 | 3 | 68 | 1 | 2 | 178 |
|  | 40-49 | 0 |  | 167 | 1 | 2 | 58 | 1 | 2 | 58 | 1 | 2 | 183 |
|  | 50-59 | 1 |  | 468 | 0 | 1 | 53 | 1 | 3 | 67 | 1 | 3 | 188 |
|  | 60-64 | 0 |  | 030 | 0 | 0 | 30 | 1 | 3 | 33 | 0 | 2 | 93 |
|  | ALL 1) | 1 | 2 | 2235 | 1 | 2 | 211 | 1 | 3 | 249 | 1 | 3 | 695 |

1) standardized by age


Fig. 2. Consumption of rye products by age and sex


Fig. 3. Consumption of wheat products by age and sex


Fig. 4. Consumption of other cereal products by age and sex


Fig. 5. Consumption of legumes and nuts by age and sex


Fig. 6. Consumption of potatoes by age and sex

> —— total, men
> - $/ 1000 \mathrm{kcal}$, men
--_--- total, women
/1000 kcal, women


Fig. 7. Consumption of roots by age and sex


Fig. 8. Consumption of other vegetables by age and sex


Fig. 9. Consumption of fruit and berries by age and sex


Fig. 10. Consumption of margarine and oils by age and sex


Fig.11. Consumption of butter by age and sex
———total, men
/1000 kcal, men
total, women
$/ 1000 \mathrm{kcal}$, women


Fig.12. Consumption of milk by age and sex


Fig.13. Consumption of cheese by age and sex


Fig.14. Consumption of other milk products by age and sex


Fig.15. Consumption of pork by age and sex


Fig. 16. Consumption of beef and other meat by age and sex

— — - total, men

- ---- total, women
--------------- / 1000 kcal , women


Fig. 17. Consumption of sausage by age and sex


Fig.18. Consumption of inner organs and blood by age and sex


Fig. 19. Consumption of fish and fish products by age and sex


Fig. 20. Consumption of eggs by age and sex


Fig. 21. Consumption of coffee by age and sex
——— total, men
/1000 kcal, men
------ total, women
$/ 1000 \mathrm{kcal}$, women


Fig. 22. Consumption of tea by age and sex


Fig. 23. Consumption of alcoholic drinks by age and sex


Fig. 24. Consumption of soft drinks by age and sex


Fig. 25. Consumption of sweets, sugar, syrup and honey by age and sex


Fig. 26. Consumption of other foodstuffs by age and sex
——— total, men
total, women
/1000 kcal; women

Table 36. Quantile distribution of daily food consumption in grams for men.


Table 37. Quantile distribution of daily food consumption in grams for women.

|  | QUANTLLES |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Q(0.10) | Q(0.25) | $\mathbf{Q}(0.50)$ | $\mathbf{Q ( 0 . 7 5 )}$ | $\mathbf{Q ( 0 . 9 0 )}$ |
|  |  |  |  |  |  |
| Rye products | 27 | 50 | 82 | 117 | 150 |
| Wheat products | 31 | 55 | 81 | 117 | 159 |
| Other cereal products | 0 | 4 | 14 | 29 | 48 |
| L.egumes and nuts | 0 | 0 | 0 | 7 | 24 |
| Potatoes | 27 | 60 | 100 | 150 | 202 |
| Roots | 0 | 5 | 24 | 54 | 90 |
| Other vegetables | 7 | 23 | 51 | 90 | 142 |
| Fruit and berries | 84 | 184 | 292 | 435 | 569 |
| Margarine and oils | 0 | 3 | 13 | 28 | 45 |
| Butter | 2 | 6 | 18 | 36 | 50 |
| Milk | 72 | 148 | 305 | 487 | 672 |
| Cheese | 0 | 0 | 17 | 33 | 58 |
| Other milk products | 3 | 34 | 137 | 298 | 442 |
| Pork | 0 | 0 | 13 | 33 | 65 |
| Beef and other meat | 0 | 14 | 37 | 69 | 111 |
| Sausage | 0 | 6 | 25 | 52 | 85 |
| Inner organs and blood | 0 | 0 | 0 | 0 | 24 |
| Fish and other seafood | 0 | 0 | 19 | 44 | 79 |
| Eggs | 3 | 8 | 16 | 32 | 51 |
| Coffee | 233 | 383 | 567 | 750 | 1000 |
| Tea | 0 | 0 | 133 | 267 |  |
| Alcoholic drinks | 0 | 0 | 0 | 0 | 110 |
| Soft drinks | 0 | 0 | 0 | 66 | 143 |
| Sweets, sugar, suryp |  |  |  |  |  |
| and honey | 9 | 18 | 29 | 45 | 63 |
| Other foodstuffs | 0 | 0 | 0 | 0 | 3 |
|  |  |  |  |  |  |

table 38. MEAN dayly intake of energy (MJ) by sek, age and area

|  |  | ENERGY in megajoules |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 14.9 | 3.4 | 13 | 11.6 | 2.9 | 25 | 13.2 | 3.8 | 18 | 12.9 | 3.5 | 56 |
|  | 30-39 | 13.2 | 3.6 | 56 | 13.6 | 4.0 | 84 | 12.3 | 3.3 | 53 | 13.1 | 3.7 | 193 |
|  | 40-49 | 12.2 | 3.1 | 45 | 11.8 | 2.7 | 41 | 11.7 | 2.6 | 55 | 11.9 | 2.8 | 141 |
|  | 50-59 | 10.7 | 3.1 | 68 | 11.2 | 3.0 | 49 | 10.8 | 2.8 | 69 | 10.8 | 3.0 | 186 |
|  | 60-64 | 9.7 | 2.4 | 26 | 10.5 | 3.4 | 13 | 10.0 | 2.9 | 38 | 10.0 | 2.8 | 77 |
|  | ALL | 12.4 | 3.6 | 208 | 12.0 | 3.4 | 212 | 11.8 | 3.2 | 233 | 12.1 | 3.4 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 10.0 | 2.8 | 12 | 10.1 | 3.7 | 18 | 8.9 | 2.8 | 23 | 9.6 | 3.1 | 53 |
|  | 30-39 | 9.2 | 2.6 | 58 | 9.4 | 2.5 | 52 | 8.9 | 2.3 | 68 | 9.2 | 2.4 | 178 |
|  | 40-49 | 8.7 | 2.2 | 67 | 8.8 | 2.2 | 58 | 8.0 | 1.9 | 58 | 8.5 | 2.1 | 183 |
|  | 50-59 | 8.8 | 2.3 | 68 | 8.0 | 1.7 | 53 | 8.3 | 1.8 | 67 | 8.4 | 2.0 | 188 |
|  | 60-64 | 8.0 | 2.3 | 30 | 7.2 | 2.4 | 30 | 7.3 | 2.1 | 33 | 7.5 | 2.3 | 93 |
|  | ALL | 9.0 | 2.5 | 235 | 8.8 | 2.6 | 211 | 8.4 | 2.2 | 249 | 8.7 | 2.4 | 695 |

1) standardized by age
table 39. mean daily intake of energy (kcal) by sex, age and area

|  |  | ENERGY in kilocalories |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 3563 | 817 | 13 | 2768 | 706 | 25 | 3155 | 905 | 18 | 3077 | 847 | 56 |
|  | 30-39 | 3118 | 816 | 56 | 3233 | 946 | 84 | 2933 | 774 | 53 | 3117 | 869 | 193 |
|  | 40-49 | 2906 | 739 | 45 | 2812 | 614 | 41 | 2778 | 614 | 55 | 2829 | 654 | 141 |
|  | 50-59 | 2550 | 745 | 68 | 2665 | 715 | 49 | 2559 | 662 | 69 | 2584 | 705 | 186 |
|  | 60-64 | 2308 | 570 | 26 | 2511 | 801 | 13 | 2377 | 689 | 38 | 2376 | 667 | 77 |
|  | ALL | 2958 | 845 | 208 | 2860 | 796 | 212 | 2809 | 763 | 233 | 2873 | 802 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 2383 | 655 | 12 | 2383 | 870 | 18 | 2121 | 682 | 23 | 2269 | 743 | 53 |
|  | 30-39 | 2192 | 608 | 58 | 2237 | 580 | 52 | 2112 | 550 | 68 | 2175 | 577 | 178 |
|  | 40-49 | 2064 | 530 | 67 | 2098 | 523 | 58 | 1913 | 454 | 58 | 2027 | 509 | 183 |
|  | 50-59 | 2093 | 547 | 68 | 1918 | 401 | 53 | 1977 | 418 | 67 | 2002 | 468 | 188 |
|  | 60-64 | 1906 | 549 | 30 | 1727 | 572 | 30 | 1752 | 494 | 33 | 1794 | 538 | 93 |
|  | ALL | 2135 | 585 | 235 | 2094 | 616 | 211 | 1991 | 527 | 249 | 2071 | 577 | 695 |

[^8]table 40. MEAN DAILY INTAKE OF PROTEIN BY SEX, AGE AND AREA

|  |  | PROTEIN in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO | PROVINCE |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 127 | 28 | 13 | 99 | 25 | 25 | 110 | 36 | 18 | 109 | 31 | 56 |
|  | 30-39 | 117 | 34 | 56 | 114 | 35 | 84 | 104 | 29 | 53 | 112 | 33 | 193 |
|  | 40-49 | 109 | 34 | 45 | 105 | 25 | 41 | 98 | 24 | 55 | 104 | 28 | 141 |
|  | 50-59 | 95 | 31 | 68 | 100 | 25 | 49 | 94 | 26 | 69 | 96 | 28 | 186 |
|  | 60-64 | 93 | 27 | 26 | 98 | 33 | 13 | B5 | 23 | 38 | 90 | 27 | 77 |
|  | ALL 1) | 111 | 34 | 208 | 104 | 29 | 212 | 100 | 29 | 233 | 105 | 31 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 81 | 23 | 12 | 87 | 27 | 18 | 81 | 26 | 23 | 83 | 25 | 53 |
|  | 30-39 | 80 | 24 | 58 | 85 | 26 | 52 | 79 | 25 | 68 | 81 | 25 | 178 |
|  | 40-49 | 77 | 22 | 67 | 78 | 23 | 58 | 72 | 18 | 58 | 76 | 21 | 183 |
|  | 50-59 | 79 | 20 | 68 | 71 | 16 | 53 | 73 | 17 | 67 | 75 | 18 | 188 |
|  | 60-64 | 72 | 18 | 30 | 65 | 21 | 30 | 64 | 15 | 33 | 67 | 18 | 93 |
|  | ALL 1) | 78 | 22 | 235 | 77 | 24 | 211 | 74 | 21 | 249 | 77 | 22 | 695 |

1) standardized by age
table 41. mean daily intake of protein per 1000 kcal by sex, age and area

[^9]TABLE 42. MEAN DAILY INTAKE OF fat by SEX, AGE and area

|  |  | FAT in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | AlL |  | N |
|  |  | mean | STD | N | mean | STD | N | MEAN | STD | N | MEAN | StD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 160 | 51 | 13 | 120 | 38 | 25 | 138 | 53 | 18 | 135 | 48 | 56 |
|  | 30-39 | 131 | 41 | 56 | 145 | 55 | 84 | 128 | 40 | 53 | 136 | 48 | 193 |
|  | 10-49 | 123 | 38 | 45 | 121 | 36 | 41 | 124 | 35 | 55 | 123 | 36 | 141 |
|  | 50-59 | 110 | 37 | 68 | 114 | 42 | 49 | 110 | 36 | 69 | 111 | 38 | 186 |
|  | 60-64 | 95 | 39 | 26 | 105 | 40 | 13 | 101 | 33 | 38 | 100 | 36 | 77 |
|  | ALL | 127 | 45 | 208 | 124 | 45 | 212 | 123 | 41 | 233 | 125 | 44 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 98 | 34 | 12 | 109 | 50 | 18 | 92 | 32 | 23 | 99 | 40 | 53 |
|  | 30-39 | 93 | 35 | 58 | 94 | 31 | 52 | 94 | 31 | 68 | 94 | 32 | 178 |
|  | 40-49 | 84 | 29 | 67 | 87 | 28 | 58 | 80 | 23 | 58 | 84 | 27 | 183 |
|  | 50-59 | 83 | 28 | 68 | 78 | 24 | 53 | 85 | 24 | 67 | 82 | 26 | 188 |
|  | 60-64 | 76 | 29 | 30 | 65 | 31 | 30 | 69 | 25 | 33 | 70 | 28 | 93 |
|  | ALL | 87 | 31 | 235 | 88 | 35 | 211 | 85 | 28 | 249 | 87 | 31 | 695 |

1) standardized by age
table 43. MEAN DAILY intake of fat per 1000 kCal by sex, age and area


[^10]table 44. mean daily intake of saturated fatty acids (sfa) by sex. age and area

| SFA in grams |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 84.3 | 30.0 | 13 | 62.5 | 22.1 | 25 | 65.4 | 23.8 | 18 | 68.5 | 25.8 | 56 |
|  | 30-39 | 68.2 | 23.3 | 56 | 75.4 | 33.5 | 84 | 61.1 | 20.8 | 53 | 69.4 | 28. 2 | 193 |
|  | 40-49 | 64.0 | 25.0 | 45 | 63.7 | 20.7 | 41 | 61.1 | 22.1 | 55 | 62.8 | 22.6 | 141 |
|  | 50-59 | 57.0 | 21.6 | 68 | 61.1 | 27.4 | 49 | 54.7 | 20.9 | 69 | 57.2 | 23.0 | 186 |
|  | 60-64 | 52.6 | 21.7 | 26 | 54.9 | 22.9 | 13 | 52.5 | 19.2 | 38 | 52.9 | 20.4 | 77 |
|  | ALL 1) | 66.4 | 26.2 | 208 | 65.3 | 26.9 | 212 | 59.8 | 21.8 | 233 | 63.7 | 25.1 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 52.6 | 16.4 | 12 | 55.4 | 26.6 | 18 | 41.0 | 13.8 | 23 | 48.5 | 20.4 | 53 |
|  | 30-39 | 47.8 | 20.6 | 58 | 50.0 | 17.8 | 52 | 45.2 | 15.2 | 68 | 47.5 | 17.9 | 178 |
|  | 40-49 | 43.1 | 15.8 | 67 | 47.6 | 17.5 | 58 | 39.3 | 13.0 | 58 | 43.3 | 15.9 | 183 |
|  | 50-59 | 43.9 | 18.2 | 68 | 41.7 | 15.8 | 53 | 42.4 | 12.4 | 67 | 42.8 | 15:6 | 188 |
|  | 60-64 | 42.9 | 18.6 | 30 | 35.6 | 20.4 | 30 | 34.5 | 16.4 | 33 | 37.5 | 18.7 | 93 |
|  | ALL 1) | 46.0 | 18.2 | 235 | 46.7 | 20.0 | 211 | 41.2 | 14.2 | 249 | 44.5 | 17.6 | 695 |

1) standardized by age
table 45. MEAN dAILY intake of saturated fatty acids (Sfa) per 1000 kcal by sex, age and area


[^11]table 46. mean daily intake of monounsaturated fatty acids (mufa) by sex, age and area



|  |  | MUFA in grams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | Mean | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 13.9 | 2.1 | 13 | 14.3 | 2.1 | 25 | 14.7 | 2.6 | 18 | 14.3 | 2.2 | 56 |
|  | 30-39 | 14.3 | 3.0 | 56 | 15.1 | 3.0 | 84 | 15.3 | 2.8 | 53 | 14.9 | 3.0 | 193 |
|  | 40-49 | 13.8 | 2.5 | 45 | 14.0 | 2.5 | 41 | 15.3 | 2.7 | 55 | 14.4 | 2.6 | 141 |
|  | 50-59 | 14.2 | 2.9 | 68 | 13.7 | 2.6 | 49 | 14.4 | 2.5 | 69 | 14.2 | 2.7 | 186 |
|  | 60-64 | 12.8 | 3.0 | 26 | 13.6 | 2.4 | 13 | 14.0 | 2.4 | 38 | 13.5 | 2.6 | 77 |
|  | ALL 1) | 13.9 | 2.7 | 208 | 14.2 | 2.6 | 212 | 14.9 | 2.7 | 233 | 14.4 | 2.7 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 13.3 | 2.7 | 12 | 14.8 | 3.3 | 18 | 15.4 | 3.0 | 23 | 14.7 | 3.1 | 53 |
|  | 30-39 | 13.8 | 2.5 | 58 | 13.7 | 2.6 | 52 | 15.1 | 2.3 | 68 | 14.3 | 2.5 | 178 |
|  | 40-49 | 13.3 | 2.7 | 67 | 13.3 | 2.1 | 58 | 14.4 | 2.5 | 58 | 13.6 | 2.5 | 183 |
|  | 50-59 | 12.7 | 2.2 | 68 | 12.7 | 2.2 | 53 | 14.3 | 3.1 | 67 | 13.3 | 2.6 | 188 |
|  | 60-64 | 12.4 | 2.2 | 30 | 11.6 | 1.9 | 30 | 12.5 | 2.2 | 33 | 12.2 | 2.1 | 93 |
|  | ALL 1) | 13.2 | 2.5 | 235 | 13.3 | 2.6 | 211 | 14.5 | 2.8 | 249 | 13.7 | 2.7 | 695 |

[^12]TABLE 46. MEAN DAILY INTAKE OF POLYUNSATURATED FATTY ACIDS (PUFA) BY SEX, AGE AND AREA

|  |  | PUFA in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | mean | STD | N | mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 19.1 | 11.0 | 13 | 13.7 | 6.3 | 25 | 20.7 | 20.0 | 18 | 17.2 | 13.3 | 56 |
|  | 30-39 | 14.1 | 6.0 | 56 | 16.3 | 8.3 | 84 | 18.3 | 9.0 | 53 | 16.2 | 8.0 | 193 |
|  | 40-49 | 14.7 | 6.5 | 45 | 13.7 | 5.9 | 41 | 16.6 | 5.9 | 55 | 15.2 | 6.2 | 141 |
|  | 50-59 | 12.5 | 6.4 | 68 | 12.2 | 5.5 | 49 | 14.3 | 6.9 | 69 | 13.1 | 6.4 | 186 |
|  | 60-64 | 9.0 | 3.5 | 26 | 13.0 | 6.2 | 13 | 11.8 | 6.5 | 38 | 11.0 | 5.7 | 77 |
|  | all 1) | 14.4 | 7.6 | 208 | 14.0 | 6.7 | 212 | 16.9 | 11.0 | 233 | 15.2 | 8.8 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 10.6 | 6.2 | 12 | 13.8 | 8.6 | 18 | 14.1 | 8.3 | 23 | 13.2 | 8.0 | 53 |
|  | 30-39 | 11.6 | 6.8 | 58 | 10.3 | 4.0 | 52 | 13.3 | 7.2 | 68 | 11.9 | 6.4 | 178 |
|  | 40-49 | 10.7 | 5.3 | 67 | 8.8 | 3.6 | 58 | 11.0 | 4.6 | 58 | 10.2 | 4.7 | 183 |
|  | 50-59 | 10.0 | 4.4 | 68 | 8.7 | 4.5 | 53 | 11.3 | 5.6 | 67 | 10.1 | 5.0 | 188 |
|  | 60-64 | 7.2 | 3.7 | 30 | 6.7 | 2.7 | 30 | 9.7 | 4.1 | 33 | 7.9 | 3.8 | 93 |
|  | ALL 1) | 10.3 | 5.6 | 235 | 9.7 | 5.3 | 211 | 12.0 | 6.3 | 249 | 10.7 | 5.9 | 695 |

1) standardized by age
table 49. MEAN daity intake of polyunsaturated fatty acids (pufa) per 1000 kcal by sex, age and area

|  |  | PUFA in grame/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALl |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | mean | STD | N | EAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 5.1 | 2.4 | 13 | 4.9 | 2.0 | 25 | 5.2 | 4.4 | 18 | 5.4 | 3.0 | 56 |
|  | 30-39 | 4.6 | 1.8 | 56 | 5.1 | 2.3 | 84 | 6.1 | 2.1 | 53 | 5.2 | 2.2 | 193 |
|  | 40-49 | 5.2 | 2.4 | 45 | 4.8 | 1.8 | 41 | 6.1 | 2.1 | 55 | 5.4 | 2.1 | 141 |
|  | 50-59 | 4.9 | 2.3 | 68 | 4.6 | 2.1 | 49 | 5.5 | 2.2 | 69 | 5.0 | 2.2 | 186 |
|  | 60-64 | 3.8 | 0.9 | 26 | 5.6 | 3.5 | 13 | 4.9 | 2.2 | 38 | 4.7 | 2.2 | 77 |
|  | All 1) | 4.8 | 2.1 | 208 | 4.9 | 2.2 | 212 | 5.9 | 2.7 | 233 | 5.3 | 2.4 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 4.3 | 1.5 | 12 | 5.5 | 2.6 | 18 | 6.5 | 2.7 | 23 | 5.7 | 2.6 | 53 |
|  | 30-39 | 5.3 | 2.7 | 58 | 4.5 | 1.4 | 52 | 6.0 | 2.3 | 68 | 5.3 | 2.3 | 178 |
|  | 40-49 | 5.2 | 2.3 | 67 | 4.2 | 1.4 | 58 | 5.8 | 2.1 | 58 | 5.0 | 2.0 | 183 |
|  | 50-59 | 4.9 | 2.2 | 68 | 4.5 | 2.1 | 53 | 5.7 | 2.3 | 67 | 5.1 | 2.3 | 188 |
|  | 60-64 | 3.7 | 1.4 | 30 | 4.0 | 1.7 | 30 | 5.5 | 1.8 | 33 | 4.4 | 1.8 | 93 |
|  | ALL 1) | 4.8 | 2.2 | 235 | 4.5 | 1.9 | 211 | 5.9 | 2.3 | 249 | 5.1 | 2.2 | 695 |

[^13]table 50. mean daily intake of linoleic acid by sex, age and area

|  |  | LINOLEIC ACID in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | mean | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 15.8 | 9.8 | 13 | 11.6 | 5.5 | 25 | 17.8 | 18.3 | 18 | 14.6 | 12.0 | 56 |
|  | 30-39 | 11.8 | 5.2 | 56 | 13.8 | 7.6 | 84 | 15.7 | 8.0 | 53 | 13.7 | 7.2 | 193 |
|  | 40-49 | 12.3 | 5.8 | 45 | 11.0 | 4.4 | 41 | 13.9 | 5.2 | 55 | 12.6 | 5.3 | 141 |
|  | 50-59 | 10.3 | 5.4 | 68 | 9.9 | 4.4 | 49 | 12.0 | 6.2 | 69 | 10.8 | 5.5 | 186 |
|  | 60-64 | 6.8 | 2.7 | 26 | 11.1 | 5.4 | 13 | 9.6 | 5.6 | 38 | 8.9 | 4.9 | 77 |
|  | ALL 1) | 11.9 | 6.6 | 208 | 11.7 | 5.8 | 212 | 14.3 | 9.9 | 233 | 12.7 | 7.8 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 9.2 | 5.7 | 12 | 12.1 | 7.8 | 18 | 12.2 | 7.2 | 23 | 11.5 | 7.1 | 53 |
|  | 30-39 | 10.0 | 6.4 | 58 | 8.7 | 3.5 | 52 | 11.4 | 6.5 | 68 | 10.1 | 5.9 | 178 |
|  | 40-49 | 9.0 | 4.7 | 67 | 7.5 | 3.3 | 58 | 9.3 | 4.2 | 58 | 8.6 | 4.2 | 183 |
|  | 50-59 | 8.3 | 4.0 | 68 | 7.1 | 3.8 | 53 | 9.6 | 5.2 | 67 | 8.4 | 4.5 | 188 |
|  | 60-64 | 5.9 | 3.3 | 30 | 5.5 | 2.1 | 30 | 8.2 | 3.8 | 33 | 6.6 | 3.3 | 93 |
|  | ALl 1) | 8.7 | 5.2 | 235 | 8.2 | 4.8 | 211 | 10.2 | 5.7 | 249 | 9.1 | 5.3 | 695 |

