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National Institute of Health and Nutrition

The National Health and Nutrition Survey (NHNS) Japan, 2014

Summary

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Summary of the Survey

1. Purpose of the National Health and Nutrition Survey (NHNS)

The purpose of this survey was to clarify the physical conditions, nutrient intake, and lifestyle of citizens based on the Health Promotion Act (Law No. 103, enacted in 2002) and to obtain basic data for the comprehensive promotion of their health.

2. Participants

In the Comprehensive Survey of Living Conditions in 2014 (approximately 2,000 areas with 59,000 households and 148,000 family members), participants included households and family members (aged 1 year and over as of November 1, 2014) in 300 area, stratified and randomly extracted from the general census areas. Of the selected census areas, 1 was excluded due to the storm disaster in August 2014.

The following households and family members were excluded from this survey:

- <Households>
- -Households of which the heads were not Japanese.
- -Households which were provided with delivered/prepared meals three times a day.
- -One-person households in a live-in situation or residing in dormitories provided with meals.
- <Family Members>
- -Infants aged 11 months or younger.
- -Persons who were unable to eat regular meals, including home care patients taking only fluids or drugs due to illness.
- -Those not having meals together with the rest of the family.
- -Those who were absent from the household which included migrant workers and those who were (a) working away from home, (b) away on business for a long period (3 months or more), (c) studying away from home, (d) admitted to a social welfare facility (including nursing care facilities), (e) admitted to a hospital for a long period, (f) put out to nurse, (g) imprisoned, and (h) not living together.

3. Purpose and Period of Survey

3.1 Survey items and target age

This survey consisted of a physical examination, dietary survey, and a lifestyle habits questionnaire. The age of the subjects was the age as of November 1, 2014. The survey items and the target age were as follows.

3.1.1 Physical examination

- A) Height (aged 1 year and over)
- B) Body weight (aged 1 year and over)
- C) Abdominal circumference (aged 20 years and over)
- D) Blood pressure: systolic and diastolic blood pressure (aged 20 years and over) measured twice a day.
- E) Blood tests (aged 20 years and over)
- F) Medical interview (aged 20 years and over) regarding the following:

Drugs in use

Anti-hypertensives

Anti-arrhythmic

Insulin or other oral drugs for treatment of diabetes mellitus

Cholesterol-lowering

Antihyperlipidemic (triglyceride lowering)

Diagnosis and treatment

Diagnosis of diabetes

Treatment for diabetes

Regular exercise habits

Presence of restrictions for exercise due to medical reasons

Frequency of exercise per week

Average exercise duration per day

Duration of regular exercise habit

3.1.2 Dietary Survey (aged 1 year and over)

- A) Household status: Name, birth date, sex, pregnant (gestational age) or lactating women, and occupation.
- B) Meal classification for each family member on the day of the survey (meals cooked at home, home meal replacement, buying cooked food, using food delivery services, eating out, meals provided at school/workplace, etc.).
- C) Food intake: Dish name, food name, volume, waste volume and proportional distribution by each household member.
- D) Daily physical activity (the number of steps in a day, aged 20 years and over).

3.1.3 Lifestyle Habits Questionnaire (aged 20 years and over)

Participants were provided with a self-administered questionnaire, in which they answered questions about eating habits, physical activity, exercise, resting (sleep), alcohol intake, smoking, and dental health.

Further, household income was examined as an important item in 2014.

3.2 Survey period

The period of this survey was in November 2014.

- A) Physical examination: Date on which the highest participation could be achieved, considering circumstances in the national census areas (several dates were established).
- B) Dietary survey: One day, excluding Sunday and holidays.
- C) Lifestyle habits questionnaire: During the survey period (November).

4. Organizations involved in the survey

The survey system was as follows:

Ministry of Health, Labour and Welfare

(Prefecture / Special districts of cities with public health centers installed)

Public health centers

National health and nutrition investigators

5. Data analyses

Survey participants

The comments related to the evaluation of results such as "higher", "lower", "increased", or "decreased" were made based on the statistical tests (level of statistical significance defined as p < 0.05). The details are presented below.

5.1 Analysis of income and lifestyle/diet

After adjusting the data of age (six categories: 20 to 29 years, 30 to 39 years, 40 to 49 years, 50 to 59 years, 60 to 69 years, 70 years and over) and number of persons in a household (three categories: 1, 2, 3 and more), proportions were analyzed using multivariate logistic regression, and means were analyzed using analysis of covariance.