1) standardized by age

TABLE 51. MEAN DAILY INTAKE OF LINOLEIC ACID PER 1000 KCAL by SEX, AGE AND AREA

|  |  | LINOLEIC ACID in grams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age | 4.3 | 2.2 | 13 | 4.2 | 1.7 | 25 | 5.4 | 4.0 | 18 | 4.6 | 2.8 | 56 |
| MEN | 25-29 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30-39 | 3.9 | 1.6 | 56 | 4.3 | 2.1 | 84 | 5.3 | 1.9 | 53 | 4.5 | 2.0 | 193 |
|  | 40-49 | 4.4 | 2.3 | 45 | 3.9 | 1.4 | 41 | 5.1 | 1.9 | 55 | 4.5 | 1.9 | 141 |
|  | 50-59 | 4.0 | 2.0 | 68 | 3.8 | 1.8 | 49 | 4.6 | 2.0 | 69 | 4.2 | 1.9 | 186 |
|  | 60-64 | 2.9 | 0.8 | 26 | 4.9 | 3.4 | 13 | 4.0 | 1.8 | 38 | 3.8 | 2.0 | 77 |
|  | ALL 1) | 4.0 | 1.9 | 208 | 4.1 | 2.0 | 212 | 5.0 | 2.4 | 233 | 4.4 | 2.2 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 3.7 | 1.4 | 12 | 4.8 | 2.4 | 18 | 5.6 | 2.5 | 23 | 4.9 | 2.3 | 53 |
|  | 30-39 | 4.5 | 2.7 | 58 | 3.8 | 1.2 | 52 | 5.1 | 2.1 | 68 | 4.5 | 2.1 | 178 |
|  | 40-49 | 4.3 | 2.0 | 67 | 3.6 | 1.3 | 58 | 4.9 | 1.9 | 58 | 4.3 | 1.9 | 183 |
|  | 50-59 | 4.1 | 2.1 | 68 | 3.7 | 1.8 | 53 | 4.8 | 2.2 | 67 | 4.2 | 2.1 | 188 |
|  | 60-64 | 3.0 | 1.3 | 30 | 3.3 | 1.4 | 30 | 4.6 | 1.7 | 33 | 3.7 | 1.6 | 93 |
|  | ALL 1) | 4.1 | 2.1 | 235 | 3.8 | 1.7 | 211 | 5.0 | 2.1 | 249 | 4.3 | 2.0 | 695 |

[^14]table 52. mean daily intake of carbohydrate by sex, age and area

|  |  | CARBOHYDRATE in grame |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 408 | 95 | 13 | 308 | 73 | 25 | 362 | 114 | 18 | 349 | 100 | 56 |
|  | 30-39 | 366 | 125 | 56 | 358 | 112 | 84 | 328 | 101 | 53 | 352 | 114 | 193 |
|  | 40-49 | 338 | 99 | 45 | 324 | 84 | 41 | 304 | 78 | 55 | 321 | 87 | 141 |
|  | 50-59 | 294 | 104 | 68 | 304 | 99 | 49 | 286 | 81 | 69 | 294 | 94 | 186 |
|  | 60-64 | 272 | 60 | 26 | 299 | 95 | 13 | 280 | 99 | 38 | 281 | 87 | 77 |
|  | ALL 1) | 344 | 111 | 208 | 324 | 96 | 212 | 316 | 97 | 233 | 327 | 102 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 296 | 82 | 12 | 267 | 103 | 18 | 243 | 90 | 23 | 263 | 93 | 53 |
|  | 30-39 | 266 | 74 | 58 | 267 | 73 | 52 | 238 | 59 | 68 | 255 | 69 | 178 |
|  | 40-49 | 256 | 67 | 67 | 256 | 64 | 58 | 223 | 66 | 58 | 246 | 67 | 183 |
|  | 50-59 | 266 | 70 | 68 | 241 | 45 | 53 | 232 | 60 | 67 | 247 | 62 | 188 |
|  | 60-64 | 241 | 71 | 30 | 227 | 66 | 30 | 226 | 68 | 33 | 231 | 68 | 93 |
|  | ALL 1) | 266 | 73 | 235 | 254 | 71 | 211 | 232 | 68 | 249 | 250 | 72 | 695 |
| 1) stan | by age |  |  |  |  |  |  |  |  |  |  |  |  |

table 53. mean daily intake of carbohydrate per 1000 kcal by sex, age and area


[^15]table 54. Mean daily intake of sucrose by sex, age and area

|  |  | SUCROSE in grams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 67 | 26 | 13 | 59 | 26 | 25 | 78 | 43 | 18 | 67 | 33 | 56 |
|  | 30-39 | 76 | 45 | 56 | 65 | 34 | 84 | 60 | 31 | 53 | 67 | 37 | 193 |
|  | 40-49 | 60 | 30 | 45 | 59 | 29 | 41 | 56 | 29 | 55 | 58 | 29 | 141 |
|  | 50-59 | 42 | 24 | 68 | 47 | 28 | 49 | 49 | 26 | 69 | 46 | 26 | 186 |
|  | 60-64 | 45 | 17 | 26 | 58 | 30 | 13 | 51 | 28 | 38 | 50 | 25 | 77 |
| . | ALL 1) | 61 | 34 | 208 | 58 | 30 | 212 | 59 | 33 | 233 | 59 | 33 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 60 | 29 | 12 | 52 | 44 | 18 | 52 | 26 | 23 | 54 | 33 | 53 |
|  | 30-39 | 51 | 25 | 58 | 54 | 26 | 52 | 46 | 22 | 68 | 50 | 24 | 178 |
|  | 40-49 | 48 | 27 | 67 | 48 | 26 | 58 | 40 | 22 | 58 | 45 | 25 | 183 |
|  | 50-59 | 47 | 25 | 68 | 41 | 18 | 53 | 40 | 21 | 67 | 42 | 22 | 188 |
|  | 60-64 | 43 | 25 | 30 | 38 | 23 | 30 | 41 | 24 | 33 | 41 | 24 | 93 |
|  | ALL 1) | 50 | 26 | 235 | 47 | 28 | 211 | 43 | 23 | 249 | 47 | 26 | 695 |

1) standardized by age

TABLE 55. MEAN DAILY INTAKE OF SUCROSE PER 1000 KCAL BY SEX, AGE AND AREA


[^16]table 56. mean daily intake of vitamin a (ret. eq.) by sex. age and area

|  |  | VITAMIN A, ret.eq. in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO | PROVINCE |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 1245 | 584 | 13 | 1626 | 1367 | 25 | 1910 | 1749 | 18 | 1629 | 1377 | 56 |
|  | 30-39 | 1495 | 1084 | 56 | 1511 | 1341 | 84 | 1500 | 1166 | 53 | 1503 | 1217 | 193 |
|  | 40-49 | 1424 | 1229 | 45 | 1234 | 619 | 41 | 1208 | 674 | 55 | 1285 | 877 | 141 |
|  | 50-59 | 875 | 405 | 68 | 1085 | 750 | 49 | 1025 | 799 | 69 | 986 | 669 | 186 |
|  | 60-64 | 876 | 298 | 26 | 1245 | 716 | 13 | 994 | 473 | 38 | 997 | 484 | 77 |
|  | ALL 1) | 1251 | 925 | 208 | 1352 | 1048 | 212 | 1360 | 1121 | 233 | 1323 | 1038 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 1091 | 853 | 12 | 1645 | 801 | 18 | 1056 | 670 | 23 | 1264 | 794 | 53 |
|  | 30-39 | 1538 | 1782 | 58 | 1240 | 787 | 52 | 1100 | 906 | 68 | 1284 | 1244 | 178 |
|  | 40-49 | 1124 | 1343 | 67 | 1159 | 884 | 58 | 1132 | 968 | 58 | 1137 | 1092 | 183 |
|  | 50-59 | 1259 | 963 | 68 | 1095 | 639 | 53 | 1244 | 1525 | 67 | 1208 | 1128 | 188 |
|  | 60-64 | 1095 | 1027 | 30 | 993 | 654 | 30 | 864 | 554 | 33 | 980 | 764 | 93 |
|  | ALL 1) | 1247 | 1294 | 235 | 1224 | 787 | 211 | 1107 | 1036 | 249 | 1190 | 1067 | 695 |

1) standardized by age

TABLE 57. MEAN DAILY INTAKE OF VITAMIN A (RET. EQ.) PER 1000 KCAL BY SEX, AGE AND AREA

table 58. mean daily intake of thiamin by sex. age and area

|  |  | THIAMIN in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | mean | STD | N | MEAN | STD | N | ean | St | N | Ean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 2.4 | 0.6 | 13 | 1.8 | 0.4 | 25 | 2.1 | 0.6 | 18 | 2.0 | 0.6 | 56 |
|  | 30-39 | 2.1 | 0.6 | 56 | 2.1 | 0.6 | 84 | 2.0 | 0.6 | 53 | 2.1 | 0.6 | 193 |
|  | 40-49 | 2.0 | 0.5 | 45 | 1.9 | 0.5 | 41 | 1.9 | 0.5 | 55 | 1.9 | 0.5 | 141 |
|  | 50-59 | 1.8 | 0.6 | 68 | 1.9 | 0.5 | 49 | 1.8 | 0.5 | 69 | 1.8 | 0.5 | 186 |
|  | 60-64 | 1.7 | 0.5 | 26 | 1.8 | 0.7 | 13 | 1.7 | 0.6 | 38 | 1.7 | 0.6 | 77 |
|  | ALL | 2.1 | 0.6 | 208 | 2.0 | 0.5 | 212 | 1.9 | 0.5 | 233 | 2.0 | 0.6 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 1.6 | 0.4 | 12 | 1.6 | 0.5 | 18 | 1.4 | 0.5 | 23 | 1.5 | 0.5 | 53 |
|  | 30-39 | 1.5 | 0.4 | 58 | 1.5 | 0.4 | 52 | 1.5 | 0.4 | 68 | 1.5 | 0.4 | 178 |
|  | 40-49 | 1.5 | 0.4 | 67 | 1.5 | 0.3 | 58 | 1.4 | 0.4 | 58 | 1.4 | 0.4 | 183 |
|  | 50-59 | 1.5 | 0.4 | 68 | 1.4 | 0.3 | 53 | 1.4 | 0.4 | 67 | 1.5 | 0.4 | 188 |
|  | 60-64 | 1.4 | 0.3 | 30 | 1.3 | 0.4 | 30 | 1.3 | 0.3 | 33 | 1.3 | 0.3 | 93 |
|  | ALL | 1.5 | 0.4 | 235 | 1.5 | 0.4 | 211 | 1.4 | 0.4 | 249 | 1.5 | 0.4 | 695 |

1) standardized by age

TABLE 59. MEAN DAILY INTAKE OF THIAMIN PER 1000 KCAL BY SER, AGE AND AREA

|  |  |  | THIAMIN in milligrame/1000 keal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | NORTH KARELIA |  |  | KUOPIO PROUINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 |  | 0.7 | 0.2 | 13 | 0.7 | 0.1 | 25 | 0.7 | 0.1 | 18 | 0.7 | 0.1 | 56 |
|  | 30-39 |  | 0.7 | 0.1 | 56 | 0.7 | 0.1 | 84 | 0.7 | 0.1 | 53 | 0.7 | 0.1 | 193 |
|  | 40-49 |  | 0.7 | 0.1 | 45 | 0.7 | 0.1 | 41 | 0.7 | 0.1 | 55 | 0.7 | 0.1 | 141 |
|  | 50-59 |  | 0.7 | 0.1 | 68 | 0.7 | 0.1 | 49 | 0.7 | 0.1 | 69 | 0.7 | 0.1 | 186 |
|  | 60-64 |  | 0.7 | 0.1 | 26 | 0.7 | 0.1 | 13 | 0.7 | 0.1 | 38 | 0.7 | 0.1 | 77 |
|  | ALl | 1) | 0.7 | 0.1 | 208 | 0.7 | 0.1 | 212 | 0.7 | 0.1 | 233 | 0.7 | 0.1 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 |  | 0.7 | 0.1 | 12 | 0.7 | 0.1 | 18 | 0.7 | 0.1 | 23 | 0.7 | 0.1 | 53 |
|  | 30-39 |  | 0.7 | 0.1 | 58 | 0.7 | 0.1 | 52 | 0.7 | 0.1 | 68 | 0.7 | 0.1 | 178 |
|  | 40-49 |  | 0.7 | 0.1 | 67 | 0.7 | 0.1 | 58 | 0.7 | 0.1 | 58 | 0.7 | 0.1 | 183 |
|  | 50-59 |  | 0.7 | 0.1 | 68 | 0.7 | 0.1 | 53 | 0.7 | 0.1 | 67 | 0.7 | 0.1 | 188 |
|  | 60-64 |  | 0.7 | 0.1 | 30 | 0.8 | 0.1 | 30 | 0.7 | 0.1 | 33 | 0.7 | 0.1 | 93 |
|  | ALL | 1) | 0.7 | 0.1 | 235 | 0.7 | 0.1 | 211 | 0.7 | 0.1 | 249 | 0.7 | 0.1 | 695 |

[^17]|  |  | RIBOFLAVIN in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROUINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | Std |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 3.8 | 0.8 | 13 | 3.1 | 1.0 | 25 | 3.1 | 1.3 | 18 | 3.3 | 1.1 | 56 |
|  | 30-39 | 3.3 | 1.3 | 56 | 3.2 | 1.0 | 84 | 2.9 | 1.0 | 53 | 3.1 | 1.1 | 193 |
|  | 40-49 | 3.1 | 1.0 | 45 | 3.0 | 0.8 | 41 | 2.6 | 0.8 | 55 | 2.8 | 0.9 | 141 |
|  | 50-59 | 2.6 | 0.8 | 68 | 2.8 | 0.9 | 49 | 2.5 | 0.7 | 69 | 2.6 | 0.8 | 186 |
|  | 60-64 | 2.4 | 0.6 | 26 | 2.7 | 1.1 | 13 | 2.2 | 0.7 | 38 | 2.4 | 0.7 | 77 |
|  | ALL 1) | 3.1 | 1.1 | 208 | 3.0 | 1.0 | 212 | 2.7 | 1.0 | 233 | 2.9 | 1.0 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 2.3 | 0.7 | 12 | 2.6 | 0.9 | 18 | 2.1 | 0.8 | 23 | 2.3 | 0.9 | 53 |
|  | 30-39 | 2.3 | 1.0 | 58 | 2.4 | 0.8 | 52 | 2.0 | 0.7 | 68 | 2.2 | 0.8 | 178 |
|  | 40-49 | 2.2 | 0.8 | 67 | 2.2 | 0.8 | 58 | 1.8 | 0.6 | 58 | 2.1 | 0.7 | 183 |
|  | 50-59 | 2.3 | 0.7 | 68 | 2.1 | 0.6 | 53 | 2.0 | 0.7 | 67 | 2.1 | 0.7 | 188 |
|  | 60-64 | 2.1 | 0.7 | 30 | 1.9 | 0.7 | 30 | 1.8 | 0.5 | 33 | 1.9 | 0.6 | 93 |
|  | All 1) | 2.2 | 0.8 | 235 | 2.2 | 0.8 | 211 | 2.0 | 0.7 | 249 | 2.1 | 0.8 | 695 |

1) standardized by age
table 61. mean daily intake of riboflavin per 1000 kcal by sex. age and area

|  |  | RIBOFLAVIN in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | MEAN | STD | N | Mean | STD | N | MEAN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 1.1 | 0.2 | 13 | 1.1 | 0.3 | 25 | 1.0 | 0.4 | 18 | 1.1 | 0.3 | 56 |
|  | 30-39 | 1.1 | 0.3 | 56 | 1.0 | 0.2 | 84 | 1.0 | 0.2 | 53 | 1.0 | 0.2 | 193 |
|  | 40-49 | 1.1 | 0.3 | 45 | 1.1 | 0.3 | 41 | 0.9 | 0.2 | 55 | 1.0 | 0.3 | 141 |
|  | 50-59 | 1.0 | 0.2 | 68 | 1.1 | 0.3 | 49 | 1.0 | 0.2 | 69 | 1.0 | 0.2 | 186 |
|  | 60-64 | 1.1 | 0.2 | 26 | 1.1 | 0.2 | 13 | 1.0 | 0.2 | 38 | 1.0 | 0.2 | 77 |
|  | ALL 1) | 1.1 | 0.3 | 208 | 1.1 | 0.3 | 212 | 1.0 | 0.3 | 233 | 1.0 | 0.3 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 1.0 | 0.2 | 12 | 1.1 | 0.3 | 18 | 1.0 | 0.2 | 23 | 1.0 | 0.3 | 53 |
|  | 30-39 | 1.1 | 0.3 | 58 | 1.1 | 0.3 | 52 | 1.0 | 0.2 | 68 | 1.0 | 0.3 | 178 |
|  | 40-49 | 1.1 | 0.3 | 67 | 1.0 | 0.3 | 58 | 1.0 | 0.2 | 58 | 1.0 | 0.3 | 183 |
|  | 50-59 | 1.1 | 0.3 | 68 | 1.1 | 0.2 | 53 | 1.0 | 0.3 | 67 | 1.1 | 0.3 | 188 |
|  | 60-64 | 1.1 | 0.3 | 30 | 1.1 | 0.2 | 30 | 1.1 | 0.2 | 33 | 1.1 | 0.3 | 93 |
|  | ALL 1) | 1.1 | 0.3 | 235 | 1.1 | 0.3 | 211 | 1.0 | 0.3 | 249 | 1.1 | 0.3 | 695 |

[^18]TABLE 62. MEAN DAILY INTAKE OF NIACIN By SEX, AGE AND AREA

|  |  | NIACIN in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | AlL |  | N |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| men | 25-29 | 26 | 7 | 13 | 21 | 6 | 25 | 27 | 11 | 18 | 24 | 8 | 56 |
|  | 30-39 | 25 | 7 | 56 | 25 | 9 | 84 | 24 | 8 | 53 | 25 | 8 | 193 |
|  | 40-49 | 23 | 8 | 45 | 22 | 7 | 41 | 22 | 6 | 55 | 22 | 7 | 141 |
|  | 50-59 | 20 | 8 | 68 | 20 | 6 | 49 | 21 | 6 | 69 | 20 | 7 | 186 |
|  | 60-64 | 19 | 7 | 26 | 19 | 8 | 13 | 19 | 6 | 38 | 19 | 7 | 77 |
|  | ALL 1) | 23 | 8 | 208 | 22 | 7 | 212 | 23 | 7 | 233 | 23 | 8 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 18 | 6 | 12 | 18 | 7 | 18 | 17 | 5 | 23 | 18 | 6 | 53 |
|  | 30-39 | 17 | 6 | 58 | 18 | 6 | 52 | 17 | 6 | 68 | 17 | 6 | 178 |
|  | 40-49 | 16 | 5 | 67 | 17 | 6 | 58 | 17 | 5 | 58 | 16 | 6 | 183 |
|  | 50-59 | 17 | 5 | 68 | 16 | 4 | 53 | 17 | 5 | 67 | 16 | 5 | 188 |
|  | 60-64 | 15 | 5 | 30 | 14 | 5 | 30 | 14 | 4 | 33 | 14 | 4 | 93 |
|  | ALL 1) | 17 | 5 | 235 | 17 | 6 | 211 | 17 | 5 | 249 | 17 | 5 | 695 |
| ) stan | by age |  |  |  |  |  |  |  |  |  |  |  |  |

table 63. MEAN dAILY intake of niacin per 1000 kcal by sex, age and area

|  |  | NIACIN in milligrame/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALI |  |  |
|  |  | MEAN | STD | N | MEAN | 3TD | N | MEAN | STD | N | MEAN |  | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 8 | 3 | 13 | 8 | 2 | 25 | 9 | 4 | 18 | 8 | 3 | 56 |
|  | 30-39 | 8 | 2 | 56 | 8 | 2 | 84 | 8 | 2 | 53 | 8 | 2 | 193 |
|  | 40-49 | 8 | 2 | 45 | 8 | 2 | 41 | 8 | 2 | 55 | 8 | 2 | 141 |
|  | 50-59 | 8 | 2 | 68 | 8 | 2 | 49 | 8 | 2 | 69 | 8 | 2 | 186 |
|  | 60-64 | 8 | 2 | 26 | 8 | 2 | 13 | 8 | 2 | 38 | 8 | 2 | 77 |
|  | All 1) | 8 | 2 | 208 | 8 | 2 | 212 | 8 | 2 | 233 | 8 | 2 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 7 | 2 | 12 | 8 | 3 | 18 | 8 | 2 | 23 | 8 | 2 | 53 |
|  | 30-39 | 8 | 2 | 58 | 8 | 2 | 52 | 8 | 2 | 68 | 8 | 2 | 178 |
|  | 40-49 | 8 | 2 | 67 | 8 | 2 | 58 | 9 | 2 | 58 | 8 | 2 | 183 |
|  | 50-59 | 8 | 2 | 68 | 8 | 2 | 53 | 9 | 3 | 67 | 8 | 2 | 188 |
|  | 60-64 | 8 | 3 | 30 | 8 | 2 | 30 | 8 | 2 | 33 | 8 | 2 | 93 |
|  | ALL 1) | 8 | 2 | 235 | 8 | 2 | 211 | 9 | 2 | 249 | 8 | 2 | 695 |

[^19]TABLE 64. MEAN DAILY INTAKE OF NIACIN (INCL. EQ.) BY SEX, AGE AND AREA


1) standardized by age

TABLE 65. MEAN DAILY INTAKE OF NLACIN (INCL. EQ.) PER 1000 KCAL BY SEX, AGE AND AREA


[^20]table 66. mean daily intake of vitamin c by sex. age and area


1) Etandardized by age
table 67. mean daily intake of vitamin c per 1000 kcal by sex, age and area

[^21]TABLE 68. MEAN DAILY INTAKE OF CHOLESTEROL BY SEX, AGE AND AREA


1) standardized by age

TABLE 69. MEAN DAILY intake of Cholesterol per 1000 kcal by sex. age and area


[^22]table 70. mean daily intake of ethanol by sex. age and area

## Area



| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MEN | 25-29 | 6 | 8 | 13 | 15 | 17 | 25 | 10 | 16 | 18 | 11 | 15 | 56 |
|  | 30-39 | 9 | 14 | 56 | 14 | 29 | 84 | 13 | 18 | 53 | 12 | 23 | 193 |
|  | 40-49 | 9 | 17 | 45 | 6 | 16 | 41 | 14 | 24 | 55 | 10 | 20 | 141 |
|  | 50-59 | 7 | 20 | 68 | 9 | 17 | 49 | 12 | 21 | 69 | 9 | 19 | 186 |
|  | 60-64 | 3 | 10 | 26 | 1 | 3 | 13 | 6 | 9 | 38 | 4 | 9 | 77 |
|  | ALL 1) | 8 | 15 | 208 | 10 | 20 | 212 | 12 | 19 | 233 | 10 | 19 | 653 |

WOMEN


1) etandardized by age
table 71. MEAN dAILy intake of ethanol per 1000 kcal by sex, age and area

[^23]TABLE 72. MEAN DAILY P/S -RATIO OF DIET BY SEX, AGE AND AREA

|  |  | P/S -RATIO |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO | PROVINCE |  | SOUTHWEST FINLAND |  |  | ALL |  | N |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD |  |
| Sex | Age | . |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 0.26 | 0.23 | 13 | 0.24 | 0.14 | 25 | 0.33 | 0.24 | 18 | 0.28 | 0.20 | 56 |
|  | 30-39 | 0.23 | 0.12 | 56 | 0.25 | 0.15 | 84 | 0.32 | 0.13 | 53 | 0.26 | 0.14 | 193 |
|  | 40-49 | . 0.27 | 0.17 | 45 | 0.23 | 0.12 | 41 | 0.31 | 0.15 | 55 | 0.28 | 0.15 | 141 |
|  | 50-59 | 0.25 | 0.15 | 68 | 0.24 | 0.17 | 49 | 0.29 | 0.17 | 69 | 0.26 | 0.16 | 186 |
|  | 60-64 | 0.19 | 0.06 | 26 | 0.29 | 0.22 | 13 | 0.25 | 0.16 | 38 | 0.24 | 0.15 | 77 |
|  | all 1) | 0.25 | 0.16 | 208 | 0.25 | 0.15 | 212 | 0.31 | 0.17 | 233 | 0.27 | 0.16 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 0.20 | 0.08 | 12 | 0.26 | 0.13 | 18 | 0.36 | 0.18 | 23 | 0.29 | 0.16 | 53 |
|  | 30-39 | 0.28 | 0.18 | 58 | 0.22 | 0.08 | 52 | 0.31 | 0.15 | 68 | 0.27 | 0.15 | 178 |
|  | 40-49 | 0.27 | 0.16 | 67 | 0.21 | 0.10 | 58 | 0.31 | 0.16 | 58 | 0.26 | 0.15 | 183 |
|  | 50-59 | 0.28 | 0.22 | 68 | 0.25 | 0.17 | 53 | 0.29 | 0.14 | 67 | 0.28 | 0.18 | 188 |
|  | 60-64 | 0.18 | 0.10 | 30 | 0.24 | 0.18 | 30 | 0.31 | 0.13 | 33 | 0.25 | 0.15 | 93 |
|  | all 1) | 0.26 | 0.18 | 235 | 0.23 | 0.13 | 211 | 0.31 | 0.15 | 249 | 0.27 | 0.16 | 695 |

1) standardized by age


Fig. 27. Energy intake by age and sex


Fig. 28. Protein intake by age and sex


Fig. 29. Total fat intake by age and sex


Fig. 30. Saturated fatty acid intake by age and sex


Fig. 31. Monounsaturated fatty acid intake by age and sex
———t total, men
total, women
——/ 1000 kcal men
$/ 1000 \mathrm{kcal}$, women