5.2 Analysis regarding annual changes

Age-adjusted values were calculated applying the 2010 Census population using the six age groups: 20-29 years, 30-39 years, 40-49 years, 50-59 years, 60-69 years, and 70-79 years¹. The trend test was performed using the Joinpoint Regression Program which used the mean/proportion and standard error for each year². To test the trend of 3 points, regression analysis was performed based on the oldest survey year. In these trend tests, the adjusted national values were used for the 2012 surveys³.

5.3 Other

Regarding the comparison between groups, proportions were analyzed using Cochran-Mantel-Haenszel tests and means were analyzed using covariance analysis after adjusting age.

- 1 Directed estimation method
- 2 National Cancer Institute (NCI): Joinpoint Trend Analysis Software (https://surveillance.cancer.gov/joinpoint/).
- 3 Results of NHNS Japan, 2012 (https://www.mhlw.go.jp/bunya/kenkou/eiyou/dl/h24-houkoku.pdf).

6. Collection of Samples and Results

The results were analyzed by the National Institutes of Biomedical Innovation, Health and Nutrition. Of 5,432 target households for the survey, 3,648 households that responded to the household status in the dietary survey questionnaire were included in the analysis.

Number of samples collected with respect to age category

	Physical Ex	amination			Dietary	Survey		Lifestyle questionnaire		
Men and Women	,		Blood Test				Steps p			er day
	n	%	n	%	n	%	n	%	n	%
Total	7,123	100.0	3,504	100.0	8,047	100.0	6,353	100.0	7,641	100.0
1-6 years	305	4.3	-	-	345	4.3	-	-	-	-
7-14 years	530	7.4	-	-	620	7.7	-	-	-	-
15-19 years	272	3.8	-	-	355	4.4	-	-	-	-
20-29 years	415	5.8	138	3.9	491	6.1	458	7.2	583	7.6
30-39 years	695	9.8	325	9.3	797	9.9	734	11.6	935	12.2
40-49 years	868	12.2	439	12.5	1,009	12.5	991	15.6	1,159	15.2
50-59 years	942	13.2	560	16.0	1,027	12.8	995	15.7	1,156	15.1
60-69 years	1,419	19.9	928	26.5	1,548	19.2	1,513	23.8	1,751	22.9
70 years and over	1,677	23.5	1,114	31.8	1,855	23.1	1,662	26.2	2,057	26.9

	Physical Ex	amination			Dietary	Survey			Lifestyle	
Men			Blood Test				Steps p	er day	questionnaire	
	n	n % n		%	n	%	n	%	n	%
Total	3,321	100.0	1,476	100.0	3,786	100.0	2,947	100.0	3,569	100.0
1-6 years	158	4.8	-	-	181	4.8	-	-	-	-
7-14 years	271	8.2	-	-	320	8.5	-	-	-	-
15-19 years	132	4.0	-	-	173	4.6	-	-	-	-
20-29 years	178	5.4	52	3.5	219	5.8	196	6.7	259	7.3
30-39 years	327	9.8	108	7.3	376	9.9	349	11.8	451	12.6
40-49 years	390	11.7	161	10.9	461	12.2	451	15.3	542	15.2
50-59 years	426	12.8	219	14.8	476	12.6	460	15.6	543	15.2
60-69 years	666	20.1	420	28.5	741	19.6	721	24.5	846	23.7
70 years and over	773	23.3	516	35.0	839	22.2	770	26.1	928	26.0

Women	Physical Ex	amination	Blood	l Test	Dietary	Survey	Steps p	er day	Lifestyle questionnaire	
	n	%	n	%	n	%	n	%	n	%
Total	3,802	100.0	2,028	100.0	4,261	100.0	3,406	100.0	4,072	100.0
1-6 years	147	3.9	-	-	164	3.8	-	-	-	-
7-14 years	259	6.8	-	-	300	7.0	-	-	-	-
15-19 years	140	3.7	-	-	182	4.3	-	-	-	-
20-29 years	237	6.2	86	4.2	272	6.4	262	7.7	324	8.0
30-39 years	368	9.7	217	10.7	421	9.9	385	11.3	484	11.9
40-49 years	478	12.6	278	13.7	548	12.9	540	15.9	617	15.2
50-59 years	516	13.6	341	16.8	551	12.9	535	15.7	613	15.1
60-69 years	753	19.8	508	25.0	807	18.9	792	23.3	905	22.2
70 years and over	904	23.8	598	29.5	1,016	23.8	892	26.2	1,129	27.7

7. Others

- The number of analyzed subjects is shown in parentheses in the figures and tables.
- Because the values listed in the collection of results and samples are rounded off, the breakdown total may not match the total

Summary of the Results

Part I. Status regarding socioeconomic status and lifestyle

1. Income and lifestyle

The results of comparison of status regarding lifestyle of participants (diet, exercise, smoking, alcohol consumption, sleep, medical checkup, physical condition, and number of teeth) by household income category (less than 2,000,000 yen, 2,000,000 to less than 6,000,000 yen, and 6,000,000 yen or more) are described as follows:

- 1. For men, cereal intake was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than those with a household income of 6,000,000 yen or more. For women, cereal intake was significantly higher among participants with a household income of less than 2,000,000 yen compared than those with a household income of 6,000,000 yen or more. Regarding vegetables and meat intakes, they were significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen, than those with a household income of 6,000,000 yen or more, in both men and women.
- 2. For both men and women, the proportion of those without exercise habits did not differ among household income categories. The number of steps per day was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than those with a household income of 6,000,000 yen or more in both men and women.
- 3. The proportion of regular smoker was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than the participants with a household income of 6,000,000 yen or more in both men and women.
- 4. For men, the proportion of those who consume alcohol at a level which increases the risk of lifestyle-related diseases was significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with a household income of 6,000,000 yen or more, while no difference was observed for women.
- 5. The proportion of participants without adequate rest during sleep did not differ among household income categories in both sexes.
- 6. For men, the proportion of those without medical checkup was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with a household income of 6,000,000 yen or more. For women, the corresponding value was significantly higher among participants with a household income of less than 2,000,000 yen than in the participants with a household income of 6,000,000 yen.
- 7. The proportion of obese was significantly higher among participants with a household income of less than 2,000,000 yen than in the participants with a household income of 6,000,000 yen or more in both sexes.
- 8. The proportion of those with less than 20 teeth was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with a household income of 6,000,000 yen or more, in both sexes.

Table 1. Status of Annual Income of the Households included in the analysis

	n of households	%
Total	3,266	
Less than 2,000,000 yen	784	24.0
2,000,000 yen to less than 6,000,000 yen	1,765	54.0
6,000,000 yen or more	717	22.0

^{*}Among the 3,648 households with at least one valid response in the lifestyle questionnaire, 3,424 households (93.9%) with a valid response to the question No.10 in the lifestyle questionnaire were included analysis. After excluding 158 households those responded "I don't know" to the question No.10, 3,266 households were analyzed.

Table 2. Status regarding Income and Lifestyle (aged 20 years and over)

		H	louseho	ld income [†]		
	•		2,000	,000 to		
	<2,000	,000 yen	<6,000	,000 yen	≧6,000	, 000 yen
	n	proportion or mean ^{‡§}	n	proportion or mean ^{‡§}	n	proportion or mean [‡]
1. Diet						
Mean cereal intake (g/day)						
Men	423	535.1*	1623	520.9*	758	494.1
Women	620	372.5*	1776	359.4	842	352.8
Mean vegetable intake (g/day)						
Men	423	253.6*	1623	288.5*	758	322.3
Women	620	271.8*	1776	284.8*	842	313.6
Mean meat intake (g/day)						
Men	423	101.7*	1623	111.0*	758	122.0
Women	620	74.1*	1776	78.0*	842	83.9
2. Exercise						
Proportion of those without exercise habit (%) ¶						
Men	267	70.9	973	68.0	393	68.2
Women	417	78.0	1,146	74.4	546	74.8
Mean number of steps (steps/day)	•••••	•••••			***************************************	
Men	384	6,263*	1,537	7,606	743	7,592
Women	570		1,675		814	•
3. Proportion of regular smoker (%)		***************************************			***************************************	
Men	499	35.4*	1,853	33.4*	867	29.2
Women	705	15.3*	1,996		935	5.6
4. Proportion of those who consume alcohol at a level which inc	reases the r	isk of lifesty	/le-relat	ed diseases	· (%) ^{††}	
Men	502		1,853		867	15.0
Women	705		1,996		936	
5. Proportion of those without adequate rest from sleep (%) **						
Men	502	18.0	1,855	5 20.0	867	18.8
Women	705		1,997		937	
6. Proportion of those without medical checkup (%)	703	21.7	1,557	13.3	337	10.5
Men	501	42.9*	1,854	27.2*	867	16.1
Women	703		1,998		937	
7. Proportion of obesity (BMI ≧ 25) (%)	,,,,,	10.0	1,330	30.1	337	30.7
Men	383	38.8*	1,457	27.7	659	25.6
Women	576		1,565		750	
8. Proportion of those with less than 20 teeth	5/0	20.3	1,505	20.4	/30	ZZ.3
Men	500	33.9*	1,844	27.5*	865	20.3
Women	702		1,991		936	