Fig. 32. Polyunsaturated fatty acid intake by age and sex


Fig. 33. Linoleic acid intake by age and sex


Fig. 34. Carbohydrate intake by age and sex


Fig. 35. Sucrose intake by age and sex


Fig. 36. Vitamin A (ret.eq.) intake by age and sex

———total, men<br>/1000 kcal, men

--_--- total, women
--------------- / 1000 kcal , women


Fig. 37. Thiamin intake by age and sex


Fig. 38. Riboflavin intake by age and sex


Fig. 39.Niacin intake by age and sex


Fig. 40. Niacin (eq.) intake by age and sex


Fig. 41. Vitamin C intake by age and sex

——— total, men<br>/1000 kcal, men

-_-_-- total, women
$/ 1000$ kcal, women


Fig. 42. Cholesterol intake by age and sex


Fig. 43. Ethanol intake by age and sex


Fig. 44. P/S -ratio by age and sex

-     -         - total, men
/1000 kcal, men
total, women
$/ 1000$ kcal, women

Table 73. Quantile distribution of daily energy and nutrient intake for men.

|  | Quantres |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q(0.10) | G(0.25) | Q(0.50) | Q(0.75) | Q(0.90) |
| Energy, MJ | 7.9 | 9.6 | 11.3 | 13.8 | 16.1 |
| kcal | 1890 | 2280 | 2690 | 3270 | 3840 |
| Protein, 9 | 67 | 82 | 99 | 120 | 142 |
| Fat, $g$ | 73 | 91 | 116 | 146 | 178 |
| Saturated fatty acids, $g$ | 35 | 44 | 58 | 76 | 95 |
| Monounsaturated fatty acids, g | 24 | 30 | 38 | 49 | 62 |
| Polyunsaturated fatty acids, $g$ | 7 | 9 | 13 | 19 | 24 |
| Linoleic acid, $g$ | 5 | 7 | 11 | 15 | 21 |
| Carbohydrate, g | 198 | 248 | 309 | 376 | 455 |
| Sucrose, g | 21 | 35 | 52 | 72 | 97 |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 526 | 731 | 992 | 1385 | 2223 |
| Thiamin, mg | 1.3 | 1.5 | 1.8 | 2.3 | 2.7 |
| Riboflavin, mg | 1.8 | 2.1 | 2.7 | 3.3 | 4.2 |
| Niacin, mg | 13 | 17 | 21 | 26 | 33 |
| Niacin, eq., mg | 27 | 34 | 41 | 50 | 59 |
| Vitamin C, mg | 50 | 74 | 110 | 163 | 219 |
| Cholesterol, mg | 274 | 365 | 481 | 635 | 811 |
| Ethanol, g | 0 | 0 | 0 | 12 | 34 |
| P/S-ratio | 0.12 | 0.15 | 0.20 | 0.35 | 0.48 |

Table 74. Quantile distribution of daily energy and nutrient intake for women.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q(0.10) | Q(0.25) | Q(0.50) | Q(0.75) | $Q(0.90)$ |
| Energy, MJ | 5.8 | 7.0 | 8.5 | 9.8 | 11.8 |
| kcal | 1400 | 1660 | 2010 | 2350 | 2780 |
| Protein, g | 51 | 61 | 74 | 87 | 106 |
| Fat, g | 51 | 65 | 82 | 102 | 126 |
| Saturated fatty acids, g | 24 | 31 | 41 | 53 | 66 |
| Monounsaturated fatty acids, 9 | 16 | 21 | 27 | 34 | 42 |
| Polyunsaturated fatty acids, $g$ | 5 | 7 | 9 | 13 | 18 |
| L.inoleic acid, g | 4 | 5 | 8 | 11 | 15 |
| Carbohydrate, $g$ | 163 | 201 | 243 | 289 | 337 |
| Sucrose, g | 18 | 29 | 40 | 59 | 79 |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 457 | 611 | 846 | 1357 | 2170 |
| Thiamin, mg | 1.0 | 1.2 | 1.4 | 1.7 | 1.9 |
| Riboflavin, mg | 1.3 | 1.6 | 2.0 | 2.5 | 3.0 |
| Niacin, mg | 10 | 13 | 16 | 19 | 23 |
| Niacin, eq., mg | 21 | 25 | 31 | 36 | 44 |
| Vitamin C, mg | 60 | 88 | 132 | 179 | 238 |
| Cholesterol, mg | 204 | 261 | 346 | 447 | 582 |
| Ethanol, g | 0 | 0 | 0 | 0 | 8 |
| P/S-ratio | 0.12 | 0.15 | 0.22 | 0.34 | 0.47 |

Table 75. Quantile distribution of daily nutrient intake per 1000 kcal for men.

|  | QUANTIEES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q(0.10) | Q(0.25) | Q(0.50) | Q(0.75) | Q(0.90) |
| Protein, g | 30 | 33 | 36 | 40 | 45 |
| Fat, g | 35 | 38 | 43 | 47 | 51 |
| Saturated fatty acids, g | 16 | 18 | 22 | 25 | 28 |
| Monounsaturated <br> fatty acids, 9 <br> Polyunsaturated | 11 | 13 | 14 | 16 | 18 |
| fatty acids, g | 3 | 3 | 5 | 6 | 8 |
| Linoleic acid, 9 | 2 | 3 | 4 | 5 | 7 |
| Carbohydrate, 9 | 91 | 103 | 116 | 128 | 138 |
| Sucrose, g | 21 | 35 | 52 | 72 | 97 |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 232 | 285 | 355 | 473 | 770 |
| Thiamin, mg | 0.6 | 0.6 | 0.7 | 0.8 | 0.8 |
| Riboflavin, mg | 0.8 | 0.9 | 1.0 | 1.2 | 1.3 |
| Niacin, mg | 6 | 7 | 8 | 9 | 11 |
| Niacin, eq., mg | 12 | 13 | 15 | 17 | 19 |
| Vitamin C, mg | 20 | 27 | 41 | 60 | 80 |
| Cholesterol, mg | 118 | 144 | 170 | 215 | 258 |
| Ethanol, g | 0 | 0 | 0 | 4 | 11 |

Table 76. Quantile distribution of daily nutrient intake per 1000 kcal for women.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q(0.10) | Q(0.25) | Q(0.50) | Q(0.75) | Q(0.90) |
| - |  |  |  |  |  |
| Protein, 9 | 31 | 33 | 37 | 41 | 46 |
| Fat, 9 | 33 | 37 | 40 | 45 | 49 |
| Saturated fatty acids, $g$ | 16 | 18 | 20 | 24 | 27 |
| Monounsaturated fatty acids, g | 11 | 12 | 13 | 15 | 17 |
| Polyunsaturated fatty acids, g | 3 | 3 | 5 | 6 | 8 |
| L.inoleic acids, 9 | 2 | 3 | 4 | 5 | 7 |
| Carbohydrate, 9 | 102 | 112 | 123 | 134 | 145 |
| Sucrose, 9 | 18 | 29 | 40 | 59 | 79 |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 258 | 315 | 409 | 634 | 1113 |
| Thiamin, mg | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 |
| Riboflavin, mg | 0.8 | 0.9 | 1.0 | 1.2 | 1.4 |
| Niacin, mg | 6 | 7 | 8 | 9 | 11 |
| Niacin, eq., mg | 12 | 14 | 15 | 17 | 20 |
| Vitamin C, mg | 30 | 46 | 66 | 94 | 119 |
| Cholesterol, mg | 121 | 143 | 170 | 208 | 259 |
| Ethanol, 9 | 0 | 0 | 0 | 0 | 4 |

table 77. mean daily percent of energy from protein by sex, age and area


1) atandardized by age
table 78. mean daily percent of energy from fat by sex, age and area


[^24]table 79. mean daily percent of energy from saturated fatty acids by sex, age and area


1) standardized by age
table 80. mean daily percent of energy from monounsaturated fatty acids by sex, age and area


[^25]table 81. Mean daily percent of energy from polyunsaturated fatty acids by sex, age and area

|  |  | PERCENT Of ENERGY from polyunsaturated fatty acids |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN |  | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 5 | 52 | 213 | 4 | 2 | 25 | 6 | 4 | 18 | 5 | 3 | 56 |
|  | 30-39 | 4 | 4 | 256 | 5 | 2 | 84 | 6 | 2 | 53 | 5 | 2 | 193 |
|  | 40-49 | 5 | 52 | 245 | 4 | 2 | 41 | 5 | 2 | 55 | 5 | 2 | 141 |
|  | 50-59 | 4 | 4 | 268 | 4 | 2 | 49 | 5 | 2 | 69 | 5 | 2 | 186 |
|  | 60-64 | 3 | 31 | 126 | 5 | 3 | 13 | 4 | 2 | 38 | 4 | 2 | 77 |
|  | ALL | 4 | 4 | 2208 | 4 | 2 | 212 | 5 | 2 | 233 | 5 | 2 | 653 |
|  | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 4 | 4 | 112 | 5 | 2 | 18 | 6 | 2 | 23 | 5 | 2 | 53 |
|  | 30-39 | 5 | 52 | 258 | 4 | 1 | 52 | 5 | 2 | 68 | 5 | 2 | 178 |
|  | 40-49 | 5 |  | 267 | 4 | 1 | 58 | 5 | 2 | 58 | 5 | 2 | 183 |
|  | 50-59 | 4 | 2 | 268 | 4 | 2 | 53 | 5 | 2 | 67 | 5 | 2 | 188 |
|  | 60-64 | 3 | 1 | 130 | 4 | 2 | 30 | 5 | 2 | 33 | 4 | 2 | 93 |
|  | ALL | 4 | 2 | 2235 | 4 | 2 | 211 | 5 | 2 | 249 | 5 | 2 | 695 |

1) standardized by age

TABLE 82. MEAN DAILY PERCENT OF ENERGY FROM LINOLEIC ACID GY gex. Age and area


[^26]table 83. MEAN DAILY PERCENT OF ENERGY PROM CARbOHYDRATE by SEX, AGE AND AREA


1) standardized by age
table 84. mean daily intake of energy from sucrose by sex. age and area


[^27]table 85. mean daily percent of energy from alcohol by sex, age and area


[^28]

Fig. 45. Percent of energy from protein by age and sex


Fig. 46. Percent of energy from fat by age and sex


Fig. 47. Percent of energy from saturated fatty acids by age and sex


Fig. 48. Percent of energy from monounsaturated fatty acids by age and sex


Fig. 49. Percent of energy from polyunsaturated fatty acids by age and sex
——— total, men.

- ----- total, women
———/1000 kcal, men
------------- / 1000 kcal , women


Fig. 50. Percent of energy from linoleic acid by age and sex


Fig. 51. Percent of energy from carbohydrate by age and sex


Fig. 52. Percent of energy from sucrose by age and sex


Fig. 53. Percent of energy from alcohol by age and sex

> ———tatal, men - 11000 kcal, men

Table 86. Quantile distribution of energy supply from protein, fat, carbohydrate and alcohol. Values for men are on the upper line and values for women are on the lower line.

|  | QUANTILES |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Q(0.10) | Q(0.25) | Q(0.50) | Q(0.75) | Q(0.90) |
| Protein, E\% | 12 | 13 | 14 | 16 | 18 |
|  | 12 | 13 | 15 | 16 | 18 |
| Fat, E\% |  |  |  |  |  |
|  | 31 | 34 | 38 | 42 | 46 |
| Saturated fatty | 14 | 17 | 36 | 40 | 44 |
| acids, E\% | 14 | 16 | 19 | 22 | 26 |
| Monounsaturated | 10 | 11 | 13 | 15 | 24 |
| fatty acids, E\% | 10 | 11 | 12 | 14 | 16 |
| Polyunsaturated | 3 | 3 | 4 | 6 | 8 |
| fatty acids, E\% | 3 | 3 | 4 | 6 | 7 |
| Linoleic acid, E\% | 2 | 2 | 3 | 5 | 6 |
|  | 2 | 3 | 3 | 5 | 6 |
|  |  |  |  |  |  |
| Carbohydrate, E\% | 35 | 40 | 45 | 49 | 53 |
|  | 39 | 43 | 48 | 52 | 56 |
| Sucrose, E\% | 4 | 5 | 8 | 10 | 13 |
|  | 4 | 6 | 8 | 11 | 14 |

table 87. MEAN dAILY intake of potassium by sex, age and area


1) standardized by age

TABLE 88. MEAN DAILY INTAKE OF POTASSIUM PER 1000 KCAL BY SEX, AGE AND AREA


[^29]TABLE 89. MEAN DAILY INTAKE OF CALCIUM EY SEX, AGE AND AREA


TABLE 90. MEAN DAILY INTAKE OF CALCIUM PER 1000 KCAL BY SEX, AGE AND AREA

|  |  | CALCIUM in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALI |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 560 | 17.4 | 13 | 578 | 149 | 25 | 466 | 149 | 18 | 538 | 160 | 56 |
|  | 30-39 | 531 | 146 | 56 | 504 | 163 | 84 | 478 | 124 | 53 | 505 | 149 | 193 |
|  | 40-49 | 542 | 151 | 45 | 541 | 154 | 41 | 482 | 110 | 55 | 519 | 139 | 141 |
|  | 50-59 | 528 | 145 | 68 | 571 | 158 | 49 | 503 | 139 | 69 | 530 | 148 | 186 |
|  | 60-64 | $560$ | 186 | 26 | 516 | 140 | 13 | 490 | 137 | 38 | 518 | 157 | 77 |
|  | ALL 1) | 541 | 155 | 208 | 541 | 156 | 212 | 483 | 129 | 233 | 521 | 149 | 653 |
|  | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 528 | 96 | 12 | 571 | 207 | 18 | 513 | 124 | 23 | 536 | 152 | 53 |
|  | 30-39 | 536 | 141 | 58 | 577 | 162 | 52 | 563 | 174 | 68 | 558 | 160 | 178 |
|  | 40-49 | 603 | 198 | 67 | 547 | 154 | 58 | 537 | 151 | 58 | 564 | 172 | 183 |
|  | 50-59 | 568 | 170 | 68 | 549 | $161$ | $53$ | 533 | 121 | 67 | 551 | 151 |  |
|  | 60-64 | 557 | $161$ | $30$ | 579 | $161$ | 30 | $599$ | 124 | 33 | $579$ | 148 | 93 |
|  | ALl 1) | 561 | 161 | 235 | 562 | 166 | 211 | 546 | 145 | 249 | 556 | 157 | 695 |
| stan | by age |  |  |  |  |  |  |  |  |  |  |  |  |

[^30]table 91. mean daily intake of magnesium by sex, age and area

|  |  | MAGNESIUM in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | Mean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 567 | 97 | 13 | 450 | 100 | 25 | 497 | 127 | 18 | 492 | 116 | 56 |
|  | 30-39 | 508 | 136 | 56 | 507 | 123 | 84 | 454 | 119 | 53 | 493 | 128 | 193 |
|  | 40-49 | 488 | 131 | 45 | 461 | 108 | 41 | 435 | 110 | 55 | 459 | 118 | 141 |
|  | 50-59 | 443 | 128 | 68 | 456 | 110 | 49 | 422 | 92 | 69 | 438 | 111 | 186 |
|  | 60-64 | 414 | 98 | 26 | 426 | 143 | 13 | 391 | 104 | 38 | 405 | 109 | 77 |
|  | ALL 1) | 492 | 131 | 208 | 467 | 116 | 212 | 445 | 115 | 233 | 467 | 122 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 400 | 83 | 12 | 370 | 114 | 18 | 354 | 94 | 23 | 370 | 99 | 53 |
|  | 30-39 | 377 | 91 | 58 | 376 | 93 | 52 | 346 | 86 | 68 | 365 | 90 | 178 |
|  | 40-49 | 370 | 87 | 67 | 365 | 81 | 58 | 334 | 84 | 58 | 357 | 85 | 183 |
|  | 50-59 | 372 | 82 | 68 | 358 | 72 | 53 | 341 | 75 | 67 | 357 | 77 | 188 |
|  | 60-64 | 331 | 79 | 30 | 340 | 94 | 30 | 319 | 68 | 33 | 330 | 80 | 93 |
|  | ALL 1) | 373 | 86 | 235 | 364 | 89 | 211 | 340 | 82 | 249 | 358 | 87 | 695 |
| 1) standardized by age |  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE 92. MEAN DAILY INTAKE OF MAGNESIUM PER 1000 KCAL BY SEX, AGE AND AREA

|  |  | MAGNESIUM in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | N | AN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 165 | 27 | 13 | 167 | 17 | 25 | 165 | 46 | 18 | 166 | 31 | 56 |
|  | 30-39 | 172 | 57 | 56 | 163 | 32 | 84 | 159 | 26 | 53 | 164 | 40 | 193 |
|  | 40-49 | 171 | 27 | 45 | 168 | 32 | 41 | 160 | 25 | 55 | 166 | 28 | 141 |
|  | 50-59 | 178 | 30 | 68 | 177 | 32 | 49 | 170 | 29 | 69 | 175 | 30 | 186 |
|  | 60-64 | 184 | 29 | 26 | 171 | 17 | 13 | 169 | 26 | 38 | 174 | 26 | 77 |
|  | ALL 1) | 173 | 38 | 208 | 169 | 29 | 212 | 163 | 31 | 233 | 168 | 33 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 179 | 33 | 12 | 168 | 50 | 18 | 172 | 30 | 23 | 172 | 38 | 53 |
|  | 30-39 | 179 | 37 | 58 | 173 | 35 | 52 | 171 | 36 | 68 | 174 | 36 | 178 |
|  | 40-49 | 185 | 28 | 67 | 180 | 28 | 58 | 178 | 24 | 58 | 181 | 27 | 183 |
|  | 50-59 | 184 | 34 | 68 | 193 | 38 | 53 | 177 | 26 | 67 | 184 | 33 | 188 |
|  | 60-64 | 180 | 25 | 30 | 207 | 47 | 30 | 190 | 30 | 33 | 192 | 36 | 93 |
|  | ALL 1) | 182 | 32 | 235 | 182 | 40 | 211 | 176 | 30 | 249 | 186 | 34 | 695 |

[^31]table 93. mean daily intake of phosphorus by sex, age and area


1) standardized by age

TABLE 94. MEAN DAILY INTAKE OF PhOSPHORUS PER 1000 KCAL by SEX, AGE AND AREA

|  |  | PHOSPHORUS in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALl |  |  |
|  |  | menn | STD | N | MEAN | STD | N | mean | STD | N | EAN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 746 | 116 | 13 | 755 | 95 | 25 | 664 | 114 | 18 | 724 | 112 | 56 |
|  | 30-39 | 758 | 100 | 56 | 715 | 124 | 84 | 686 | 99 | 53 | 719 | 113 | 193 |
|  | 40-49 | 764 | 131 | 45 | 764 | 132 | 41 | 689 | 85 | 55 | 735 | 121 | 141 |
|  | 50-59 | 775 | 118 | 68 | 787 | 131 | 49 | 731 | 110 | 69 | 762 | 120 | 186 |
|  | 60-64 | 804 | 137 | 26 | 774 | 95 | 13 | 717 | 109 | 38 | 756 | 122 | 77 |
|  | ALL | 765 | 118 | 208 | 755 | 122 | 212 | 694 | 103 | 233 | 736 | 118 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 711 | 74 | 12 | 728 | 181 | 18 | 715 | 100 | 23 | 719 | 127 | 53 |
|  | 30-39 | 746 | 137 | 58 | 760 | 118 | 52 | 720 | 125 | 68 | 740 | 127 | 178 |
|  | 40-49 | 788 | 142 | 67 | 752 | 111 | 58 | 722 | 103 | 58 | 756 | 123 | 183 |
|  | 50-59 | 782 | 135 | 68 | 762 | 124 | 53 | 735 | 112 | 67 | 759 | 125 | 188 |
|  | 60-64 | 785 | 123 | 30 | 800 | 136 | 30 | 776 | 125 | 33 | 787 | 127 | 93 |
|  | ALL 1 | 763 | 130 | 235 | 758 | 132 | 211 | 730 | 114 | 249 | 750 | 126 | 695 |

[^32]table 95. Méan daily intake of sulphur by sex, age and area

|  |  | SULPHUR in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | Mean | STD | N | mean | STD | N | mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 1585 | 422 | 13 | 1185 | 318 | 25 | 1265 | 513 | 18 | 1303 | 436 | 56 |
|  | 30-39 | 1529 | 511 | 56 | 1454 | 554 | 84 | 1314 | 477 | 53 | 1437 | 525 | 193 |
|  | 40-49 | 1270 | 406 | 45 | 1248 | 320 | 41 | 1217 | 353 | 55 | 1243 | 360 | 141 |
|  | 50-59 | 1140 | 434 | 68 | 1153 | 303 | 49 | 1125 | 338 | 69 | 1138 | 367 | 186 |
|  | 60-64 | 1019 | 321 | 26 | 1146 | 461 | 13 | 994 | 319 | 38 | 1028 | 346 | 77 |
|  | ALL 1) | 1349 | 476 | 208 | 1263 | 420 | 212 | 1213 | 423 | 233 | 1272 | 442 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 963 | 332 | 12 | 983 | 280 | 18 | 924 | 287 | 23 | 953 | 291 | 53 |
|  | 30-39 | 1002 | 357 | 58 | 972 | 252 | 52 | 978 | 373 | 68 | 984 | 335 | 178 |
|  | 40-49 | 895 | 246 | 67 | 874 | 272 | 58 | 872 | 249 | 58 | 881 | 254 | 183 |
|  | 50-59 | 904 | 259 | 68 | 809 | 204 | 53 | 895 | 302 | 67 | 874 | 263 | 188 |
|  | 60-64 | 838 | 309 | 30 | 727 | 204 | 30 | 725 | 166 | 33 | 762 | 236 | 93 |
|  | AlL 1) | 928 | 301 | 235 | 884 | 259 | 211 | 894 | 306 | 249 | 902 | 289 | 695 |

1) standardized by age
table 96. mean daily intake of sulphur per 1000 kcal by sex, age and area

|  |  | SULPHUR in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | AlL |  |  |
|  |  | MEAN | STD | N | mean | STD | N | MEAN | STD | N | EAN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 451 | 101 | 13 | 437 | 96 | 25 | 401 | 99 | 18 | 429 | 98 | 56 |
|  | 30-39 | 501 | 137 | 56 | 456 | 123 | 84 | 454 | 119 | 53 | 469 | 127 | 193 |
|  | 40-49 | 442 | 109 | 45 | 446 | 66 | 41 | 440 | 85 | 55 | 442 | 88 | 141 |
|  | 50-59 | 447 | 109 | 68 | 441 | 85 | 49 | 449 | 127 | 69 | 446 | 110 | 186 |
|  | 60-64 | 441 | 76 | 26 | 458 | 107 | 13 | 423 | 80 | 38 | 435 | 83 | 77 |
|  | ALL 1) | 460 | 115 | 208 | 447 | 96 | 212 | 437 | 107 | 233 | 448 | 106 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 398 | 94 | 12 | 434 | 123 | 18 | 446 | 87 | 23 | 431 | 102 | 53 |
|  | 30-39 | 463 | 114 | 58 | 440 | 71 | 52 | 465 | 126 | 68 | 457 | 109 | 178 |
|  | 40-49 | 442 | 93 | 67 | 421 | 85 | 58 | 459 | 92 | 58 | 441 | 91 | 183 |
|  | 50-59 | 438 | 87 | 68 | 425 | 74 | 53 | 456 | 112 | 67 | 441 | 94 | 188 |
|  | 60-64 | 446 | 108 | 30 | 431 | 71 | 30 | 429 | 84 | 33 | 435 | 88 | 93 |
|  | ALL 1) | 439 | 100 | 235 | 430 | 85 | 211 | 454 | 104 | 249 | 442 | 98 | 695 |

[^33]TABLE 97. MEAN DAILY INTAKE OF IRON BY SEX, AGE AND AREA


TABLE 98. MEAN DAILY INTAKE OF IRON PER 1000 KCAL BY SEX, AGE AND AREA


[^34]

1) standardized by age
table 100. mean daily intake of copper per 1000 kcal by sex. age and area

|  |  | COPPER in milligrams/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | AN | TD | N | AN | TD | N |
| sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 0.6 | 0.1 | 13 | 0.7 | 0.3 | 25 | 0.7 | 0.4 | 18 | 0.7 | 0.3 | 56 |
|  | 30-39 | 0.7 | 0.2 | 56 | 0.7 | 0.3 | 84 | 0.7 | 0.3 | 53 | 0.7 | 0.3 | 193 |
|  | 40-49 | 0.7 | 0.3 | 45 | 0.7 | 0.2 | 41 | 0.6 | 0.2 | 55 | 0.7 | 0.3 | 141 |
|  | 50-59 | 0.6 | 0.2 | 68 | 0.6 | 0.2 | 49 | 0.7 | 0.2 | 69 | 0.6 | 0.2 | 186 |
|  | 60-64 | 0.6 | 0.1 | 26 | 0.7 | 0.2 | 13 | 0.6 | 0.1 | 38 | 0.6 | 0.1 | 77 |
|  | ALL | 0.7 | 0.2 | 208 | 0.7 | 0.2 | 212 | 0.7 | 0.3 | 233 | 0.7 | 0.3 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 0.7 | 0.3 | 12 | 0.8 | 0.3 | 18 | 0.7 | 0.2 | 23 | 0.7 | 0.3 | 53 |
|  | 30-39 | 0.8 | 0.5 | 58 | 0.7 | 0.3 | 52 | 0.7 | 0.3 | 68 | 0.8 | 0.4 | 178 |
|  | 40-49 | 0.8 | 0.4 | 67 | 0.8 | 0.4 | 58 | 0.8 | 0.4 | 58 | 0.8 | 0.4 | 183 |
|  | 50-59 | 0.8 | 0.4 | 68 | 0.8 | 0.3 | 53 | 0.8 | 0.6 | 67 | 0.8 | 0.5 | 188 |
|  | 60-64 | 0.8 | 0.4 | 30 | 0.7 | 0.2 | 30 | 0.8 | 0.2 | 33 | 0.8 | 0.3 | 93 |
|  | ALI | 0.8 | 0.4 | 235 | 0.7 | 0.3 | 211 | 0.8 | 0.4 | 249 | 0.8 | 0.4 | 695 |