[‡] Adjusted for age (six categories: 20-29 years, 30-39 years, 40-49 years, 50-59 years, 60-69 years and 70 years and over) and the number of persons in a household (three categories: 1, 2, 3 and more). Proportions were calculated using the directly methods while means were calculated using analysis of covariance.

[§] Multiple logistic regression for proportions and analysis of covariance for means were used to compare the participants by the household income category (reference: household income 6,000,000 yea or more); * P < 0.05.

For details, refer to **Table 3** on page 7.

[¶] Consist of participants except for those who responded "regular exercise habit (those with exercise activities for 30 minutes or longer per session, twice a week or more for at least one year)"

^{††&}quot;Those who consume alcohol at a level which increases the risk of lifestyle-related diseases" refers to men and women who consumed 40 g or more and 20 g or more, respectively of pure alcohol daily. This included:

⁽¹⁾ Men who consumed 360 mL or more of sake every day, 360 mL or more 5 to 6 times a week, 540 mL or more 3 to 4 times a week, 900 mL or more once or twice a week, or 900 mL or more 1 to 3 times a month.

⁽²⁾ Women who consumed 180 mL or more of sake every day, 180 mL or more 5 to 6 times a week, 180 mL or more 3 to 4 times a week, 540 mL or more once or twice a week, or 900 mL or more 1 to 3 times a month.

^{‡‡} Consist of participants who responded "not enough" or "no sleep" to the question about sleep.

2. Income and Diet

The results of comparison of status regarding diet (dietary intake and important criteria for food choice) by household income category (less than 2,000,000 yen, 2,000,000 to 6,000,000 yen, and 6,000,000 yen or more) are described as follows:

1. Dietary intake

1.1 Food group intake

- For men, cereal intake was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more. For women, cereal intake was significantly higher among participants with a household income of less than 2,000,000 yen than in the participants with household income 6,000,000 yen or more.
- Regarding vegetables and meat, their intakes were significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen compared with those in the participants with household income 6,000,000 yen or more in both men and women.
- Regarding mushrooms and milk (including dairy products), their intakes were significantly lower among participants with household income less than 2,000,000 yen compared with those in the participants with household income 6,000,000 yen or more for men. For women, intakes of mushrooms and milk were significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen compared with those in the participants with household income 6,000,000 yen or more.

1.2 Intakes of energy and energy-providing nutrients

- For men, energy intake was significantly lower in participants with a household income of less than 2,000,000 yen than among participants with household income 6,000,000 yen or more. For women, energy intake was significantly lower in participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more.
- For men, the energy intake from carbohydrate (%) was significantly higher in participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than among participants with household income 6,000,000 yen or more. For women, the corresponding value was significantly higher in participants with a household income of less than 2,000,000 yen than among participants with household income 6,000,000 yen or more.
- The energy intake from protein (%) was significantly lower among participants with a household income of less than 2,000,000 yen than in the participants with household income 6,000,000 yen or more in both men and women.
- For men, the energy intake from fat (%) was significantly lower in participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more. For women, the corresponding value was significantly higher in participants with a household income of less than 2,000,000 yen than in the participants with household income 6,000,000 yen or more.