[^35]table 101. mean daily intake of manganese by sex, age and area


TABLE 102. MEAN DAILY INTAKE OF MANGANESE PER 1000 KCAL BY SEX, AGE AND AREA


[^36]TABLE 103. MEAN DAILY INTAKE OF ZINC BY SEX, AGE AND AREA


1) standardized by age

TABLE 104. MEAN DAILY INTAKE OF ZINC PER 1000 KCAL BY SEX, AGE AND AREA


1) standardized by age
table 105. MEAN DAILY Intake of molybdenum by sex, age and area

|  |  | MOLYBDENUM in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | mean | STD | N | mean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 141 | 28 | 13 | 128 | 40 | 25 | 143 | 42 | 18 | 136 | 38 | 56 |
|  | 30-39 | 148 | 52 | 56 | 139 | 42 | 84 | 135 | 40 | 53 | 140 | 45 | 193 |
|  | 40-49 | 135 | 47 | 45 | 126 | 34 | 41 | 125 | 46 | 55 | 128 | 43 | 141 |
|  | 50-59 | 112 | 29 | 68 | 123 | 36 | 49 | 119 | 33 | 69 | 117 | 33 | 186 |
|  | 60-64 | 110 | 32 | 26 | 116 | 33 | 13 | 108 | 30 | 38 | 110 | 31 | 77 |
|  | ALL 1) | 132 | 43 | 208 | 128 | 38 | 212 | 128 | 41 | 233 | 130 | 41 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 118 | 26 | 12 | 121 | 33 | 18 | 103 | 34 | 23 | 112 | 33 | 53 |
|  | 30-39 | 118 | 47 | 58 | 109 | 29 | 52 | 105 | 32 | 68 | 110 | 37 | 178 |
|  | 40-49 | 105 | 34 | 67 | 103 | 26 | 58 | 98 | 31 | 58 | 102 | 31 | 183 |
|  | 50-59 | 111 | 30 | 68 | 99 | 21 | 53 | 102 | 34 | 67 | 104 | 30 | 188 |
|  | 60-64 | 99 | 38 | 30 | 95 | 36 | 30 | 97 | 30 | 33 | 97 | 34 | 93 |
|  | ALl 1) | 111 | 36 | 235 | 106 | 29 | 2.11 | 101 | 32 | 249 | 106 | 33 | 695 |

1) standardized by age
table 106. MEAN dAILY INtake of molybdenum per 1000 kcal by sex, age and area

|  |  | MOLYEDENUM in micrograms/1000 keal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALI |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | TD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 41 | 6 | 13 | 46 | 9 | 25 | 48 | 14 | 18 | 45 | 10 | 56 |
|  | 30-39 | 48 | 11 | 56 | 44 | 10 | 84 | 46 | 11 | 53 | 46 | 11 | 193 |
|  | 40-49 | 47 | 14 | 45 | 46 | 10 | 41 | 46 | 14 | 55 | 45 | 13 | 141 |
|  | 50-59 | 45 | 9 | 68 | 47 | 9 | 49 | 48 | 11 | 69 | 47 | 10 | 186 |
|  | 60-64 | 49 | 11 | 26 | 48 | 8 | 13 | 46 | 8 | 38 | 47 | 9 | 77 |
|  | ALL 1) | 46 | 11 | 208 | 46 | 9 | 212 | 47 | 12 | 233 | 46 | 11 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 53 | 12 | 12 | 54 | 17 | 18 | 50 | 14 | 23 | 52 | 14 | 53 |
|  | 30-39 | 55 | 18 | 58 | 50 | 13 | 52 | 50 | 10 | 68 | 52 | 14 | 178 |
|  | 40-49 | 52 | 14 | 67 | 51 | 14 | 58 | 53 | 12 | 58 | 52 | 13 | 183 |
|  | 50-59 | 55 | 13 | 68 | 53 | 11 | 53 | 53 | 18 | 67 | 54 | 15 | 188 |
|  | 60-64 | 53 | 16 | 30 | 58 | 19 | 30 | 57 | 14 | 33 | 55 | 16 | 93 |
|  | All 1) | 54 | 15 | 235 | 53 | 14 | 211 | 52 | 14 | 249 | 53 | 14 | 695 |

[^37]TABLE 107. NEAN DAILY INTAKE OF COBALT BY SEX, AGE AND AREA


1) standardized by age
table 108. mean daily intake of cobalt per 1000 kcal by sex, age and area


[^38]table 109. mean daily intake of nickel by sex, age and area

|  |  | NICKEL in micrograme |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | mean | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 185 | 129 | 13 | 139 | 64 | 25 | 168 | 97 | 18 | 159 | 93 | 56 |
|  | 30-39 | 172 | 81 | 56 | 164 | 78 | 84 | 192 | 102 | 53 | 174 | 86 | 193 |
|  | 40-49 | 158 | 65 | 45 | 159 | 68 | 41 | 193 | 126 | 55 | 172 | 95 | 141 |
|  | 50-59 | 146 | 65 | 68 | 161 | 79 | 49 | 170 | 93 | 69 | 159 | 80 | 186 |
|  | 60-64 | 154 | 72 | 26 | 172 | 93 | 13 | 174 | 136 | 38 | 167 | 110 | 77 |
|  | All 1) | 164 | 84 | 208 | 158 | 75 | 212 | 182 | 109 | 233 | 168 | 92 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 139 | 63 | 12 | 140 | 65 | 18 | 139 | 79 | 23 | 139 | 70 | 53 |
|  | 30-39 | 136 | 66 | 58 | 130 | 50 | 52 | 126 | 53 | 68 | 130 | 57 | 178 |
|  | 40-49 | 130 | 51 | 67 | 139 | 62 | 58 | 124 | 67 | 58 | 131 | 60 | 183 |
|  | 50-59 | 140 | 55 | 68 | 142 | 63 | 53 | 137 | 67 | 67 | 140 | 62 | 188 |
|  | 60-64 | 121 | 57 | 30 | 129 | 58 | 30 | 137 | 57 | 33 | 129 | 57 | 93 |
|  | ALL 1) | 134 | 58 | 235 | 136 | 59 | 211 | 131 | 65 | 249 | 134 | 61 | 695 |

1) standardized by age
table 110. mean daily intake of nickel per 1000 kcal by sex, age and area

|  |  | NICKEL in micrograme/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROUINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 53 | 42 | 13 | 51 | 23 | 25 | 56 | 30 | 18 | 53 | 30 | 56 |
|  | 30-39 | 55 | 19 | 56 | 52 | 28 | 84 | 69 | 41 | 53 | 58 | 31 | 193 |
|  | 40-49 | 56 | 22 | 45 | 59 | 31 | 41 | 71 | 45 | 55 | 63 | 35 | 141 |
|  | 50-59 | 60 | 29 | 68 | 62 | 27 | 49 | 69 | 38 | 69 | 64 | 32 | 186 |
|  | 60-64 | 69 | 32 | 26 | 74 | 42 | 13 | 69 | 36 | 38 | 70 | 35 | 77 |
|  | ALL 1) | 57 | 28 | 208 | 58 | 30 | 212 | 67 | 39 | 233 | 61 | 33 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 66 | 34 | 12 | 63 | 32 | 18 | 66 | 31 | 23 | 65 | 31 | 53 |
|  | 30-39 | 64 | 36 | 58 | 60 | 21 | 52 | 62 | 24 | 68 | 62 | 28 | 178 |
|  | 40-49 | 66 | 29 | 67 | 70 | 30 | 58 | 67 | 40 | 58 | 68 | 33 | 183 |
|  | 50-59 | 70 | 29 | 68 | 77 | 37 | 53 | 70 | 29 | 67 | 72 | 31 | 188 |
|  | 60-64 | 64 | 22 | 30 | 80 | 34 | 30 | 82 | 31 | 33 | 76 | 30 | 93 |
|  | ALL 1) | 56 | 30 | 235 | 69 | 31 | 211 | 68 | 32 | 249 | 68 | 31 | 695 |

[^39]table 111. mean daily intake of chromium by sex, age and area

|  |  | CHROMIUM in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | mean | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 46 | 12 | 13 | 37 | 10 | 25 | 42 | 12 | 18 | 41 | 12 | 56 |
|  | 30-39 | 45 | 14 | 56 | 45 | 13 | 84 | 40 | 13 | 53 | 43 | 14 | 193 |
|  | 40-49 | 39 | 10 | 45 | 38 | 10 | 41 | 35 | 9 | 55 | 37 | 9 | 141 |
|  | 50-59 | 34 | 11 | 68 | 35 | 10 | 49 | 34 | 10 | 69 | 34 | 10 | 186 |
|  | 60-64 | 30 | 7 | 26 | 32 | 11 | 13 | 32 | 10 | 38 | 32 | 9 | 77 |
|  | ALL 1) | 40 | 12 | 208 | 38 | 12 | 212 | 37 | 11 | 233 | 38 | 12 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 34 | 10 | 12 | 32 | 10 | 18 | 30 | 13 | 23 | 32 | 11 | 53 |
|  | 30-39 | 30 | 9 | 58 | 31 | 8 | 52 | 31 | 8 | 68 | 31 | 8 | 178 |
|  | 40-49 | 29 | 9 | 67 | 28 | 8 | 58 | 28 | 7 | 58 | 28 | 8 | 183 |
|  | 50-59 | 29 | 8 | 68 | 26 | 7 | 53 | 28 | 7 | 67 | 28 | 7 | 188 |
|  | 60-64 | 25 | 7 | 30 | 24 | 7 | 30 | 24 | 7 | 33 | 24 | 7 | 93 |
|  | All 1) | 30 | 9 | 235 | 29 | 8 | 211 | 28 | 9 | 249 | 29 | 9 | 695 |

1) standardized by age

TABLE 112. MEAN DAILY INTAKE OF CHROMIUM PER 1000 KCAL bY SEX. AGE AND AREA


[^40]table 113. MEAN daily intake of fluorine by sex, age and area

|  |  | FlUORINE in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH | karelia |  | KUOPIO | PROUINCE |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | mean | STD | N | MEAN | STD | N | mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 562 | 116 | 13 | 423 | 123 | 25 | 487 | 147 | 18 | 476 | 139 | 56 |
|  | 30-39 | 537 | 177 | 56 | 511 | 166 | 84 | 515 | 195 | 53 | 520 | 177 | 193 |
|  | 40-49 | 503 | 147 | 45 | 500 | 159 | 41 | 464 | 119 | 55 | 487 | 141 | 141 |
|  | 50-59 | 455 | 152 | 68 | 489 | 222 | 49 | 455. | 143 | 69 | 464 | 170 | 186 |
|  | 160-64 | 437 | 106 | 26 | 470 | 146 | 13 | 469 | 215 | 38 | 458 | 172 | 77 |
|  | ALL 1) | 507 | 153 | 208 | 484 | 170 | 212 | 481 | 162 | 233 | 490 | 162 | 653 |
|  | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 418 | 115 | 12 | 432 | 182 | 18 | 387 | 176 | 23 | 409 | 165 | 53 |
|  | 30-39 | 386 | 128 | 58 | 424 | 125 | 52 | 391 | 121 | 68 | 399 | 125 | 178 |
|  | 40-49 | 396 | 115 | 67 | 380 | 116 | 58 | 366 | 98 | 58 | 382 | 111 | 183 |
|  | 50-59 | 399 | 119 | 68 | 347 | 94 | 53 | 387 | 130 | 67 | 380 | 118 | 188 |
|  | 60-64 | 359 | 120 | 30 | 346 | 110 | 30 | 347 | 104 | 33 | 351 | 110 | 93 |
|  | ALL 1) | 394 | 120 | 235 | 387 | 130 | 211 | 378 | 126 | 249 | 386 | 125 | 695 |

table 114. mean daily intake of fluorine per 1000 kcal by sex, age and area


[^41]table 115. mean daily intake of selenium by sex, age and area


1) standardized by age

TABLE 116. MEAN DAILY INTAKE OF SELENIUM PER 1000 KCAL BY SEX, AGE AND AREA


1) standardized by age
table 117. MEAN DAILY intake of gilicon by sex, age and area

|  |  | silicon in milligrams |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 39 | 14 | 13 | 38 | 21 | 25 | 44 | 19 | 18 | 40 | 19 | 56 |
|  | 30-39 | 47 | 33 | 56 | 46 | 39 | 84 | 39 | 26 | 53 | 45 | 34 | 193 |
|  | 40-49 | 39 | 22 | 45 | 36 | 17 | 41 | 34 | 19 | 55 | 36 | 19 | 141 |
|  | 50-59 | 30 | 13 | 68 | 32 | 13 | 49 | 34 | 23 | 69 | 32 | 17 | 186 |
|  | 60-64 | 25 | 9 | 26 | 25 | 10 | 13 | 30 | 19 | 38 | 27 | 15 | 77 |
|  | ALL 1) | 38 | 23 | 208 | 38 | 25 | 212 | 37 | 22 | 233 | 37 | 23 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 31 | 11 | 12 | 26 | 10 | 18 | 25 | 11 | 23 | 27 | 11 | 53 |
|  | 30-39 | 31 | 18 | 58 | 28 | 13 | 52 | 25 | 12 | 68 | 28 | 14 | 178 |
|  | 40-49 | 27 | 13 | 67 | 31 | 21 | 58 | 26 | 16 | 58 | 28 | 17 | 183 |
|  | 50-59 | 30 | 16 | 68 | 27 | 14 | 53 | 25 | 13 | 67 | 27 | 14 | 188 |
|  | 60-64 | 24 | 10 | 30 | 27 | 15 | 30 | 23 | 13 | 33 | 24 | 13 | 93 |
|  | ALL 1) | 29 | 15 | 235 | 28 | 15 | 211 | 25 | 13 | 249 | 27 | 14 | 695 |

1) standardized by age

TABLE 118. MEAN DAILY INTAKE OF SILICON PER 1000 fCAL BY SEX, AGE AND AREA


[^42]TABLE 120. MEAN DAILY INTAKE OF MERCURY BY SEX, AGE AND AREA

|  |  | MERCURY in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROUINCE |  |  | SOUTHWEST FINLAND |  |  | ALl |  | N |
|  |  | mean | STD | N | Mean | STD | N | MEAN | STD | N | AN | STD |  |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | B. 5 | 10.6 | 13 | 4.5 | 3.4 | 25 | 4.8 | 3.1 | 18 | 5.5 | 5.9 | 56 |
|  | 30-39 | 7.9 | 10.2 | 56 | 7.9 | 11.1 | 84 | 5.3 | 4.9 | 53 | 7.2 | 9.5 | 193 |
|  | 40-49 | 8.5 | 9.3 | 45 | 8.5 | 7.0 | 41 | 6.2 | 6.0 | 55 | 7.6 | 7.5 | 141 |
|  | 50-59 | 7.2 | 7.8 | 68 | 11.2 | 14.9 | 49 | 7.1 | 9.6 | 69 | 8.2 | 10.8 | 186 |
|  | 60-64 | 12.4 | 19.0 | 26 | 10.4 | 14.8 | 13 | 4.6 | 4.2 | 38 | 8.2 | 13.2 | 77 |
|  | ALL 1) | 8.5 | 10.7 | 208 | 8.3 | 10.7 | 212 | 5.7 | 6.1 | 233 | 7.4 | 9.4 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 4.1 | 2.4 | 12 | 4.4 | 5.8 | 18 | 3.9 | 4.2 | 23 | 4.1 | 4.4 | 53 |
|  | 30-39 | 6.2 | 7.6 | 58 | 7.9 | 17.8 | 52 | 4.7 | 3.9 | 68 | 6.1 | 10.8 | 178 |
|  | 40-49 | 5.9 | 6.3 | 67 | 5.1 | 4.8 | 58 | 4.4 | 4.6 | 58 | 5.2 | 5.3 | 183 |
|  | 50-59 | 6.4 | 6.5 | 68 | 4.2 | 2.9 | 53 | 4.2 | 3.8 | 67 | 5.0 | 4.9 | 188 |
|  | 60-64 | 5.2 | 5.3 | 30 | 8.8 | 19.6 | 30 | 3.6 | 2.7 | 33 | 5.8 | 11.7 | 93 |
|  | ALL 1) | 5.7 | 6.1 | 235 | 5.9 | 11.6 | 211 | 4.3 | 4.0 | 249 | 5.2 | 7.7 | 695 |

1) standardized by age
tABLE 120. MEAN DAILY INTAKE OF MERCURY PER 1000 KCAL bY SEX, AgE AND AREA

|  |  | MERCURY in micrograms/1000 keal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO | PROVINCE |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 2.4 | 2.7 | 13 | 1.6 | 1.0 | 25 | 1.5 | 1.0 | 18 | 1.8 | 1.6 | 56 |
|  | 30-39 | 2.4 | 2.6 | 56 | 2.3 | 2.7 | 84 | 1.8 | 1.3 | 53 | 2.2 | 2.4 | 193 |
|  | 40-49 | 2.8 | 2.6 | 45 | 3.1 | 2.5 | 41 | 2.3 | 2.2 | 55 | 2.7 | 2.4 | 141 |
|  | 50-59 | 2.8 | 2.7 | 68 | 4.0 | 5.2 | 49 | 2.8 | 3.9 | 69 | 3.1 | 3.9 | 186 |
|  | 60-64 | 5.0 | 7.0 | 26 | 4.3 | 6.0 | 13 | 2.0 | 2.1 | 38 | 3.4 | 5.1 | 77 |
|  | ALL 1) | 2.8 | 3.3 | 208 | 2.9 | 3.6 | 212 | 2.1 | 2.3 | 233 | 2.6 | 3.1 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 2.0 | 1.6 | 12 | 2.2 | 3.7 | 18 | 1.8 | 1.6 | 23 | 2.0 | 2.5 | 53 |
|  | 30-39 | 3.0 | 3.9 | 58 | 3.4 | 6.5 | 52 | 2.4 | 2.2 | 68 | 2.9 | 4.4 | 178 |
|  | 40-49 | 3.0 | 3.7 | 67 | 2.7 | 3.9 | 58 | 2.3 | 2.3 | 58 | 2.7 | 3.4 | 183 |
|  | 50-59 | 3.1 | 3.2 | 68 | 2.3 | 1.8 | 53 | 2.2 | 2.0 | 67 | 2.6 | 2.5 | 188 |
|  | 60-64 | 2.9 | 2.5 | 30 | 4.4 | 6.7 | 30 | 2.2 | 1.9 | 33 | 3.1 | 4.3 | 93 |
|  | ALL 1) | 2.9 | 3.3 | 235 | 2.9 | 4.7 | 211 | 2.2 | 2.0 | 249 | 2.6 | 3.4 | 695 |

[^43]Table 121. MEAN dAILy Intake of arsenic by sex, age and area

|  |  | ARSENIC in micrograms |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | All |  |  |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 61 | 32 | 13 | 55 | 39 | 25 | 69 | 45 | 18 | 61 | 39 | 56 |
|  | 30-39 | 76 | 63 | 56 | 68 | 60 | 84 | 69 | 58 | 53 | 71 | 60 | 193 |
|  | 40-49 | 66 | 45 | 45 | 77 | 53 | 41 | 79 | 68 | 55 | 74 | 57 | 141 |
|  | 50-59 | 56 | 36 | 68 | 64 | 39 | 49 | 70 | 67 | 69 | 63 | 50 | 186 |
|  | 60-64 | 64 | 41 | 26 | 51 | 25 | 13 | 57 | 28 | 38 | 58 | 33 | 77 |
|  | ALL 1) | 66 | 47 | 208 | 66 | 49 | 212 | 71 | 58 | 233 | 67 | 52 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 44 | 21 | 12 | 44 | 19 | 18 | 38 | 19 | 23 | 41 | 19 | 53 |
|  | 30-39 | 49 | 32 | 58 | 49 | 30 | 52 | 46 | 23 | 68 | 48 | 28 | 178 |
|  | 40-49 | 51 | 29 | 67 | 50 | 33 | 58 | 60 | 76 | 58 | 54 | 50 | 183 |
|  | 50-59 | 57 | 28 | 68 | 46 | 26 | 53 | 51 | 37 | 67 | 52 | 31 | 188 |
|  | 60-64 | 46 | 23 | 30 | 52 | 26 | 30 | 47 | 30 | 33 | 48 | 26 | 93 |
|  | ALL 1) | 50 | 28. | 235 | 48 | 28 | 211 | 50 | 46 | 249 | 49 | 35 | 695 |

1) standardized by age
table 122. mean daily intake of arsenic per 1000 kcal by sex, age and area

|  |  | ARSENIC in micrograme/1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH KARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | mean | STD | N | MEAN | STD | N | MEAN | STD | $N$ | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 17 | 11 | 13 | 18 | 11 | 25 | 22 | 14 | 18 | 19 | 12 | 56 |
|  | 30-39 | 23 | 15 | 56 | 21 | 19 | 84 | 22 | 14 | 53 | 22 | 17 | 193 |
|  | 40-49 | 22 | 12 | 45 | 27 | 18 | 41 | 29 | 28 | 55 | 26 | 21 | 141 |
|  | 50-59 | 22 | 11 | 68 | 24 | 15 | 49 | 28 | 26 | 69 | 25 | 19 | 186 |
|  | 60-64 | $28$ | $17$ | $26$ | 20 | 8 | 13 | $25$ | $12$ | $38$ | 25 | 13 | $77$ |
|  | ALL 1) | 22 | 13 | 208 | 23 | 16 | 212 | 25 | 21 | 233 | 23 | 17 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $25-29$ | 18 | 8 | 12 | 20 | 12 | 18 | 19 | 10 | 23 | 19 | 10 | 53 |
|  | 30-39 | 22 | 12 | 58 | 22 | 13 | 52 | 23 | 13 | 68 | 22 | 13 | 178 |
|  | 40-49 | 25 | 13 | 67 | 23 | 15 | 58 | 32 | 49 | 58 | 27 | 30 | 183 |
|  | 50-59 | 28 | 13 | 68 | 25 | 18 | 53 | 26 | 20 | 67 | 26 | 17 | 188 |
|  | 60-64 | 24 | 10 | 30 | 31 | 14 | 30 | 28 | 19 | 33 | 28 | 15 | 93 |
|  | ALL 1) | 24 | 12 | 235 | 24 | 15 | 211 | 26 | 28 | 249 | 24 | 20 | 695 |

[^44]table 123. Mean daily intake of cadmium by sex, age and area


1) standardized by age
table 124. MEAN dAIly INtake of cadmium per 1000 kcal by sex, age and area


[^45]table 125. mean daily intake of lead by sex. age and area

Area

|  |  | NORTH KARELIA KUOPIO PROVINCE SOUTHWEST FINLAND |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | MEAN | STD | N | MEAN | STD | N | mean | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 64 | 19 | 13 | 56 | 15 | 25 | 68 | 22 | 18 | 62 | 19 | 56 |
|  | 30-39 | 71 | 29 | 56 | 71 | 26 | 84 | 64 | 26 | 53 | 69 | 27 | 193 |
|  | 40-49 | 66 | 23 | 45 | 59 | 19 | 41 | 63 | 25 | 55 | 62 | 23 | 141 |
|  | 50-59 | 51 | 18 | 68 | 57 | 22 | 49 | 57 | 23 | 69 | 55 | 21 | 186 |
|  | 60-64 | 48 | 13 | 26 | 47 | 18 | 13 | 54 | 19 | 38 | 51 | 17 | 77 |
|  | ALL 1) | 62 | 24 | 208 | 60 | 22 | 212 | 62 | 24 | 233 | 61 | 23 | 653 |

WOMEN
Age
25-29

| $25-29$ | 48 | 18 | 12 | 54 | 18 | 18 | 54 | 22 | 23 | 53 | 20 | 53 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $30-39$ | 50 | 21 | 58 | 59 | 25 | 52 | 53 | 23 | 68 | 54 | 23 | 178 |  |
| $40-49$ | 50 | 20 | 67 | 47 | 18 | 58 | 49 | 18 | 58 | 49 | 19 | 183 |  |
| $50-59$ | 49 | 18 | 68 | 49 | 24 | 53 | 50 | 18 | 67 | 49 | 20 | 188 |  |
| $60-64$ | 41 | 15 | 30 | 44 | 28 | 30 | 45 | 17 | 33 | 43 | 20 | 93 |  |
| ALL | $1)$ | 49 | 19 | 235 | 51 | 23 | 211 | 51 | 20 | 249 | 50 | 21 | 695 |

1) standardized by age
table 126. mean daily intake of lead per 1000 kcal by sex, age and area

| * |  | LEAD in micrograms / 1000 kcal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORTH MARELIA |  |  | KUOPIO PROVINCE |  |  | SOUTHWEST FINLAND |  |  | ALL |  |  |
|  |  | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N | MEAN | STD | N |
| Sex | Age |  |  |  |  |  |  |  |  |  |  |  |  |
| MEN | 25-29 | 18 | 3 | 13 | 20 | 4 | 25 | 22 | 6 | 18 | 20 | 5 | 56 |
|  | 30-39 | 22 | 7 | 56 | 23 | 11 | 84 | 21 | 5 | 53 | 22 | 8 | 193 |
|  | 40-49 | 23 | 6 | 45 | 21 | 5 | 41 | 23 | 10 | 55 | 22 | 7 | 141 |
|  | 50-59 | 20 | 6 | 68 | 21 | 7 | 49 | 22 | 7 | 69 | 21 | 7 | 186 |
|  | 60-64 | 21 | 5 | 26 | 19 | 5 | 13 | 23 | 8 | 38 | 22 | 7 | 77 |
|  | ALL 1) | 21 | 6 | 208 | 21 | 7 | 212 | 22 | 7 | 233 | 22 | 7 | 653 |
| WOMEN | Age |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 25-29 | 20 | 5 | 12 | 24 | 8 | 18 | 26 | 9 | 23 | 24 | 8 | 53 |
|  | 30-39 | 23 | 9 | 58 | 27 | 12 | 52 | 26 | 12 | 68 | 25 | 11 | 178 |
|  | 40-49 | 25 | 9 | 67 | 23 | 10 | 58 | 27 | 11 | 58 | 25 | 10 | 183 |
|  | 50-59 | 23 | 7 | 68 | 26 | 12 | 53 | 26 | 11 | 67 | 25 | 10 | 188 |
|  | 60-64 | 21 | 6 | 30 | 27 | 20 | 30 | 26 | 8 | 33 | 25 | 13 | 93 |
|  | ALL 1) | 23 | 8 | 235 | 25 | 12 | 211 | 26 | 10 | 249 | 25 | 10 | 695 |

[^46]

Fig. 54. Potassium intake by age and sex


Fig. 55. Calcium intake by age and sex


Fig. 56. Magnesium intake by age and sex


Fig. 57. Phosphorus intake by age and sex


Fig.58. Sulphur intake by age and sex

| ———tatal, men |
| :--- |
|  | 1000 kcal , men

$/ 1000$ kcal, men
$/ 1000 \mathrm{kcal}$, women


Fig. 59. Iron intake by age and sex


Fig.60. Copper intake by age and sex


Fig. 61. Manganese intake by age and sex


Fig. 62. Zinc intake by age and sex


Fig.63. Molybdenum intake by age and sex
/1000 kcal, men
/1000 kcal, women


Fig.64. Cobalt intake by age and sex


Fig.65. Nickel intake by age and sex


Fig. 66. Chromium intake by age and sex


Fig. 67. Fluorine intake by age and sex


Fig. 68. Selenium intake by age and sex

- — total, men
$\quad / 1000 \mathrm{kcal}$, men
total, women
/1000 kcal, women


Fig.69. Silicon intake by age and sex


Fig. 70. Mercury intake by age and sex


Fig.71. Arsenic intake by age and sex


Fig.72. Cadmium intake by age and sex


Fig.73. Lead intake by age and sex
——— total, men
— $/ 1000 \mathrm{kcal}$, men
total, women
/1000 kcal, women

Table 127. Quantile distribution of daily mineral element intake for men.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q (0.10) | Q(0.25) | Q (0.50) | Q (0.75) | Q (0.90) |
| Potassium, mg | 3374 | 4018 | 4793 | 5687 | 6588 |
| Calcium, mg | 818 | 1053 | 1343 | 1751 | 2169 |
| Magnesium, mg | 316 | 375 | 443 | 532 | 621 |
| Phosphorus, mg | 1379 | 1624 | 1948 | 2390 | 2809 |
| Sulphur, mg | 763 | 940 | 1173 | 1470 | 1789 |
| Iron, mg | 12 | 15 | 19 | 23 | 28 |
| Copper, mg | 1.1 | 1.3 | 1.7 | 2.1 | 2.7 |
| Manganese, mg | 3.9 | 5.0 | 6.5 | 8.4 | 9.9 |
| Zinc, mg | 10 | 13 | 15 | 18 | 22 |
| Molybdenum, $\mu \mathrm{g}$ | 83 | 100 | 120 | 147 | 179 |
| Cobalt, $\mu \mathrm{g}$ | 12 | 15 | 18 | 23 | 27 |
| Nickel, $\mu \mathrm{g}$ | 81 | 103 | 147 | 203 | 279 |
| Chromium, $\mu \mathrm{g}$ | 24 | 29 | 36 | 45 | 54 |
| Fluorine, $\mu \mathrm{g}$ | 307 | 373 | 457 | 573 | 693 |
| Selenium, $\mu \mathrm{g}$ | 31 | 40 | 53 | 69 | 89 |
| Silicon, mg | 17 | 23 | 30 | 44 | 60 |
| Mercury, $\mu \mathrm{g}$ | 2.3 | 3.0 | 4.0 | 7.1 | 17.5 |
| Arsenic, $\mu \mathrm{g}$ | 27 | 37 | 53 | 80 | 125 |
| Cadmium, $\mu \mathrm{g}$ | 10 | 12 | 15 | 18 | 22 |
| Lead, $\mu \mathrm{g}$ | 37 | 43 | 57 | 70 | 93 |

Table 128. Quantile distribution of daily mineral element intake for women.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q (0.10) | Q(0.25) | Q (0.50) | Q (0.75) | Q (0.90) |
| Potassium, mg | 2702 | 3177 | 3780 | 4407 | 5138 |
| Calcium, mg | 644 | 846 | 1083 | 1333 | 1620 |
| Magnesium, mg | 252 | 296 | 349 | 412 | 475 |
| Phosphorus, mg | 980 | 1221 | 1484 | 1777 | 2053 |
| Sulphur, mg | 590 | 707 | 843 | 1027 | 1251 |
| Iron, mg | 10 | 12 | 14 | 17 | 21 |
| Copper, mg | 0.9 | 1.1 | 1.3 | 1.7 | 2.3 |
| Manganese, mg | 3.3 | 4.1 | 5.2 | 6.6 | 7.7 |
| Zinc, mg | 8 | 9 | 12 | 14 | 16 |
| Molybdenum, $\mu \mathrm{g}$ | 70 | 80 | 100 | 120 | 147 |
| Cobalt, $\mu \mathrm{g}$ | 10 | 12 | 15 | 18 | 20 |
| Nickel, $\mu$ | 70 | 90 | 123 | 163 | 218 |
| Chromium, $\mu \mathrm{g}$ | 19 | 23 | 28 | 33 | 39 |
| Fluorine, | 247 | 303 | 367 | 440 | 547 |
| Selenium, $\mu \mathrm{g}$ | 25 | 32 | 40 | 54 | 66 |
| Silicon, mg | 14 | 18 | 23 | 32 | 43 |
| Mercury, $\mu \mathrm{g}$ | 1.9 | 2.3 | 3.1 | 5.3 | 11.0 |
| Arsenic, $\mu$ | 23 | 30 | 43 | 60 | 87 |
| Cadmium, $\mu \mathrm{g}$ | 8 | 10 | 12 | 15 | 17 |
| L.ead, $\mu \mathrm{g}$ | 27 | 37 | 47 | 60 | 73 |

Table 129. Quantile distribution of daily mineral element intake per 1000 kcal for men.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q (0.10) | Q(0.25) | Q (0:50) | Q (0.75) | Q (0.90) |
| Potassium, mg | 1415 | 1570 | 1787 | 2005 | 2229 |
| Calcium, mg | 348 | 417 | 505 | 602 | 714 |
| Magnesium, mg: | 135 | 148 | 166 | 185 | 203 |
| Phosphorus, mg: | 603 | 656 | 734 | 808 | 892 |
| Sulphur, mg | 33.7 | 378 | 427 | 500 | 585. |
| Iron, mg | 5 | 6 | 7 | 8 | 9 |
| Copper, mg | 0.5 | 0.5 | 0.6 | 0.7 | 0.9 |
| Manganese, mg | 1.6 | 2.0 | 2.4 | 2.9 | 3.5 |
| Zinc, mg | 5 | 5 | 6 | 6. | 7 |
| Molybdenum, Hg | 37 | 40 | 43 | 50 | 57 |
| Cobalt, ug | 5 | 6 | 7 | 8. | 9 |
| Nickel, $\mu \mathrm{g}$ | 33. | 40 | 50 | 73 | 109 |
| Chromium, g | 11 | 12 | 13 | 14 | 16 |
| Fluorine, $\mu \mathrm{g}$ | 130 | 147 | 167 | 197 | 237 |
| Selenium, $\mu \mathrm{g}$ | 13 | 15 | 19 | 23 | 30 |
| Silicon, mg | 7 | 9 | 11 | 15 | 20 |
| Mercury, $\mu \mathrm{g}$ | 1.0 | 1.1 | 1.4 | 2.6 | 6.5 |
| Arsenic, $\mu \mathrm{g}$ | 10 | 13 | 17. | 30 | 43 |
| Cadmium, $\mu \mathrm{g}$ | 4 | 5 | 6 | 6 | 7 |
| Lead, $\mu \mathrm{g}$ | 16 | 18 | 21 | 24 | 29 |

Table 130. Quantile distribution of daily mineral element intake per 1000 kcal for women.

|  | QUANTILES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q (0.10) | Q(0.25) | Q (0.50) | Q (0.75) | Q (0.90) |
| Potassium, mg | 1509 | 1697 | 1930 | 2193 | 2477 |
| Calcium, mg | 367 | 452 | 547 | 646 | 762 |
| Magnesium, mg | 143 | 159 | 178 | 198 | 222 |
| Phosphorus, mg | 608 | 672 | 740 | 822 | 918 |
| Sulphur, mg | 343 | 380 | 420 | 487 | 567 |
| Iron, mg | 6 | 6 | 7 | 8 | 10 |
| Copper, mg | 0.5 | 0.6 | 0.7 | 0.8 | 1.2 |
| Manganese, mg | 1.9 | 2.2 | 2.7 | 3.1 | 3.7 |
| Zinc, mg | 5 | 5 | 6 | 7 | 7 |
| Molybdenum, $\mu \mathrm{g}$ | 40 | 43 | 50 | 57 | 70 |
| Cobalt, | 6 | 7 | 7 | 8 | 10 |
| Nickel, $\mu \mathrm{g}$ | 37 | 47 | 60 | 83 | 107 |
| Chromium, $\mu \mathrm{g}$ | 11 | 12 | 14 | 16 | 17 |
| Fluorine, $\mu$ | 143 | 157 | 183 | 213 | 263 |
| Selenium, $\mu \mathrm{g}$ | 14 | 17 | 20 | 25 | 31 |
| Silicon, mg | 8 | 9 | 12 | 15 | 21 |
| Mercury, ug | 1.0 | 1.2 | 1.6 | 2.7 | 5.7 |
| Arsenic, $\mu \mathrm{g}$ | 10 | 13 | 20 | $30^{\circ}$ | 43 |
| Cadmium, $\mu \mathrm{g}$ | 5 | 5 | 6 | 7 | 8 |
| Lead, $\mu \mathrm{g}$ | 16 | 19 | 23 | 28 | 34 |

5.2. Sources of energy and nutrients
Table 131.
Mean daily supply of energy and nutrients by different food groups. The values for men are on the upper line and the values for women are on the lower line. Standard deviations of means are in parenthesis.
-
and the values for women are on the lower line Standard The values for men are on the upper line
and the vaiues for women are on the lower line. Standard deviations of means are in parenthesis.

|  | Cereal products | Potato <br> and vegetables | Fruit and berries | Butter, margarine and oils | Milk and milk products | Meat and meat products | Fish and fish products | Eggs | Beverages, sweets etc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retinol, eq.,pg | $7 \text { (4) }$ | $246 \text { (336) }$ | $40(39)$ |  |  |  |  |  |  |
|  | $5(4)$ | $308 \text { (355) }$ | $45(35)$ | $258 \text { (136) }$ | $\begin{aligned} & 229 \text { (127) } \\ & 180 \text { (123) } \end{aligned}$ | $\begin{aligned} & 334 \text { (912) } \\ & 330 \text { (942) } \end{aligned}$ | $\begin{aligned} & 9(23) \\ & 6(19) \end{aligned}$ | $\begin{aligned} & 76(71) \\ & 57(54) \end{aligned}$ | $\begin{aligned} & 0(1) \\ & 0(1) \end{aligned}$ |
| Thiamin, mg | 0.8 (0.4) | 0.3 (0.2) | 0.1 (0.1) | 0 (0) |  |  |  |  |  |
|  | 0.6 (0.2) | 0.2 (0.1) | 0.2 (0.1) | 0 (0) | 0.2 (0.1) | $\begin{aligned} & 0.5(0.2) \\ & 0.2(0.1) \end{aligned}$ | O (0) | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ |
| Riboflavin, mg | 0.3 (0.2) | $0.1(0.1)$ |  | 0 (0) | 1.7 (0.8) |  |  |  |  |
|  | 0.2 (0.1) | $0.1(0.1)$ | $0.1 \text { (0.1) }$ | 0 (0) | 1.2 (0.6) | $0.3(0.4)$ | $\begin{aligned} & 0.1(0.1) \\ & 0.0(0.1) \end{aligned}$ | $\begin{aligned} & 0.1(0.1) \\ & 0.1(0.1) \end{aligned}$ | $\begin{aligned} & 0.1(0.1) \\ & 0.1(0.1) \end{aligned}$ |
| Niacin, mg | 6 (4) | 3 (1) | 1 (1) | 0 (0) | 1 (0) |  |  |  |  |
|  | 5 (2) | 2 (1) | 1 (1) | 0 (0) | 1 (0) | $5(4)$ | $1 \text { (1) }$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 3(3) \\ & 3(2) \end{aligned}$ |
| Vitamin C, mg | 0 (1) | 43 (27) | 75 (72) | 0 (0) |  |  |  |  |  |
|  | 0 (1) | 42 (28) | 90 (60) | 0 (0) | $\begin{aligned} & 10(16) \\ & 7 \text { (4) } \end{aligned}$ | $\begin{aligned} & 1(4) \\ & 1(4) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ |
| Cholesterol, mg | 0 (1) | 0 (0) | 0 (0) | 110 (76) | 103 (57) | 131 (83) | 32 (52) |  |  |
|  | 1 (3) | 0 (0) | 0 (0) | 70 (50) | 79 (46) | 91 (65) | 21 (32) | 113 (107) | $0(0)$ |

List of food groups and abbreviations used in the figures 74-108

| cereals | cereals products, legumes and nuts |
| :--- | :--- |
| vegetables | potatoes, roots and other vegetables |
| fruit, berries | fruit, berries and juices |
| fats | butter, margarine and oils |
| milk | milk and milk products |
| meat | meat and meat products |
| fish | fish and other seafood |
| eggs | eggs |

bev \& swe
beverages, sweets, sugar and other foods

Fig.74. Sources of energy (\%)
Men


Women


## Fig.75. Sources of protein (\%) Men



Women


# Fig.76. Sources of fat (\%) Men 



Women


## Fig.77. Sources of SFA (\%) Men



Women


# Fig.78. Sources of MUFA (\%) <br> Men 



Women


## Fig.79. Sources of PUFA (\%) Men



Women


## Fig. 80. Sources of linoleic acid (\%) Men



Women


Fig. 81. Sources of carbohydrate (\%) Men


Women


Fig. 82. Sources of sucrose (\%) Men


## Women



Fig.83. Sources of vitamin A (ret.eq.) Men


Women
vegetables (25)


## Fig.84. Sources of thiamin (\%) Men



## Women



Fig. 85. Sources of riboflavin (\%) Men


Women


## Fig.86. Sources of niacin (\%) Men



## Women



Fig. 87. Sources of vitamin C (\%)
Men


Women


FRUIT, BERRIES (59)

# Fig. 88. Sources of cholesterol (\%) Men 



Women

Table 133. Mean daily supply of mineral elements by different food groups. The values for men are on the upper line and the values for women are on the lower line. Standard deviations of means are in parenthesis.

|  | Cereal products | Potato and vegetables | Fruit and berries | Butter, margarine and oils | Milk and milk products | Meat and meat products | Fish and fish products | Eggs | Beverages, sweets etc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Potassium, mg | 713 (303) | 1215 (573) | 510 (440) | 12 (7) | 1264 (635) | 419 (250) | 138 (225) | 41 (39) | 689 (393) |
|  | 517 (193) | 901 (436) | 586 (371) | 8 (5) | 867 (446) | 280 (179) | 96 (130) | 30 (29) | 597 (320) |
| Calcium, mg | 71 (40) | 44 (31) | 73 (69) | 12 (7) | 1124 (534) | 53 (45) | 35 (69) | 18 (17): | 44 (31) |
|  | 52 (21) | 44 (32) | 91 (67) | 8 (4) | 832 (394) | 32 (29) | 19 (35) | 13 (13) | 39 (28) |
| Magnesium, mg | 144 (62) | 64 (32) | 35 (33) | 2 (1) | 96 (46) | 29 (17) | 10 (16) | 4 (4) | 84 (53) |
|  | 104 (40) | 47 (24) | 41 (29) | 1 (1) | 68 (32) | 19 (12) | 6 (10) | 3 (3) | 69 (38) |
| Phosphorus, mg | 484 (200) | 135 (78) | 48 (41) | 16 (10) | 849 (398) | 314 (185) | 93 (156) | 66 (62) | 77 (55) |
|  | 353 (129) | 101 (59) | 58 (37) | 10 (6) | 622 (286) | 206 (129) | 60 (88) | 49 (47) | 62 (38) |
| Sulphur, mg | 285 (117) | 90 (45) | 25 (21) | 3 (4) | 286 (134) | 390 (332) | 85 (138) | 59 (56) | 49 (41) |
|  | 212 (76) | 68 (36) | 30 (18) | 1 (2) | 214 (100) | 239 (211) | 58 (80) | 44 (42) | 34 (24) |
| Iron, mg | 11 (5) | 2 (1) | 1 (1) | 0 (0) | 0 (0) | 4 (3) | 0 (1) | 1 (1) | 1 (1) |
|  | 8 (3) | 2 (1) | 1 (1) | 0 (0) | 0 (0) | 3 (4) | 0 (0) | 1 (1) | 1 (0) |
| Copper, mg | 0.8 (0.3) | 0.3 (0.2) | 0.2 (0.2) | 0 (0) | 0.1 (0.2) | 0.3 (0.6) | 0 (0) | 0 (0) | 0.1 (0.1) |
|  | 0.6 (0.2) | 0.2 (0.1) | 0.2 (0.2) | 0 (0) | 0.1 (0.2) | 0.3 (0.7) | 0 (0) | 0 (0) | 0.1 (0.0) |
| Manganese, mg | 4.3 (1.9) | 0.7 (0.4) | 0.8 (1.0) | 0 (0) | 0.1 (0.0) | 0 (0) | 0 (0) | 0.1 (0.1) | 0.8 (0.4) |
|  | 3.1 (1.2) | 0.6 (0.3) | 0.9 (0.9) | 0 (0) | 0.1 (0.0) | 0 (0) | 0 (0) | 0.1 (0.1) | 0.7 (0.3) |
| Zinc, mg | 5 (2) | 1 (1) | 0 (0) | 0 (0) | 4 (2) | 4 (3) | 1 (1) | 0 (0) | 0 (0) |
|  | 3 (1) | 1 (1) | 0 (0) | 0 (0) | 3 (2) | 3 (2) | 0 (1) | 0 (0) | 0 (0) |
| Molybdenum, $\mu \mathrm{g} 28$ (ll) 21 (8) |  | 21 (17) | 13 (12) | 0 (0) | 33 (19) | 15 (20) | 2 (5) | 0 (1) | 16 (9) |
|  |  | 17 (13) | 17 (11) | 0 (0) | 25 (14) | 11 (18) | 1 (3) | 0 (1) | 12 (6) |

Table 134. Mean daily supply of mineral elements by different food groups. The values for men are on the upper line

|  | Cereal products | Potato and vegetables | Fruit and berries | Butter, margarine and oils | Milk and milk products | Meat and meat porducts | Fish and fish products | Eggs | Beverages, sweets etc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cobolt, $\mu \mathrm{g}$ | $\begin{aligned} & 8(4) \\ & 6(2) \end{aligned}$ | $\begin{aligned} & 3(2) \\ & 2(1) \end{aligned}$ | $\begin{aligned} & 2(2) \\ & 2(1) \end{aligned}$ | $\begin{aligned} & 1 \text { (1) } \\ & 1 \text { (1) } \end{aligned}$ | $\begin{aligned} & 1 \text { (2) } \\ & 1 \text { (1) } \end{aligned}$ | $\begin{aligned} & 2(1) \\ & 1(1) \end{aligned}$ | $\begin{aligned} & 0(1) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 2(1) \\ & 1(1) \end{aligned}$ |
| Nickel, $\mu$ | $\begin{aligned} & 65(76) \\ & 47(47) \end{aligned}$ | $\begin{aligned} & 46(37) \\ & 36(31) \end{aligned}$ | $\begin{aligned} & 11 \text { (12) } \\ & 13 \text { (11) } \end{aligned}$ | $\begin{aligned} & 6(4) \\ & 3(4) \end{aligned}$ | $\begin{aligned} & 13(13) \\ & 11 \text { (10) } \end{aligned}$ | $\begin{aligned} & 3(3) \\ & 1(2) \end{aligned}$ | $\begin{aligned} & 3(16) \\ & 2(15) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 20(15) \\ & 18(14) \end{aligned}$ |
| Chromium, $\mu \mathrm{g}$ | $\begin{aligned} & 8(4) \\ & 6(2) \end{aligned}$ | $\begin{aligned} & 3(2) \\ & 3(1) \end{aligned}$ | $\begin{aligned} & 4(4) \\ & 5(3) \end{aligned}$ | $\begin{aligned} & 3(2) \\ & 2(1) \end{aligned}$ | $\begin{aligned} & 9(4) \\ & 6(3) \end{aligned}$ | $\begin{aligned} & 7(4) \\ & 4(3) \end{aligned}$ | $\begin{aligned} & 1 \text { (1) } \\ & 0(1) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 4(4) \\ & 3(3) \end{aligned}$ |
| Fluorine, $\mu \mathrm{g}$ | $\begin{aligned} & 147(58) \\ & 107(39) \end{aligned}$ | $\begin{aligned} & 34(18) \\ & 26(14) \end{aligned}$ | $\begin{aligned} & 36(35) \\ & 45(31) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 97(45) \\ & 72(33) \end{aligned}$ | $\begin{aligned} & 23 \text { (15) } \\ & 15 \text { (11) } \end{aligned}$ | $\begin{aligned} & 38(63) \\ & 23(37) \end{aligned}$ | $\begin{aligned} & 9(9) \\ & 7(7) \end{aligned}$ | $\begin{aligned} & 105 \text { (95) } \\ & 89 \text { (81) } \end{aligned}$ |
| Selenium, | $\begin{aligned} & 23 \text { (11) } \\ & 19 \text { (9) } \end{aligned}$ | $\begin{aligned} & 1(2) \\ & 1(2) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 1(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 6(3) \\ & 5(3) \end{aligned}$ | $\begin{aligned} & 12(15) \\ & 8(9) \end{aligned}$ | $\begin{aligned} & 10(16) \\ & 7(10) \end{aligned}$ | $\begin{aligned} & 5(4) \\ & 4(3) \end{aligned}$ | $\begin{aligned} & 1(0) \\ & 1(0) \end{aligned}$ |
| Silicon, mg | $\begin{aligned} & 17 \text { (10) } \\ & 12(6) \end{aligned}$ | $\begin{aligned} & 2(1) \\ & 1(2) \end{aligned}$ | $\begin{aligned} & 9(18) \\ & 8(12) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 1(0) \\ & 1(0) \end{aligned}$ | $\begin{aligned} & 2(2) \\ & 2(1) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 7(12) \\ & 3(5) \end{aligned}$ |
| Mercury, $\mu \mathrm{g}$ | $\begin{aligned} & 0.6(0.3) \\ & 0.5(0.2) \end{aligned}$ | $\begin{aligned} & 0.7(0.7) \\ & 0.5(0.7) \end{aligned}$ | $\begin{aligned} & 0.3(0.3) \\ & 0.4(0.2) \end{aligned}$ | $\begin{aligned} & 0.1(0.1) \\ & 0.1(0.0) \end{aligned}$ | $\begin{aligned} & 0.8(0.4) \\ & 0.6(0.3) \end{aligned}$ | $\begin{aligned} & 0.3(0.2) \\ & 0.2(0.1) \end{aligned}$ | $\begin{aligned} & 4.3(9.3) \\ & 2.8(7.6) \end{aligned}$ | $\begin{aligned} & 0.2(0.2) \\ & 0.2(0.2) \end{aligned}$ | $\begin{aligned} & 0.1(0.1) \\ & 0.1(0.1) \end{aligned}$ |
| Arsenic, $\mu \mathrm{g}$ | $\begin{aligned} & 9(4) \\ & 6(4) \end{aligned}$ | $\begin{aligned} & 10(6) \\ & 7(5) \end{aligned}$ | $\begin{aligned} & 11(26) \\ & 11(16) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 9(4) \\ & 6(4) \end{aligned}$ | $\begin{aligned} & 1(2) \\ & 0(1) \end{aligned}$ | $\begin{aligned} & 23(42) \\ & 14(30) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 2(4) \\ & 1(3) \end{aligned}$ |
| Cadmium, mg | $\begin{aligned} & 7(3) \\ & 5(2) \end{aligned}$ | $\begin{aligned} & 4(2) \\ & 4(2) \end{aligned}$ | $\begin{aligned} & 1(1) \\ & 1(1) \end{aligned}$ | $\begin{aligned} & 0(1) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 1 \text { (1) } \\ & 1 \text { (1) } \end{aligned}$ | $\begin{aligned} & 1(2) \\ & 1(1) \end{aligned}$ | $\begin{aligned} & 0(1) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 1(1) \\ & 1(0) \end{aligned}$ |
| Lead, $\mu \mathrm{g}$ | $\begin{aligned} & 13(6) \\ & 10(4) \end{aligned}$ | $\begin{gathered} 10(12) \\ 9(15) \end{gathered}$ | $\begin{aligned} & 12 \text { (10) } \\ & 14 \text { (9) } \end{aligned}$ | $\begin{aligned} & 0(1) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 10(5) \\ & 8(5) \end{aligned}$ | $\begin{aligned} & 6(5) \\ & 3(4) \end{aligned}$ | $\begin{aligned} & 2(5) \\ & 1(3) \end{aligned}$ | $\begin{aligned} & 0(0) \\ & 0(0) \end{aligned}$ | $\begin{aligned} & 8(9) \\ & 5(7) \end{aligned}$ |

Fig. 89. Sources of potassium (\%) Men


Women


Fig. 90. Sources of calcium (\%)
Men


## Women



## Fig.91. Sources of magnesium (\%) Men



## Women



## Fig.92. Sources of phosphorus (\%) Men



## Women



## Fig.93. Sources of sulphur (\%) Men



## Women



Fig.94. Sources of iron (\%)
Men


Women


# Fig. 95. Sources of copper (\%) Men 



## Women



Fig. 96. Sources of manganese
Men


Women


## Fig.97. Sourees of zinc (\%) Men



Women


# Fig.98. Sources of molybdenum (\%) Men 



## Women

FRUIT, berries (16)


## Fig.99. Sources of cobalt (\%) Men



## Women



Fig. 100. Sources of nickel (\%) Men


Women


## Fig.101. Sources of chromium (\%) Men



## Women



# Fig.102. Sources of fluorine (\%) Men 



Women


# Fig. 103. Sources of selenium (\%) <br> Men 



## Women



## Fig.104. Sources of silicon (\%) Men




# Fig. 105. Sources of mercury (\%) Men 



Women


## Fig.106. Sources of arsenic (\%) Men



Women


Fig.107. Sources of cadmium (\%) Men


Women


## Fig. 108. Sources of lead (\%) Men



Women

5.3. Food and nutrient intake by occupation

Table 135. Mean daily consumption of foods in grams by occupation of men. Standard deviations of means are in parenthesis.
$\left.\begin{array}{lllll}\hline & \text { Farmers } & \begin{array}{l}\text { Blue- } \\ \text { collar } \\ \text { workers }\end{array} & \begin{array}{l}\text { White- } \\ \text { collar } \\ \text { workers }\end{array} & \text { Retired } \\ & & \text { (N=122) } & (\mathbf{N}=212) & (N=221)\end{array}\right)(\mathbf{N}=68)$

Table 136. Mean daily consumption of foods in grams by occupation of women. Standard deviations of means are in parenthesis.

|  | Farmers $(N=90)$ | Blue- <br> collar <br> workers <br> ( $\mathrm{N}=90$ ) | White- <br> collar <br> workers $(N=307)$ | Housewives $(\mathbb{N}=99)$ | Retired $(N=87)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rye products | 110 (49) | 85 (51) | 76 (45) | 91 (45) | 92 (47) |
| Wheat products | 104 (52) | 88 (52) | 94 (53) | 87 (54) | 71 (39) |
| Other cereal products | 24 (20) | 17 (19) | 18 (20) | 21 (23) | 22 (19) |
| l.egumes and nuts | 5 (9) | 5 (12) | 6 (11) | 10 (16) | 8 (16) |
| Potatoes | 141 (76) | 122 (83) | 89 (60) | 107 (61) | 128 (60) |
| Roots | 37 (40) | 33 (41) | 38 (44) | 34 (36) | 35 (35) |
| Other vegetables | 37 (36) | 56 (47) | 83 (61) | 61 (58) | 44 (41) |
| Fruit and berries | 291 (170) | 320 (198) | 354 (200) | 260 (154) | 287 (183) |
| Margarine and oils | 10 (16) | 19 (18) | 22 (20) | 20 (25) | 12 (15) |
| Butter | 39 (21) | 22 (21) | 20 (19) | 23 (20) | 22 (18) |
| Milk | 468 (261) | 365 (258) | 293 (231) | 330 (214) | 410 (261) |
| Cheese | 22 (35) | 21 (25) | 30 (30) | 18 (22) | 13 (16) |
| Other milk products | 219 (200) | 194 (172) | 169 (181) | 188 (182) | 220 (187) |
| Pork | 20 (26) | 24 (32) | 25 (36) | 27 (34) | 19 (24) |
| Beef and other meat | 42 (39) | 44 (46) | 54 (52) | 41 (42) | 41 (41) |
| Sausage | 34 (42) | 42 (54) | 37 (35) | 34 (42) | 21 (31) |
| Inner organs and blood | 6 (14) | 6 (14) | 6 (14) | 6 (16) | 5 (13) |
| Fish and other seafood | 26 (31) | 27 (33) | 28 (39) | 27 (31) | 41 (57) |
| Eggs | 25 (21) | 24 (25) | 25 (24) | 20 (17) | 17 (16) |
| Coffee | 675 (344) | 650 (354) | 573 (337) | 569 (284) | 546 (397) |
| Tea | 97 (157) | 43 (80) | 119 (183) | 92 (147) | 69 (115) |
| Alcoholic drinks | 4 (19) | 58 (229) | 54 (144) | 11 (41) | 12 (65) |
| Soft drinks | 18 (41) | 34 (76) | 57 (138) | 66 (139) | 38 (78) |
| Sweets, sugar, syrup and honey | 45 (30) | 29 (19) | 34 (23) | 33 (21) | 27 (17) |
| Other foodstuffs | 1 (2) | 1 (4) | 1 (3) | 1 (2) | 1 (2) |

Table 137. Mean daily intake of energy and selected nutrients by occupation of men on the upper line and corresponding values per 1800 kcal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=122)$ | Bluecollar workers ( $\mathrm{N}=212$ ) | Whitecollar workers ( $\mathrm{N}=221$ ) | Retired $(\mathrm{N}=68)$ |
| :---: | :---: | :---: | :---: | :---: |
| Energy, MJ | 13.3 (3.7) | 12.3 (3.7) | 11.2 (2.8) | 9.5 (2.1) |
| kcal | 3160 (860) | 2930 (870) | 2670' (670) | 2260 (5.10) |
| Protein, g | 114 (33) | 107 (33) | 98 (27) | 85 (21) |
|  | 36 (6) | 37 (6) | 37 (6) | 38 (6) |
| Fat, g | 137 (47) | 127 (48) | 116 (35) | 96.3 (32) |
|  | 43 (7) | 43 (7) | 43 (7) | 41 (7) |
| Saturated | 76.9. (28.4) | 63.8 (26.8) | 57.1 (19.3) | 48.9 (18.3) |
| fatty acids, 9 | 24.1 (4.7) | 21.5 (5.1) | 21.2 (4.5) | 21.2 (5.2) |
| Monounsatu- | 43.4 (15.2) | 43.2 (17.0) | 40.1 (13.4) | 44.7 (10.8) |
| rated fatty <br> acids, g | 13.6 (2.6) | 14.5 (2.7) | 14.8 (2.9) | 13.5 (2.5) |
| Polyunsatu- | 12.3 (5.3) | 15.8 (9.5) | 15.4 (7.4) | 12.0 (7.1) |
| rated fatty <br> acids, g | 3.9 (1.6) | 5.3 (2.4) | 5.7 (2.3) | 5.2 (2.4) |
| Linoleic acid, g | 10.0 (4.5) | 13.3 (8.5) | 13.0 (6.5) | 9.8 (6.1) |
|  | 3.2 (1.4) | 4.5 (2.1) | 4.8 (2.1) | 4.2 (2.1) |
| Carbohydrate, g | 372 (118) | 332 (105) | 297 (86) | 266 (68) |
|  | 118 (18) | 115 (18) | 112 (18) | 120 (18) |
| Sucrose, g | 67 (37) | 58 (34) | 55 (28) | 43 (25) |
|  | 21 (9) | 20 (9) | 20 (9) | 19 (10) |

Table 138. Mean daily intake of selected nutrients by occupation of men on the upper line and corresponding values per 1000 kcal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=122)$ | Bluecollar workers $(N=212)$ | Whitecollar workers ( $\mathrm{N}=221$ ) | Retired $(N=68)$ |
| :---: | :---: | :---: | :---: | :---: |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 1402 (1087) | 1190 (811) | 1359 (1189) | 888 (396) |
|  | 437 (289) | 411 (262) | 509 (420) | 403 (202) |
| Thiamin, mg | 2.2 (0.6) | 2.0 (0.6) | 1.8 (0.5) | 1.6 (0.4) |
|  | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) |
| Riboflavin, mg | 3.3 (1.1) | 3.0 (1.0) | 2.6 (0.9) | 2.4 (0.6) |
|  | 1.1 (0.2) | 1.0 (0.2) | 1.0 (0.3) | 1.1 (0.2) |
| Niacin, mg | 23 (8) | 23 (8) | 22 (7) | 18 (6) |
|  | 7 (2). | 8 (2) | 8 (2) | 8 (2) |
| Niacin, eq., mg | 46 (13) | 45 (14) | 42 (12) | 35 (10) |
|  | 15 (2) | 16 (3) | 16 (3) | 15 (3) |
| Vitamin $\mathrm{C}, \mathrm{mg}$ | 128 (80) | 131 (76) | 132 (86) | 101 (62) |
|  | 41 (23) | 46 (25) | 51 (33) | 48 (30) |
| Cholesterol, mg | 602 (234) | 524 (237) | 492 (183) | 408 (183) |
|  | 189 (53) | 179 (63) | 186 (73) | 175 (63) |
| Ethanol, g | 7 (15) | 11 (22) | 12 (20) | 4 (13) |
|  | 2 (5) | 4 (8) | 4 (7) | 2 (6) |
| P/S-ratio | 0.17 (0.09) | 0.28 (0.17) | 0.30 (0.15) | 0.28 (0.17) |

Table 139. Mean daily intake of energy and selected nutrients by occupation of women on the upper line and corresponding values per 1000 keal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=90)$ | Blue- <br> collar <br> workers <br> ( $\mathrm{N}=90$ ) | White- <br> collar <br> workers $(N=307)$ | Housewives $(N=99)$ | Retired $(N=87)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Energy, MJ | 9.7 (2.7) | 8.4 (2.3) | 8.6 (2.3) | 8.3 (2.2) | 7.8 (1.9) |
| kcal | 2320 (650) | 2010 (550) | 2050 (540) | 1980 (530) | 1860 (450) |
| Protein, g | 81 (23) | 75 (23) | 77 (22) | 72 (20) | 72 (19) |
|  | 36 (5) | 38 (6) | 38 (7) | 41 (2) | 37 (6) |
| Fat, g | 95 (35) | 85 (31) | 86 (29) | 83 (28) | 72 (25) |
|  | 40 (6) | 41 (7) | 42 (6) | 41 (6) | 38 (6) |
| Saturated fatty | 53.3 (21.1) | 43.1 (17.4) | 43.4 (16.0) | 42.0 (15.0) | 38.3 (16.4) |
| acids, g | 22.4 (4.4) | 20.8 (4.9) | 20.8 (4.1) | 21.0 (4.5) | 20.0 (4.7) |
| Monounsaturated | 29.9 (11.7) | 28.5 (11.4) | 29.7 (10.6) | 27.6 (10.2) | 23.1 (7.7) |
| fatty acids, 9 | 12.6 (2.3) | 13.7 (2.6) | 14.2 (2.6) | 13.7 (2.7) | 12.1 (2.0) |
| Polyunsaturated | 9.5 (4.8) | 10.5 (5.6) | 11.2 (5.3) | 11.2 (7.5) | 8.2 (4.0) |
| fatty acids, 9 | 4.1 (1.9) | 5.1 (2.1) |  |  | 4.4 (1.8) |
| Linoleic acid, g | 7.8 (4.2) | 8.9 (5.0) | 9.6 (4.8) | 9.5 (6.9) | 6.6 (3.4) |
|  | 3.4 (1.7) |  | 4.6 (1.8) | 4.7 (2.7) |  |
| Carbohydrate, 9 | 293 (77) | 240 (62) | 241 (68) | 243 (70) | 237 (53) |
|  | 128 (14) | 122 (16) | 120 (17) | 124 (16) | 130 (15) |
| Sucrose, g | 56 (32) | 40 (21) | 48 (25) | 44 (22) | 38 (20) |
|  | 23 (10) | 20 (9) | 23 (9) | 21 (8) | 20 (9) |

Table 140. Mean daily intake of selected nutrients by occupation of women on the upper line and corresponding values per 1000 kcal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=90)$ | Bluecollar workers ( $\mathrm{N}=90$ ) | Whitecollar workers ( $\mathrm{N}=307$ ) | Housewives $(\mathrm{N}=99)$ | Retired $(N=87)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Vitamin A, ret.eq., $\mu \mathrm{g}$ | 1119 (809) | 1109 (996) | 1263 (1203) | 1177 (1097) | 1014 (705) |
|  | 480 (272) | 554 (471) | 637 (655) | 626 (600) | 561 (418) |
| Thiamin, mg | 1.6 (0.4) | 1.5 (0.4) | 1.4 (0.4) | 1.4 (0.4) | 1.4 (0.3) |
|  | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.8 (0.1) |
| Riboflavin, mg | 2.4 (0.8) | 2.1 (0.8) | 2.1 (0.8) | 2.0 (0.7) | 2.1 (0.7) |
|  | 1.0 (0.3) | 1.1 (0.3) | 1.0 (0.3) | 1.0 (0.3) | 1.2 (0.3) |
| Niacin, mg | 17 (5) | 17 (6) | 17 (6) | 16 (5) | 15 (5) |
|  | 7 (2) | 8 (2) | 8 (2) | 8 (2) | 8 (2) |
| Niacin, eq., mg | 33 (9) | 32 (9) | 32 (9) | 30 (8) | 29 (8) |
|  | 14 (2) | 16 (3) | 16 (3) | 15 (3) | 16 (3) |
| Vitamin C, mg | 142 (72) | 134 (70) | 151 (69) | 124 (62) | 128 (65) |
|  | 62 (28) | 71 (42) | 79 (38) | 66 (34) | 73 (41) |
| Cholesterol, mg | 417 (165) | 371 (163) | 384 (160) | 344 (140) | 317 (120) |
|  | 178 (48) | 183 (63) | 188 (65) | 174 (56) | 169 (47) |
| Ethanol, g | 0 (1) | 3 (10) | 4 (8) | 1 (3) | 1 (6) |
|  | 0 (1) | 2 (4) | 2 (4) | 0 (1) | 1 (2) |
| P/S-ratio | 0.21 (0.17) | 0.27 (0.15) | 0.28 (0.14) | 0.29 (0.20) | 0.24 (0.13) |

Table 141. Percentage distribution of energy intake derived from protein, fat, carbohydrate and alcohol by occupation. Standard deviations of means are in parenthesis. Values for men are on the upper line and values for women are on the lower line.

|  | Farmers $\begin{aligned} & (N=122) \\ & (N=90) \end{aligned}$ | Blue- <br> collar <br> workers <br> ( $\mathrm{N}=212$ ) <br> ( $\mathrm{N}=90$ ) | White- <br> collar <br> workers <br> ( $\mathrm{N}=221$ ) <br> ( $\mathrm{N}=307$ ) | Housewives ( $\mathrm{N}=99$ ) | Retired <br> ( $N=68$ ) <br> ( $\mathrm{N}=87$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Protein E\% | 14 (2) | 15 (2) | 15 (2) |  | 15 (3) |
|  | 14 (2) | 15 (2) | 15 (3) | 15 (2) | 16 (2) |
| Fat E\% | 39 (6) | 38 (6) | 39 (6) |  | 37 (6) |
|  | 36 (5) | 37 (6) | 37 (5) | 37 (6) | 34 (6) |
| Saturated fatty | 22 (4) | 19 (5) | 19 (4) |  | 19 (5) |
| acids E\% | 20 (4) | 19 (5) | 19 (4) | 19 (4) | 18 (4) |
| Monounsaturated | 12 (2) | 13 (2) | 13 (3) |  | 12 (2) |
| fatty acids E\% | 11 (2) | 12 (2) | 13 (2) | 12 (3) | 11 (2) |
| Polyunsaturated | 4 (1) | 5 (2) | 5 (2) |  | 5 (2) |
| fatty acids E\% | 4 (2) | 5 (2) | 5 (2) | 5(3) | 4 (2) |
| L.inoleic acid E\% | 3 (1) | 4 (2) | 4 (2) |  | 4 (2) |
|  | 3 (2) | 4 (2) | 4 (2) | 4 (2) | 3 (1) |
| Carbohydrate E\% | 45 (7) | 44 (7) | 44 (7) |  | 46 (7) |
|  | 49 (6) | 47 (6) | 46 (6) | 48 (6) | 50 (6) |
| Sucrose E\% | 8 (4) | 8 (4) | 8 (3) |  | 8 (4) |
|  | 9 (4) | 8 (4) | 9 (4) | 9 (3) | 8 (4) |
| Alcohol E\% | 2 (4) | 3 (5) | 3 (5) |  | 1 (4) |
|  | 0 (0) | 1 (3) | 1 (3) | 0 (1) | 0 (2) |

Table 142. Mean daily intake of mineral elements by occupation of men on the upper line and corresponding values per 1000 kcal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=122)$ | Blue- <br> collar <br> workers <br> ( $\mathrm{N}=212$ ) | White- <br> collar <br> workers <br> ( $\mathrm{N}=221$ ) | Retired $(N=68)$ |
| :---: | :---: | :---: | :---: | :---: |
| Potassium, mg | 5599 (1421) | 5116 (1356) | )4561 (1084) | 4254 (933) |
|  | 1824 (317) | 1807 (316) | 1776 (373) | 1935 (352) |
| Calcium, mg | 1748 (612) | 1479 (550) | 1284 (496) | 1217 (368) |
|  | 559 (146) | 514 (140) | 490 (147) | 555 (165) |
| Magnesium, mg | 514 (133) | 479 (124) | 428 (105) | 398 (88) |
|  | 167 (27) | 169 (29) | 166 (40) | 180 (29) |
| Phosphorus, mg | 2362 (662) | 2125 (619) | 1878 (494) | 1741 (397) |
|  | 757 (114) | 740 (122) | 716 (109) | 782 (132) |
| Sulphur, mg | 1405 (466) | 1331 (501) | 1181 (371) | 968 (260) |
|  | 446 (90) | 462 (127) | 448 (106) | 429 (77) |
| Iron, mg | 21 (7) | 20 (7) | 19 (6) | 16 (4) |
|  | 7 (1) | 7 (2) | 7 (2) | 7 (1) |
| Copper, mg | 1.9 (0.8) | 1.9 (0.8) | 1.8 (0.9) | 1.4 (0.4) |
|  | 0.6 (0.2) | 0.7 (0.2) | 0.7 (0.3) | 0.6 (0.1) |
| Manganese, mg | 7.5 (2.6) | 7.0 (2.5) | 6.3 (2.2) | 6.3 (2.2) |
|  | 2.4 (0.7) | 2.5 (0.7) | 2.5 (0.8) | 2.9 (0.8) |
| Zinc, mg | 18 (5) | 16 (5) | 15 (4) | 13 (3) |
|  | 6 (1) | 6 (1) | 6 (1) | 6 (1) |
| Molybdenum, $\mu \mathrm{g}$ | 140 (45) | 131 (40) | 122 (40) | 106 (25) |
|  | 45 (11) | 46 (9) | 47 (13) | 48 (9) |

Table 143. Mean daily intake of mineral elements by occupation of men on the upper line and corresponding values per 1000 keal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=122)$ | Blue- <br> collar <br> workers <br> ( $\mathrm{N}=212$ ) | Whitecollar workers ( $\mathrm{N}=221$ ) | Retired $(N=68)$ |
| :---: | :---: | :---: | :---: | :---: |
| Cobolt, | 21 (7) | 20 (7) | 18 (5) | 16 (5) |
|  | 7 (2) | 7 (2) | 7 (1) | 7 (1) |
| Nickel, $\mu$ | 172 (77) | 173 (102) | 164 (87) | 150 (82) |
|  | 57 (27) | 61 (34) | 64 (34) | 67 (29) |
| Chromium, $\mu \mathrm{g}$ | 41 (13) | 40 (13) | 36 (11) | 31 (8) |
|  | 13 (2) | 14 (2) | 14 (3) | 14 (2) |
| Fluorine, $\mu \mathrm{g}$ | 539 (194) | 501 (179) | 462 (140) | 430 (131) |
|  | 175 (51) | 176 (51) | 178 (50) | 193 (48) |
| Selenium, $\mu \mathrm{g}$ | 61 (26) | 60 (32) | 56 (21) | 49 (24) |
|  | 19 (6) | 20 (8) | 21 (7) | 21 (9) |
| Silicon, mg | 38 (25) | 38 (22) | 37 (29) | 29 (15) |
|  | 12 (6) | 13 (7) | 14 (9) | 13 (7) |
| Mercury, $\mu \mathrm{g}$ | 8.9 (11.9) | 7.1 (8.5) | 6.5 (6.9) | 10.2 (15.3) |
|  | 2.9 (3.9) | 2.3 (2.2) | 2.4 (2.5) | 4.3:(5.9) |
| Arsenic, $\mu \mathrm{g}$ | 70 (50) | 68 (51) | 68 (60) | 59 (40) |
|  | 22 (13) | 23 (18) | 25 (21) | 25 (15) |
| Cadmium, $\mu \mathrm{g}$ | 17 (5) | 16 (5) | 15 (4) | 13 (4) |
|  | 5 (1) | 6 (I) | 6 (2) | 6 (1) |
| L.ead, $\mu \mathrm{g}$ | 64 (25) | 62 (25) | 60 (23) | 51 (19) |
|  | 21 (7) | 21 (6) | 23 (8) | 23 (8) |

Table 144. Mean daily intake of mineral elements by occupation of women on the upper line and corresponding values per 1000 kcal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(\mathrm{N}=90)$ | Bluecollar workers ( $\mathrm{N}=90$ ) | Whitecollar workers $(N=307)$ | Housewives $(N=99)$ | Retired $(N=87)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Potassium, mg | 4273 (1047) | 3922 (963) | 3761 (968) | 3688 (866) | 3931 (933) |
|  | 1914 (368) | 2027 (415) | 1909 (396) | 1940 (417) | 2179 (404) |
| Calcium, mg | 1276 (503) | 1124 (375) | 1105 (403) | 1025 (348) | 1121 (404) |
|  | 557 (165) | 575 (159) | 551 (162) | 527 (136) | 607 (158) |
| Magnesium, mg | 393 (91) | 359 (83) | 348 (86) | 344 (78) | 357 (81) |
|  | 177 (33) | 185 (34) | 176 (33) | 180 (31) | 198 (36) |
| Phosphorus, mg | 1690 (460) | 1514 (412) | 1482 (413) | 1442 (372) | 1508 (407) |
|  | 745 (124) | 767 (124) | 738 (127) | 743 (115) | 820 (128) |
| Sulphur, mg | 960 (283) | 914 (336) | 894 (276) | 850 (280) | 830 (253) |
|  | 423 (89) | 457 (108) | 443 (97) | 436 (93) | 451 (93) |
| Iron, mg | 18 (6) | 15 (5) | 15 (5) | 15 (6) | 14 (5) |
|  | 8 (2) | 7 (2) | 7 (2) | 8 (2) | 8 (3) |
| Copper, mg | 1.5 (0.6) | 1.5 (0.8) | 1.6 (0.9) | 1.5 (0.8) | 1.4 (0.5) |
|  | 0.7 (0.2) | 0.8 (0.3) | 0.8 (0.4) | 0.8 (0.4) | 0.8 (0.3) |
| Manganese, mg | 6.6 (2.1) | 5.0 (1.5) | 5.1 (1.7) | 5.4 (1.5) | 5.6 (1.6) |
|  | 3.0 (0.9) | 2.6 (0.7) | 2.6 (0.8) | 2.8 (0.7) | 3.1 (0.9) |
| Zinc, mg | 13 (3) | 12 (4) | 12 (3) | 11 (3) | 12 (3) |
|  | 6 (1) | 6 (1) | 6 (1) | 6 (1) | 6 (1) |
| Molybdenum, $\mu \mathrm{g}$ | 108 (31) | 104 (33) | 106 (35) | 102 (34) | 101 (28) |
|  | 48 (10) | 53 (13) | 53 (15) | 53 (13) | 56 (13) |

Table 145. Mean daily intake of mineral elements by occupation of women on the upper line and corresponding values per 1000 keal on the lower line. Standard deviations of means are in parenthesis.

|  | Farmers $(N=90)$ | Blue- <br> collar <br> workers $(N=90)$ | White- <br> collar <br> workers $(N=307)$ | Housewives $(N=99)$ | Retired $(N=87)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cobolt, $\mu \mathrm{g}$ | 16 (4) | 15 (5) | 15 (4) | 15 (4) | 15 (4) |
|  | 7 (1) | 8 (2) | 8 (1) | 8 (1) | 8 (1) |
| Nickel, $\mu \mathrm{g}$ | 140 (57) | 123 (58) | 132 (59) | 139 (69) | 139 (61) |
|  | 63 (26) | 63 (28) | 68 (32) | 72 (34) | 76 (31) |
| Chromium, | 30 (8) | 28 (9) | 29 (8) | 27 (9) | 26 (7) |
|  | 13 (2) | 14 (3) | 15 (3) | 14 (2) | 14 (2) |
| Fluorine, $\boldsymbol{\mu}$ | 416 (126) | 352 (95) | 393 (129) | 364 (116) | 365 (110) |
|  | 183 (43) | 182 (46) | 198 (55) | 188 (40) | 200 (44) |
| Selenium, | 45 (16) | 44 (17) | 46 (18) | 42 (16) | 40 (17) |
|  | 20 (5) | 22 (8) | 23 (8) | 21 (6) | 22 (9) |
| Silicon, mg | 32 (20) | 23 (10) | 27 (14) | 26 (12) | 27 (13) |
|  | 14 (8) | 12 (4) | 13 (7) | 13 (6) | 15 (6) |
| Mercury, $\mu$ | 4.9 (4.9) | 6.0 (14.2) | 5.4 (7.8) | 4.8 (4.1) | 6.0 (6.2) |
|  | 2.4 (3.6) | 2.9 (5.4) | 2.7 (3.4) | 2.6 (2.3) | 3.2 (2.9) |
| Arsenic, $\mu$ | 56 (32) | 42 (20) | 50 (43) | 44 (22) | 56 (35) |
|  | 24 (13) | 22 (12) | 25 (25) | 23 (13) | 30 (17) |
| Cadmium, $\mu \mathrm{g}$ | 13 (4) | 12 (4) | 13 (4) | 13 (4) | 12 (3) |
|  | 6 (1) | 6 (2) | 6 (2) | 7 (2) | 7 (1) |
| Lead, $\mu \mathrm{g}$ | 49 (20) | 50 (20) | 53 (21) | 46 (20) | 47 (23) |
|  | 21 (8) | 25 (11) | 26 (10) | 23 (9) | 26 (14) |

5.4. Food and nutrient intake by place of living (urban/rural)

Table 146. Mean daily food consumption in grams by place of living. Standard deviations of means are in parenthesis.

|  | MEN |  | WOMEN |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Urban $(N=401)$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=252) \end{aligned}$ | $\begin{aligned} & \text { Urban } \\ & (\mathrm{N}=436) \end{aligned}$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=259) \end{aligned}$ |
| Rye products | 119 (71) | 143 (73) | 76 (47) | 100 (44) |
| Wheat products | 110 (69) | 110 (65) | 92 (54) | 92 (53) |
| Other cereal products | 25 (29) | 31 (40) | 18 (21) | 23 (21) |
| L.egumes and nuts | 10 (19) | 10 (18) | 7 (14) | 7 (13) |
| Potatoes | 169 (101) | 175 (95) | 103 (72) | 117 (69) |
| Roots | 30 (41) | 28 (32) | 33 (39) | 39 (41) |
| Other vegetables | 67 (69) | 42 (40) | 70 (59) | 58 (52) |
| Fruit and berries | 280 (236) | 239 (196) | 327 (194) | 304 (191) |
| Margarine and oils | 32 (33) | 17 (22) | 23 (23) | 13 (17) |
| Butter | 30 (27) | 49 (34) | 19 (19) | 31 (21) |
| Milk | 554 (366) | 660 (370) | 320 (251) | 395 (239) |
| Cheese | 25 (32) | 18 (22) | 28 (31) | 19 (26) |
| Other milk products | 186 (250) | 221 (264) | 184 (186) | 195 (183) |
| Pork | 33 (42) | 33 (42) | 23 (33) | 26 (33) |
| Beef and other meat | 64 (62) | 64 (62) | 49 (48) | 46 (46) |
| Sausage | 70 (69) | 66 (61) | 40 (46) | 34 (35) |
| Inner organs and blood | 6 (15) | 6 (13) | 6 (15) | 6 (14) |
| Fish and other seafood | 44 (70) | 39 (61) | 27 (38) | 30 (38) |
| Eggs | 33 (31) | 28 (27) | 24 (23) | 23 (20) |
| Coffee | 635 (420) | 688 (376) | 561 (316) | 668 (388) |
| Tea | 120 (193) | 96 (196) | 107 (167) | 89 (158) |
| Alcoholic drinks | 176 (350) | 85 (218) | 57 (168) | 12 (66) |
| Soft drinks | 89 (163) | 56 (125) | 52 (117) | 44 (113) |
| Sweets, sugar, suryp and honey | 44 (30) | 49 (29) | 32 (24) | 38 (24) |
| Other foodstuffs | 2 (6) | 2 (5) | 1(3) | 1 (2) |

Table 147. Mean daily intake of energy and selected nutrients by place of living. Values per 1000 kcal are on the lower line and standard deviations of means are in parenthesis.

|  | MEN |  | WOMEN |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Urban } \\ & (\mathrm{N}=401) \end{aligned}$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=252) \end{aligned}$ | $\begin{aligned} & \text { Urban } \\ & (\mathrm{N}=436) \end{aligned}$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=259) \end{aligned}$ |
| Energy, MJ | 11.9 (3.3) | 12.4 (3.5) | 8.5 (2.4) | 9.0 (2.4) |
| kcal | 2833 (789) | 2938 (820) | 2026 (576) | 2148 (573) |
| Protein, g | 104 (31) | 107 (30) | 76 (22) | 78 (22) |
|  | 37 (6) | 37 (5) | 38 (6) | 37 (6) |
| Fat, 9 | 123 (44) | 127 (44) | 86 (32) | 88 (31) |
|  | 43 (7) | 43 (6) | 41 (6) | 40 (6) |
| Saturated fatty | 61 (24) | 69 (27) | 43 (17) | 47 (18) |
| acids, g | 21 (5) | 23 (5) | 21 (4) | 22 (5) |
| Monounsaturated fatty acids, $g$ | 42 (16) | 42 (14) | 29 (12) | 29 (10) |
|  | 15 (3) | 14 (2) | 14 (3) | 13 (2) |
| Polyunsaturated fatty acids, g |  |  |  |  |
|  | 17 6 (10) | $\begin{aligned} & 13(6) \\ & 4 \text { (2) } \end{aligned}$ | 11 $6 \quad(6)$ | $\begin{aligned} & 10(5) \\ & 5 \end{aligned}$ |
| Linoleic acid, g | 14 (9) | 11 (5) | 10 (6) | 8 (4) |
|  | 5 (2) | 4 (2) | 5 (2) | 4 (2) |
| Carbohydrate, g | 318 (98) | 343 (106) | 240 (71) | 268 (71) |
|  | 113 (18) | 117 (17) | 120 (17) | 126 (15) |
| Sucrose, g | 58 (32) | 62 (33) | 44 (25) | 51 (26) |
|  | 20 (9) | 21 (9) | 22 (9) | 23 (9) |
| Vitamin A, ret.eq., $\mathrm{g}^{\prime}$ | 1350 (1111) | 1277 (909) | 1192 (1070) | 1185 (1065) |
|  | 483 (390) | 438 (294) | 609 (590) | 569 (544) |
| Thiamin, mg | 1.9 (0.6) | 2.0 (0.6) | 1.4 (0.4) | 1.5 (0.4) |
|  | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) |
| Riboflavin, mg | 2.9 (1.0) | 3.0 (1.0) | 2.1 (0.8) | 2.2 (0.7) |
|  | 1.0 (0.3) | 1.0 (0.2) | 1.1 (0.3) | 1.0 (0.3) |
| Niacin, mg | 23 (8) | 23 (7) | 17 (5) |  |
|  | 8 (2) | 8 (2) | 8 (2) | 8 (2) |
| Niacin, eq., mg | 42 (13) | 43 (13) | 31 (9) | 32 (10) |
|  | 16 (3) | 15 (3) | 16 (3) | 15 (3) |
| Vitamin C, mg | 135 (83) | 121 (70) | 138 (67) | 144 (72) |
|  | 50 (29) | 42 (22) | 74 (38) | 70 (37) |
| Cholesterol, mg | 520 (213) | 534 (223) | 367 (155) | 386 (158) |
|  | 185 (73) | 180 (53) | 182 (62) | 178 (53) |
| Ethanol, g | 12 (20) | 6 (14) | 4 (9) | 1 (3) |
|  | 4 (7) | 2 (5) | 2 (4) | 0 (2) |
| P/S -ratio | 0.30 (0.17) | 0.21 (0.12) | 0.29 (0.15) | 0.23 (0.17) |

Table 148. Percentage distribution of energy intake from protein, fat, carbohydrate and alcohol by place of living. Standard deviations of means are in parenthesis.

|  | MEN |  | WOMEN |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Unban } \\ & (\mathrm{N}=401) \end{aligned}$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=252) \end{aligned}$ | Urban $(\mathrm{N}=436)$ | $\begin{aligned} & \text { Rural } \\ & (\mathrm{N}=259) \end{aligned}$ |
| Protein | 15 (3) | 15 (2) | 15 (3) | 15 (2) |
| Fat | 39 (6) | 38 (6) | 37 (6) | 36 (6) |
| Saturated fatty acids | 19 (4) | 21 (4) | 19 (4) | 20 (4) |
| Monounsaturated fatty acids | 13 (3) | 13 (2) | 13 (3) | 12 (2) |
| Polyunsaturated fatty acids | 5 (2) | 4 (2) | 5 (2) | 4 (2) |
| Linoleic acid | 4 (2) | 3 (1) | 4 (2) | 3 (2) |
| Carbohydrate | 44 (7) | 45 (7) | 47 (7) | 49 (6) |
| Sucrose | 8 (4) | 8 (4) | 9 (4) | 9 (4) |
| Alcohol | 3 (5) | 2 (3) | 1 (3) | 0 (1) |

Table 149. Mean daily intake of mineral elements by place of living. Values per 1000 kcal are on the lower line and standard deviations of means are in parenthesis.

|  | MEN |  | WOMEN |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Urban $(N=401)$ | Rural $(N=252)$ | $\begin{aligned} & \text { Urban } \\ & (\mathrm{N}=436) \end{aligned}$ | Rural ( $\mathrm{N}=259$ ) |
| Potassium, mg | 4920 (1375) | 5132 (1210) | 3762 (985) | 4085 (985) |
|  | 1792 (353) | 1815 (327) | 1937 (395) | 1978 (428) |
| Calcium, mg | 1435 (583) | 1539 (545) | 1118 (430) | 1152 (410) |
|  | 514 (156) | 531 (137) | 561 (157) | 548 (157) |
| Magnesium, mg | 459 (125) | 480 (116) | 347 (86) | 377 (85) |
|  | 167 (31) | 170 (36) | 178 (33) | 183 (36) |
| Phosphorus, mg | 2036 (609) | 2157 (589) | 1488 (431) | 1580 (406) |
|  | 731 (126) | 746 (105) | 748 (123) | 753 (130) |
| Sulphur, mg | 1265 (458) | 1285 (416) | 889 (291) | 925 (285) |
|  | 451 (116) | 443 (89) | 445 (102) | 436 (90) |
| Iron, mg | 19 (6) | 21 (8) | 15 (5) | 16 (5) |
|  | 7 (2) | 7 (2) | 7 (2) | 8 (2) |
| Copper, mg | 1.9 (0.8) | 1.9 (0.7) | 1.5 (0.8) | 1.5 (0.8) |
|  | 0.7 (0.3) | 0.6 (0.2) | 0.8 (0.4) | 0.7 (0.4) |
| Manganese, mg | 6.7 (2.3) | 7.2 (2.5) | 5.1 (1.7) | 5.9 (1.7) |
|  | 2.4 (0.7) | 2.5 (0.7) | 2.6 (0.8) | 2.9 (0.8) |
| Zinc, mg | 16 (5) | 17 (5) | 12 (3) | 12 (3) |
|  | 6 (1) | 6 (1) | 6 (1) | 6 (1) |
| Molybdenum, $\mu \mathrm{g}$ | 130 (42) | 129 (39) | $104 \text { (33) }$ | $108 \text { (32) }$ |
|  | 47 (12) | 45 (10) | $53 \text { (14) }$ | $52(14)$ |
| Cobalt, $\mu \mathrm{g}$ | 19 (6) | 20 (6) | $\begin{gathered} 15(4) \\ 8(2) \end{gathered}$ | $\begin{gathered} 16(4) \\ 8(1) \end{gathered}$ |
| Nickel, $\mu \mathrm{g}$ | $7(2)$ 169 (94) | 7 (1) 167 (88) | $8(2)$ $132(62)$ | $8(1)$ 136 (59) |
|  | 62 (34) | 59 (31) | 68 (32) | 67 (30) |
| Chromium, $\mu \mathrm{g}$ | 38 (12) | 39 (12) | 29 (9) | 29 (8) |
|  | 14 (2) | 13 (2) | 14 (3) | 14 (2) |
| Fluorine, $\mu \mathrm{g}$ | 491 (162) | 489 (161) | 382 (130) | 393 (117) |
|  | 178 (51) | 170 (39) | 195 (54) | 188 (44) |
| Selenium, $\mu \mathrm{g}$ | 57 (27) | 57 (27) | 44 (17) | 45 (18) |
|  | 21 (8) | 20 (7) | 22 (7) | 21 (7) |
| Silicon, mg | 38 (25) | 36 (21) | 26 (14) | 29 (15) |
|  | 13 (8) | 13 (6) | 13 (6) | 14 (7) |
| Mercury, $\mu \mathrm{g}$ | 7.2 (8.8) | 7.8 (10.3) | 4.6 (4.3) | 6.3 (11.3) |
|  | 2.6 (2.9) | 2.6 (3.4) | 2.4 (2.4) | 3.0 (4.7) |
| Arsenic, $\mu$ | 71 (57) | 62 (41) | 48 (39) | 51 (28) |
|  | 25 (19) | 21 (13) | 25 (23) | 24 (13) |
| Cadmium, $\mu \mathrm{g}$ | 16 (5) | 16 (5) | 13 (4) | 13 (4) |
|  | 6 (1) | 6 (1) | 6 (2) | 6 (2) |
| Lead, $\mu \mathrm{g}$ | 61 (23) | 60 (24) | 50 (21) | 50 (21) |
|  | 22 (8) | 21 (6) | 25 (10) | 24 (11) |

5.5. Food and nutrient intake by the percentage of energy from fat

Table 150. Mean daily food consumption in grams by the percentage of energy from fat in the diet of men. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=199) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=97) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=133) \end{aligned}$ |  |  |
| Rye products | 138 (82) | 140 (76) | 129 (73) | 119 (66) | 121 (64) |
| Wheat products | 111 (78) | 104 (60) | 115 (70) | 117 (72) | 93 (54) |
| Other cereal products | 33 (39) | 30 (34) | 22 (25) | 28 (36) | 23 (25) |
| Legumes and nuts | 16 (28) | 11 (18) | 11 (20) | 11 (18) | 8 (14) |
| Potatoes | 176 (99) | 174 (100) | 159 (89) | 174 (99) | 175 (98) |
| Roots | 30 (47) | 28 (37) | 35 (39) | 28 (29) | 24 (28) |
| Other vegetables | 63 (80) | 60 (58) | 54 (50) | 59 (61) | 55 (59) |
| Fruit and berries | 315 (275) | 290 (205) | 280 (229) | 257 (197) | 192 (191) |
| Margarine and oils | 16 (18) | 19 (20) | 24 (24) | 27 (25) | 30 (35) |
| Butter | 24 (21) | 31 (23) | 32 (28) | 36 (28) | 49 (39) |
| Milk | 421 (258) | 527 (303) | 572 (348) | 602 (401) | 639 (388) |
| Cheese | 13 (17) | 20 (21) | 19 (26) | 23 (25) | 26 (34) |
| Other milk products | 293 (314) | 250 (254) | 195 (274) | 167 (201) | 168 (229) |
| Pork | 25 (32) | 25 (27) | 34 (40) | 40 (50) | 40 (49) |
| Beef and other meat | 54 (62) | 56 (47) | 59 (52) | 74 (71) | 67 (64) |
| Sausage | 39 (44) | 53 (51) | 57 (61) | 70 (72) | 93 (73) |
| Inner organs and blood | 5 (12) | 6 (16) | 6 (16) | 5 (13) | 4 (13) |
| Fish and other seafood | 56 (75) | 38 (59) | 38 (60) | 41 (64) | 43 (77) |
| Eggs | 25 (25) | 29 (27) | 28 (26) | 34 (29) | 34 (34) |
| Coffee | 666 (426) | 566 (393) | 626 (416) | 656 (347) | 672 (358) |
| Tea | 109 (180) | 110 (215) | 114 (200) | 121 (222) | 112 (204) |
| Alcoholic drinks | 208 (528) | 179 (425) | 131 (228) | 122 (267) | 106 (217) |
| Soft drinks | 102 (210) | 57 (112) | 74 (152) | 97 (168) | 63 (117) |
| Sweets, sugar, suryp and honey | 49 (35) | 47 (32) | 44 (30) | 41 (23) | 41 (26) |
| Other foodstuffs | 1 (3) | 2 (6) | 2 (5) | 2 (6) | 2 (5) |

Table 151. Mean daily food consumption in grams by the percentage of energy from fat in the diet of women. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (N=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=138) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (\mathrm{~N}=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=149) \end{aligned}$ |  |  |
| Rye products | 83 (46) | 85 (44) | 88 (48) | 93 (51) | 83 (50) |
| Wheat cereal products | 91 (52) | 95 (56) | 92 (51) | 91 (51) | 84 (49) |
| Other cereal products | 23 (20) | 21 (21) | 19 (21) | 19 (22) | 16 (18) |
| L.egumes and nuts | 6 (13) | 6 (12) | 7 (14) | 6 (12) | 6 (14) |
| Potatoes | 107 (69) | 101 (62) | 107 (77) | 119 (70) | 112 (73) |
| Roots | 42 (43) | 33 (42) | 35 (35) | 35 (35) |  |
| Other vegetables | 62 (54) | 65 (60) | 63 (54) | 64 (53) | 70 (61) |
| Fruit and berries | 350 (205) | 341 (177) | 305 (193) | 316 (186) | 266 (174) |
| Margarine and oils | 11 (11) | 16 (14) | 19 (18) | 23 (24) | 27 (27) |
| Butter | 17 (14) | 20 (16) | 22 (18) | 27 (23) | 32 (26) |
| Milk | 292 (180) | 352 (242) | 322 (228) | 358 (240) | 424 (319) |
| Cheese | 16 (22) | 21 (23) | 26 (27) | 26 (26) | 32 (41) |
| Other milk products | 217 (211) | 189 (174) | 179 (163) | 213 (205) | 150 (155) |
| Pork | 15 (22) | 22 (31) | 24 (30) | 27 (31) | 33 (44) |
| Beef and other meat | 38 (38) | 46 (41) | 50 (46) | 58 (54) | 49 (55) |
| Sausage | 21 (24) | 28 (33) | 36 (43) | 45 (45) | 53 (50) |
| Inner organs and blood | 7 (16) | 7 (17) | 7 (16) | 4 (10) | 4 (10) |
| Fish and other seafood | 30 (37) | 33 (41) | 26 (31) | 27 (37) | 30 (47) |
| Eggs | 20 (20) | 22 (20) | 23 (25) | 26 (20) | 26 (23) |
| Coffee | 574 (372) | 565 (306) | 571 (295) | 625 (334) | 641 (391) |
| Tea | 81 (129) | 102 (153) | 115 (192) | 88 (153) | 96 (166) |
| Alcoholic drinks | 50 (216) | 22 (73) | 30 (101) | 35 (87) | 45 (126) |
| Soft drinks | 39 (94) | 38 (77) | 49 (122) | 56 (134) | 56 (143) |
| Sweets, sugar, suryp and honey | 34 (23) | 37 (26) | 33 (22) | 35 (25) | 31 (20) |
| Other foodstuffs | 1 (3) | 0 (2) | 1 (2) | 1 (3) | 1 (3) |

Table 152. Mean daily intake of energy and selected nutrients by the percentage of energy from fat in the diet of men. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (\mathrm{~N}=199) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (\mathrm{~N}=97) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=133) \end{aligned}$ |  |  |
| Energy, MJ | 11.0 (3.4) | 11.4 (3.0) | 11.5 (3.5) | 12.1 (3.3) | 12.5 (3.4) |
| kcal | 2610 (790) | 2710 (710) | 2720 (800) | 2900 (790) | 2980 (820) |
| Protein, g | 98 (34) | 99 (27) | 99 (30) | 108 (32) | 107 (30) |
| Fat, 9 | 85 (28) | 103 (28) | 113 (34) | 129 (36) | 152 (45) |
| Saturated fatty acids, g | 43 (16) | 53 (17) | 57 (21) | 66 (22) | 79 (27) |
| Monounsaturated fatty |  |  |  |  |  |
| acids, g | 29 (10) | 34 (9) | 38 (12) | 44 (13) | 52 (16) |
| Polyunsaturated fatty |  |  |  |  |  |
| acids, g | 11 (6) | 12 (5) | 14 (7) | 16 (7) | 17 (10) |
| Linoleic acid, g | 9 (5) | 10 (5) | 12 (6) | 13 (6) | 14 (9) |
| Carbohydrate, $g$ | 350 (123) | 339 (96) | 322 (105) | 320 (93) | 293 (91) |
| Sucrose, g | 63 (42) | 61 (31) | 57 (33) | 56 (26) | 53 (29) |
| Vitamin A, |  |  |  |  |  |
| ret.eq., $\mu \mathrm{g}$ | 978 (715) | 1285 (1202) | )1314 (1083) | 1248 (853) | 1353 (955) |
| Thiamin, mg | 2.0 (0.6) | 2.0 (0.5) | 1.9 (0.6) | 2.0 (0.6) | 1.9 (0.5) |
| Riboflavin, mg | 2.6 (1.0) | 2.9 (1.0) | 2.8 (1.0) | 2.9 (1.0) | 2.9 (1.0) |
| Niacin, mg | 22 (8) | 21 (7) | 22 (8) | 23 (9) | 22 (7) |
| Niacin, eq., mg | 42 (14) | 41 (12) | 42 (13) | 45 (14) | 44 (12) |
| Vitamin C, mg | 144 (95) | 143 (92) | 128 (75) | 128 (67) | 109 (68) |
| Cholesterol, mg | 398 (177) | 456 (178) | 472 (185) | 555 (200) | 616 (239) |
| Ethanol, 9 | 14 (28) | 12 (23) | 10 (18) | 9 (17) | 8 (14) |
| P/S -ratio | 0.29 (0.17) | 0.25 (0.14) | 0.28 (0.16) | 0.27 (0.15) | 0.24 (0.16) |

Table 153. Mean daily intake of energy and selected nutrients by the percentage of energy from fat in the diet of women. Standard deviations of means are in parenthesis.

FAT AS \% OF ENERGY

|  | FAT AS \% Of ENERGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (\mathrm{~N}=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=149) \end{aligned}$ | $\begin{aligned} & 39-41 \\ & (\mathrm{~N}=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=138) \end{aligned}$ |
| Energy, MJ | 7.6 (2.0) | 8.4 (2.2) | 8.5 (2.2) | 9.3 (2.4) | 9.6 (2.4) |
| kcal | 1820 (480) | 1990 (530) | 2020 (520) | 2220 (560) | 2270 (580) |
| Protein, g | 68 (20) | 75 (21) | 76 (20) | 82 (23) | 82 (25) |
| Fat, g | 60 (18) | 76 (21) | 84 (22) | 99 (25) | 114 (31) |
| Saturated fatty acids, $g$ | 31 (11) | 39 (13) | 43 (14) | 50 (14) | 60 (19) |
| Monounsaturated fatty acids, g Polyunsatura- | 20 (6) | 25 (7) | 28 (8) | 33 (9) | 39 (11) |
| ted fatty acids, g | 8 (4) | 10 (4) | 11 (5) | 12 (6) | 14 (7) |
| L.inoleic acid, 9 | 7 (3) | 8 (4) | 9 (4) | 11 (6) | 12 (7) |
| Carbohydrate, g | 254 (67) | 256 (74) | 244 (67) | 254 (70) | 232 (64) |
| Sucrose, 9 | 47 (25) | 50 (28) | 45 (23) | 47 (24) | 41 (23) |
| Vitamin A, ret. |  |  |  |  |  |
| eq., $\mu \mathrm{g}$ | 1117 (1145) | 1134 (1274) | )1248 (1225) | 1194 (807) | 1229 (814) |
| Thiamin, mg | 1.4 (0.4) | 1.4 (0.4) | 1.4 (0.4) | 1.5 (0.4) | 1.5 (0.4) |
| Riboflavin, mg | 2.0 (0.6) | 2.1 (0.8) | 2.1 (0.8) | 2.2 (0.8) | 2.2 (0.8) |
| Niacin, mg | 15 (5) | 16 (5) | 17 (5) | 17 (6) | 17 (6) |
| Niacin, eq., mg | 29 (8) | 31 (9) | 32 (9) | 34 (10) | 33 (10) |
| Vitamin C, mg | 149 (69) | 149 (69) | 133 (68) | 143 (65) | 129 (68) |
| Cholesterol, mg | 293 (125) | 350 (140) | 367 (148) | 411 (148) | 459 (163) |
| Ethanol, 9 | 3 (10) | 2 (5) | 2 (6) | 2 (5) | 3 (7) |
| P/S -ratio | 0.28 (0.17) | 0.27 (0.15) | 0.28 (0.16) | 0.27 (0.15) | 0.25 (0.15) |

Table 154. Mean daily intake of selected nutrients per 1000 kcal by the percentage of energy from fat in the diet of men. Standard deviations of means are in parenthesis.

|  | FAT AS \% Of ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=199) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=97) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (\mathrm{~N}=133) \end{aligned}$ |  |  |
| Protein, g | 38 (7) | 37 (6) | 37 (5) | 37 (6) | 36 (6) |
| Fat, 9 | 32 (4) | 38 (1) | 41 (1) | 44 (1) | 51 (4) |
| Saturated fatty acids, 9 | 16 (3) | 20 (3) | 21 (3) | 23 (4) | 26 (5) |
| Monounsaturated fatty acids, g | 11 (2) | 13 (1) | 14 (1) | 15 (1) | 17 (2) |
| Polyunsaturated fatty acids, $g$ | 4 (2) | 5 (2) | 5 (2) | 6 (2) | 6 (3) |
| Linoleic acid, g | 4 (2) | 4 (2) | 4 (2) | 5 (2) | 5 (2) |
| Carbohydrate, g | 134 (18) | 126 (14) | 118 (12) | 112 (11) | 99 (12) |
| Sucrose, g | 23 (12) | 22 (9) | 21 (10) | 19 (8) | 17 (7) |
| Vitamin A, ret. |  |  |  |  |  |
| eq., $\mu \mathrm{g}$ | 380 (265) | 475 (440) | 489 (373) | 431 (250) | 461 (294) |
| Thiamin, mg | 0.8 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.6 (0.1) |
| Riboflavin, mg | 1.0 (0.3) | 1.1 (0.3) | 1.1 (0.3) | 1.0 (0.3) | 1.0 (0.2) |
| Niacin, mg | 9 (3) | 8 (2) | 8 (2) | 8 (2) | 8 (2) |
| Niacin, eq., mg | 16 (3) | 15 (3) | 16 (3) | 16 (3) | 15 (3) |
| Vitamin C, mg | 58 (41) | 54 (31) | 48 (25) | 46 (23) | 37 (20) |
| Cholesterol, mg | 153 (59) | 167 (45) | 173 (52) | 192 (53) | 209 (78) |
| Ethanol, g | 5 (11) | 4 (7) | 4 (6) | 3 (5) | 2 (4) |

Table 155. Mean daily intake of selected nutrients per 1000 kcal by the percentage of energy from fat in the diet of women. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (\mathrm{~N}=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=138) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (\mathrm{~N}=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (\mathrm{~N}=149) \end{aligned}$ |  |  |
| Protein, g | 38 (6) | 38 (6) | 38 (6) | 37 (6) | 36 (7) |
| Fat, $g$ Saturated | 33 (3) | 38 (1) | 41 (1) | 44 (1) | 50 (3) |
| fatty acids, g <br> Monounsatura- | 17 (3) | 19 (3) | 21 (3) | 23 (3) | 26 (4) |
| ted fatty acids, g <br> Polyunsatura- | 11 (1) | 13 (1) | 14 (2) | 15 (1) | 17 (2) |
| ted fatty acids, g | 4 (2) | 5 (2) | 5 (2) | 6 (2) | 6 (3) |
| Linoleic acid, 9 | 4 (2) | 4 (2) | 4 (2) | 5 (2) | 5 (3) |
| Carbohydrate, 9 | 141 (12) | 129 (9) | 122 (9) | 115 (8) | 103 (10) |
| Sucrose, g | 25 (10) | 24 (10) | 22 (8) | 20 (8) | 18 (7) |
| Vitamin A, ret. |  |  |  |  |  |
| eq., $\mu \mathrm{g}$ | 640 (669) | 598 (747) | 637 (660) | 538 (333) | 546 (311) |
| Thiamin, mg | 0.8 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) | 0.7 (0.1) |
| Riboflavin, mg | 1.1 (0.3) | 1.1 (0.3) | 1.1 (0.3) | 1.0 (0.3) | 1.0 (0.2) |
| Niacin, mg | 9 (2) | 8 (2) | 8 (2) | 8 (2) | 8 (2) |
| Niacin, eq., mg | 16 (3) | 16 (3) | 16 (3) | 15 (3) | 15 (3) |
| Vitamin C, mg | 87 (45) | 76 (31) | 70 (37) | 68 (31) | 60 (34) |
| Cholesterol, mg | 161 (58) | 177 (56) | 183 (64) | 184 (48) | 205 (58) |
| Ethanol, g | 1 (4) | 1 (3) | 1 (3) | 1 (2) | 1 (3) |

Table 156. Distribution of energy supply from protein, carbohydrate, alcohol and selected fatty acids by the precentage of energy from fat. Values for men are on the upper line and for women on the lower line. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  | $\begin{aligned} & 39-41 \\ & (N=112) \\ & (N=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (\mathrm{~N}=199) \\ & (\mathrm{N}=138) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (\mathrm{~N}=97) \\ & (\mathrm{N}=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \\ & (N=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=133) \\ & (N=149) \end{aligned}$ |  |  |
| Protein E\% | 15 (3) | 15 (2) | 15 (2) | 15 (2) | 15 (2) |
|  | 15 (3) | 15 (3) | 15 (2) | 15 (2) | 14 (3) |
| Carbohydrate E\% | 52 (7) | 49 (5) | 46 (5) | 43 (4) | 38 (5) |
|  | 54 (5) | 50 (3) | 47 (3) | 45 (3) | 40 (4) |
| Sucrose E\% | 9 (5) | 9 (3) | 8 (4) | 8 (3) | 7 (3) |
|  | 10 (4) | 10 (4) | 9 (3) | 8 (3) | 7 (3) |
| Alcohol E\% | 4 (8) | 3 (5) | 3 (4) | 2 (3) | 2 (3) |
|  | 1 (3) | 1(2) | 1 (2) | 1 (2) | 1 (2) |
| Saturated fatty | 15 (3) | 18 (3) | 19 (3) | 20 (3) | 24 (4) |
| acids E\% | 15 (3) | 18 (2) | 19 (3) | 21 (3) | 24 (4) |
| Monounsatured | 10 (2) | 11 (1) | 13 (1) | 14 (1) | 16 (2) |
| fatty acids E\% | 10 (1) | 11 (1) | 13 (1) | 14 (1) | 15 (2) |
| Polyunsaturated | 4 (2) | 4 (2) | 5 (2) | 5 (2) | 5 (2) |
| fatty acids E\% | 4 (2) | 4 (2) | 5 (2) | 5 (2) | 5 (2) |
| Linoleic acid E\% | 3 (1) | 3 (1) | 4 (2) | 4 (2) | 4 (2) |
|  | 3 (1) | 4 (2) | 4 (2) | 4 (2) | 5 (2) |

Table 157. Mean daily intake of mineral elements by the percentage of energy from fat in the diet of men. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=97) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=133) \end{aligned}$ | $\begin{aligned} & 39-41 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=199) \end{aligned}$ |
| Potassium, mg | 5107 (1486) | 4979 (1257) | 7)4824 (1281) | 4987 (1190) | 4844 (1329) |
| Calcium, mg | 1331 (594) | 1427 (467) | 1389 (529) | 1448 (564) | 1522 (594) |
| Magnesium, mg | 488 (137) | 468 (116) | 451 (118) | 463 (115) | 445 (120) |
| Phosphorus, mg | 1989 (674) | 2033 (551) | 1971 (587) | 2079 (565) | 2111 (605) |
| Sulphur, mg | 1183 (417) | 1193 (370) | 1175 (427) | 1298 (434) | 1339 (495) |
| Iron, mg | 21 (8) | 20 (6) | 19 (7) | 20 (7) | 18 (5) |
| Copper, mg | 1.9 (0.7) | 1.9 (0.9) | 1.8 (0.8) | 1.8 (0.7) | 1.7 (0.8) |
| Manganese, mg | 7.6 (2.7) | 7.3 (2.4) | 6.8 (2.4) | 6.7 (2.2) | 6.2 (2.2) |
| Zinc, mg | 15 (5) | 16 (4) | 15 (5) | 16 (5) | 17 (5) |
| Molybdenum, $\mu \mathrm{g}$ | 134 (45) | 133 (47) | 126 (40) | 128 (38) | 122 (36) |
| Cobolt, $\mu \mathrm{g}$ | 21 (7) | 20 (6) | 19 (7) | 20 (6) | 18 (5) |
| Nickel, $\mu$ | 196 (105) | 176 (94) | 162 (85) | 171 (95) | 148 (77) |
| Chromium, mg | 36 (12) | 38 (12) | 36 (11) | 38 (11) | 39 (12) |
| Fluorine, $\mu \mathrm{g}$ | 502 (172) | 485 (166) | 482 (173) | 492 (174) | 477 (152) |
| Selenium, $\mu \mathrm{g}$ | 59 (28) | 54 (22) | 56 (24) | 61 (29) | 58 (29) |
| Silican, mg | 41 (24) | 44 (36) | 37 (23) | 34 (20) | 31 (18) |
| Mercury, $\mu$ | 9.4 (11.5) | 7.2 (10.2) | 7.1 (9.3) | 7.2 (7.5) | 7.4 (10.2) |
| Arsenic, $\mu \mathrm{g}$ | 74 (66) | 70 (57) | 66 (55) | 66 (42) | 63 (46) |
| Cadmium, $\mu \mathrm{g}$ | 16 (5) | 16 (5) | 16 (5) | 16 (5) | 15 (4) |
| L.ead, $\mu \mathrm{g}$ | 102 (133) | 98 (77) | 105 (86) | 115 (97) | 120 (146) |

Table 158. Mean daily intake of mineral elements by the percentage of energy from fat in the diet of women. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (\mathrm{~N}=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (\mathrm{~N}=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=149) \end{aligned}$ | $\begin{aligned} & 39-41 \\ & (\mathrm{~N}=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (N=138) \end{aligned}$ |
| Potassium, mg | 2049 (472) | 1885 (309) | 1830 (284) | 1774 (295) | 1671 (275) |
| Calcium, mg | 520 (174) | 540 (148) | 517 (126) | 507 (154) | 516 (147) |
| Magnesium, mg | 197 (51) | 177 (25) | 171 (26) | 164 (25) | 153 (21) |
| Phosphorus, mg | 777 (144) | 763 (128) | 733 (100) | 728 (113) | 718 (109) |
| Sulphur, mg | 461 (104) | 445 (96) | 432 (91) | 455 (109) | 455 (124) |
| Iron, mg | 8 (2) | 8 (2) | 7 (2) | 7 (2) | 6 (1) |
| Copper, mg | 0.7 (0.2) | 0.7 (0.3) | 0.7 (0.2) | 0.6 (0.2) | 0.6 (0.2) |
| Manganese, mg | 3.0 (0.8) | 2.8 (0.7) | 2.6 (0.7) | 2.4 (0.7) | 2.1 (0.5) |
| Zinc, mg | 6 (1) | 6 (1) | 6 (1) | 6 (1) | 6 (1) |
| Molybdenum, $\mu \mathrm{g}$ | 53 (13) | 50 (14) | 47 (9) | 44 (7) | 41 (7) |
| Cobolt, $\mu \mathrm{g}$ | 8 (2) | 7 (2) | 7 (1) | 7 (1) | 6 (1) |
| Nickel, $\mu \mathrm{g}$ | 78 (41) | 68 (35) | 62 (32) | 60 (33) | 51 (22) |
| Chromium, $\mu \mathrm{g}$ | 14 (3) | 14 (2) | 13 (2) | 13 (2) | 13 (2) |
| Fluorine, $\mu \mathrm{g}$ | 200 (68) | 182 (44) | 180 (44) | 173 (47) | 165 (44) |
| Selenium, $\mu$ | 22 (8) | 20 (7) | 20 (6) | 21 (8) | 19 (8) |
| Silicon, mg | 16 (9) | 16 (11) | 14 (6) | 12 (5) | 11 (5) |
| Mercury, g g | 3.4 (3.8) | 2.7 (3.8) | 2.5 (3.1) | 2.5 (2.5) | 2.4 (3.2) |
| Arsenic, $\mu \mathrm{g}$ | 28 (23) | 26 (19) | 24 (20) | 23 (13) | 21 (15) |
| Cadmium, $\mu \mathrm{g}$ | 6 (2) | 6 (1) | 6 (1) | 6 (1) | 5 (1) |
| Lead, $\mu \mathrm{g}$ | 40 (51) | 38 (34) | 41 (35) | 44 (41) | 42 (47) |

Table 159. Mean daily intake of mineral elements per 1000 kcal by the percentage of energy from fat in the diet of men. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=97) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=133) \end{aligned}$ | $\begin{aligned} & 39-41 \\ & (N=112) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (\mathrm{~N}=199) \end{aligned}$ |
| Potassium, mg | 3812 (913) | 3834 (967) | 3776 (953) | 4047 (1005) | 3912 (1058) |
| Calcium, mg | 1015 (376) | 1094 (371) | 1102 (369) | 1204 (409) | 1242 (510) |
| Magnesium, mg | 351 (84) | 353 (83) | 352 (84) | 371 (87) | 360 (90) |
| Phosphorus, mg | 1401 (376) | 1492 (406) | 1500 (395) | 1607 (425) | 1610 (464) |
| Sulphur, mg | 800 (225) | 883 (283) | 875 (243) | 974 (316) | 979 (340) |
| Iron, mg | 16 (7) | 15 (6) | 15 (5) | 15 (5) | 14 (4) |
| Copper, mg | 1.5 (0.8) | 1.5 (0.9) | 1.6 (0.9) | 1.5 (0.6) | 1.4 (0.6) |
| Manganese, mg | 5.6 (1.8) | 5.6 (1.9) | 5.4 (1.8) | 5.4 (1.7) | 5.0 (1.5) |
| Zinc, mg | 11 (3) | 11 (3) | 12 (3) | 13 (3) | 12 (4) |
| Molybdenum, $\mu \mathrm{g}$ | 105 (33) | 104 (35) | 105 (33) | 108 (32) | 103 (32) |
| Cobolt, $\mu \mathrm{g}$ | 15 (5) | 15 (4) | 16 (4) | 16 (4) | 15 (4) |
| Nickel, $\mu \mathrm{g}$ | 135 (60) | 141 (68) | 133 (59) | 130 (53) | 128 (57) |
| Chromium, $\mu \mathrm{g}$ | 26 (8) | 28 (8) | 28 (8) | 31 (9) | 31 (8) |
| Fluorine, $\mu \mathrm{g}$ | 364 (114) | 387 (118) | 387 (128) | 391 (123) | 394 (126) |
| Selenium, $\mu \mathrm{g}$ | 41 (17) | 45 (18) | 44 (16) | 45 (16) | 46 (18) |
| Silicon, mg | 29 (16) | 29 (15) | 25 (12) | 28 (17) | 25 (12) |
| Mercury, ug | 5.2 (5.1) | 6.1 (11.3) | 4.7 (5.6) | 5.6 (11.0) | 5.5 (5.7) |
| Arsenic, $\mu \mathrm{g}$ | 50 (28) | 56 (54) | 46 (26) | 49 (29) | 48 (32) |
| Cadmium, $\mu \mathrm{g}$ | 12 (4) | 13 (4) | 13 (4) | 13 (4) | 13 (4) |
| Lead, $\mu \mathrm{g}$ | 24 (10) | 23 (6) | 22 (6) | 21 (6) | 20 (7) |

Table 160. Mean daily intake of mineral elements per 1000 kcal by the percentage of energy from fat in the diet of women. Standard deviations of means are in parenthesis.

|  | FAT AS \% OF ENERGY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \leq 32 \\ & (N=160) \end{aligned}$ | $\begin{aligned} & 33-35 \\ & (N=143) \end{aligned}$ | $\begin{aligned} & 36-38 \\ & (N=149) \end{aligned}$ | $\begin{aligned} & 39-41 \\ & (\mathrm{~N}=105) \end{aligned}$ | $\begin{aligned} & \geq 42 \\ & (\mathrm{~N}=138) \end{aligned}$ |
| Potassium, mg | 2186 (440) | 2000 (416) | 1920 (329) | 1888 (361) | 1774 (343) |
| Calcium, mg | 574 (185) | 559 (147) | 554 (141) | 554 (142) | 550 (169) |
| Magnesium, mg | 200 (38) | 184 (32) | 179 (26) | 173 (29) | 163 (29) |
| Phosphorus, mg | 789 (143) | 766 (130) | 753 (110) | 737 (111) | 716 (119) |
| Sulphur, mg | 448 (85) | 451 (100) | 440 (85) | 445 (111) | 432 (107) |
| Iron, mg | 9 (3) | 8 (2) | 8 (2) | 7 (1) | 6 (1) |
| Copper, mg | 0.9 (0.4) | 0.8 (0.5) | 0.8 (0.5) | 0.7 (0.3) | 0.6 (0.2) |
| Manganese, mg | 3.2 (0.9) | 2.9 (0.8) | 2.7 (0.7) | 2.5 (0.7) | 2.3 (0.6) |
| Zinc, mg | 6 (1) | 6 (1) | 6 (1) | 6 (1) | 6 (1) |
| Molybdenum, $\mu \mathrm{g}$ | 59 (16) | 54 (15) | 53 (15) | 50 (11) | 46 (9) |
| Cobolt, $\mu \mathrm{g}$ | 8 (2) | 8 (1) | 8 (1) | 7 (1) | 7 (1) |
| Nickel, $\mu \mathrm{g}$ | 78 (36) | 73 (35) | 67 (26) | 61 (25) | 58 (24) |
| Chromium, $\mu \mathrm{g}$ | 14 (3) | 14 (3) | 14 (2) | 14 (2) | 14 (2) |
| Fluorine, $\mu \mathrm{g}$ | 204 (45) | 201 (51) | 196 (54) | 180 (42) | 179 (50) |
| Selenium, $\mu \mathrm{g}$ | 23 (8) | 23 (8) | 22 (7) | 21 (5) | 20 (7) |
| Silicon, mg | 16 (7) | 15 (8) | 13 (5) | 13 (6) | 11 (5) |
| Mercury, $\mu \mathrm{g}$ | 3.0 (2.9) | 3.1 (4.5) | 2.3 (2.7) | 2.6 (4.5) | 2.5 (2.8) |
| Arsenic, $\mu \mathrm{g}$ | 28 (14) | 30 (34) | 23 (13) | 22 (12) | 21 (15) |
| Cadmium, $\mu \mathrm{g}$ | 7 (2) | 7 (2) | 6 (1) | 6 (1) | 6 (1) |
| L.ead, $\mu \mathrm{g}$ | 26 (11) | 27 (12) | 25 (11) | 24 (10) | 22 (9) |

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## ANNEXES

I FOOD RECORD FORM

II MODEL FORM

III INSTRUCTIONS ON KEEPING FOOD CONSUMPTION RECORDS

Person code

| Time | Place | Description of foods and beverages and their preparation | Portion sizes as precisely as possible |  |  |  |  |  |  |  |  |
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|  |  |  |  | 111 | 11 | 1 | 111 |  |  |  |  |
|  |  |  |  | 11 | 1 | 1 | 11 |  |  |  |  |
|  |  |  |  | 111 | 11 | 1 | 11 |  |  |  |  |
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Person code

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## ANNEX III

## INSTRUCTIONS ON KEEPING FOOD CONSUMPTION RECORDS

You are asked to keep a food consumption record during three consequtive days by using the enclosed forms. Please, write down all foods and beverages consumed during those days starting tomorrow morning.

- Start each day on a new page.
- Fill in the first four boxes by a pencil (time, place, description of food and the amount), and leave the rest of the boxes empty.
- Please, check that your name, the date and day of week are written down on every page.

Time

Write down in this box the exact time when you are eating or drinking something. It is important that you record the right time even if you eat something very little, e.g. a few sweets.

## Place

Write down the place of eating, e.g. home, restaurant, cafeteria at work, friend's house etc.

## Description of food

Write down in this box a clear description of the food or beverage that you have consumed in the place you mentioned and at the time you wrote down.

It is important to mention the quality of the food by using exact descriptions. For example whole milk, low-fat milk, skim milk, low-fat cream, whipping cream, Swiss cheese, cottage cheese, salami, bologna sausage, cream cracker, rye cracker, wheat bread, rye bread, etc. Whenever the product has a brand name, please, write that down.

When you describe a dish, write down the method of food preparation (if it is boiled or fried or grilled) and if you know the type of fat that has been used in the preparation, write that down. For example: meatballs fried in butter.

Also write down whether the food is home-made or it is bought ready-made. If you know that your home-made food differs from the "normal" Finnish food, write down the whole recipe. An example of this follows in the enclosed model form.

Use as many lines as you wish to describe the foods properly.

## Portion sizes

Write down the portion sizes of the foods of beverages already described. Use household measures such as coffee cups, tablespoons, teaspoons, decilitres or grams. If you have a kitchen scale use that for weighing for example fruit, slices of bread, portions of salad etc. whenever possible.

Estimate the portion sizes of different foods as follows:

Beverages: Use glasses, cups, or decilitres. Beer can be measured either in bottles or decilitres, and hard liquor in decilitres. Milk or cream added to coffee or tea should be measured in teaspoons or tablespoons.

Soups: Use decilitres whenever you can or describe the size of the portion as small, medium or big.

Sauces: Use tablespoons or decilitres. Note that even the amount of meat sauce such as spaghetti sauce should be estimated this way.

Meat and fish dishes: Estimate the amount of meat or fish by comparing it to an egg or by using centimeters or the palm of your hand.

Salads: If you cannot weight the portion, use decilitres, cups or tablespoons as measures.

Butter and margarine: Use levelled teaspoons or tablespoons.

Sugar: Use pieces of sugar or levelled teaspoons or tablespoons. Remember to mention also sprinkled sugar on top of porrigdes etc.

Bread and pastry: Use amounts of slices of bread and describe the size of one slice as small, medium or large and the thickness in centimeters (e.g. medium size slice, 1 cm thick). Describe the pastry as small, medium or large, and if you have a scale, weigh it.

Cold cuts: Write down the number of slices and the size of one slice in centimeters or somehow else. Examples: 3 slices of salami, cut in the butchery very thin, 4 slices of Swiss cheese cut at home with a cheese plane, $4 \times 6$ centimeters each.

Other foods: Use the information given in the package whenever you eat something that has been wrapped such as a chocolate bar or the like to get the weight of the portion.

IT IS VERY IMPORTANT THAT YOU FILL IN THE FORMS AS CAREFULL.Y AS POSSIBLE.

THANK YOU FOR YOUR CO-OPERATION!


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