2. Important criteria for food choice

- The proportion of those who responded "taste" as important criteria for food choice was significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more in both men and women. Regarding "preference" and "size/volume", the proportion of those who responded that was important criteria for food choice was significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more for men. For women, the corresponding value was significantly lower among participants with a household income of less than 2,000,000 yen than in the participants with household income 6,000,000 yen or more. These findings suggest that the proportion of those who responded the criteria except for "price" were important for food choice was significantly lower among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more.
- For men (but not for women), the proportion of those who responded they had no important criteria for food choice was significantly higher among participants with household incomes of less than 2,000,000 yen and 2,000,000 to less than 6,000,000 yen than in the participants with household income 6,000,000 yen or more.

Table 3. Status regarding Income and Dietary Intake (aged 20 years and over)

			Househol	d income [†]		
			2,000,0	000 to		
	<2,000,0	00 yen [‡]	<6,000,0	000 yen [‡]	≥6,000,	000 yen
	Men	Women	Men	Women	Men	Women
	n = 423	n = 620	n = 1,623	n = 1,776	n = 758	n = 842
Mean intake of food groups (g/day)§						
Cereals	535.1*	372.5*	520.9*	359.4	494.1	352.8
Potatoes and starches	50.7	48.3	50.8	45.1	52.2	47.1
Sugars and sweeteners	5.5*	6.3	6.6	6.6	6.9	7.0
Pulses	68.2	56.4	64.3	61.0	67.0	63.0
Nuts and seeds	1.3	2.1	2.1	2.5	2.4	2.6
Vegetables	253.6*	271.8*	288.5*	284.8*	322.3	313.6
Fruits	72.4	106.2*	91.1	121.3	88.8	127.9
Mashrooms	12.2*	14.2*	15.4	17.5*	17.9	20.9
Seaweed	8.9	7.6	11.0	8.8	10.5	9.9
Fish and shellfish	74.1	58.9	81.4	65.7	76.4	60.9
Meats	101.7*	74.1*	111.0*	78.0*	122.0	83.9
Eggs	31.8*	30.7*	38.5	35.1	38.6	34.7
Milks	87.4*	99.5*	103.4	118.8*	113.6	136.1
Fats and oils	12.0*	10.7	12.6*	10.3	14.1	10.5
Confectionaries	21.9	26.9	23.4	31.5	21.7	31.8
Beverages	655.2*	529.5*	817.2	637.1	844.1	633.3
Seasonings and spices	87.2*	70.9*	98.4	75.8	105.0	80.8
Mean intake of energy and nutrients§						
Energy (kcal)	2053.1*	1651.7*	2182.6	1703.6*	2180.3	1741.0
Energy intake from carbohydrate (%)	60.8*	58.2*	59.8*	56.8	58.5	56.1
Energy intake from protein (%)	14.1*	14.6*	14.4	15.1	14.6	15.1
Energy intake from fat (%)	25.1*	27.2*	25.9*	28.1	26.9	28.7
Animal protein (g/day)	37.5*	30.8*	42.4	34.0	43.9	34.7

 $^{^{\}dagger}$ The income of households where the participants were derived from applied to each of the participants.

[‡] Analysis of covariance was used to compare the participants by the household income category (reference: household income 6,000,000 yen or more); * P < 0.05.

[§] Adjusted for age (six categories: 20-29 years, 30-39 years, 40-49 years, 5-59 years, 60-69 years and 70 years and over) and the number of persons in a household (three categories: 1, 2, 3 and more). Proportions were calculated using the directly methods while means were calculated using analysis of covariance.

Table 4. Status regarding Important Criteria for Food Choice (aged 20 years and over)

			Househole	d income [†]			
			2,000,	000 to			
	<2,000,0	00 yen [‡]	<6,000,0	000 yen [‡]	≥6,000, 000 yen		
	Men	Women	Men Women		Men	Women	
	n = 502	n = 705	n = 1,855	n = 1,996	n = 867	n = 936	
Criteria for food choice (%)§							
Taste	62.0*	70.4*	69.5*	75.7*	70.5	81.0	
Preference	56.3*	59.1*	65.8*	66.4	67.1	69.4	
Size/volume	25.0*	31.4*	29.1*	36.2	32.4	40.0	
Nutritious	24.3	49.4*	26.4	52.0	29.2	53.6	
Seasonality	24.7*	42.1*	30.8	52.8*	32.4	57.4	
Safety	41.8	59.3*	44.7	68.4*	47.0	71.7	
Freshness	45.5	70.0*	49.6	71.3*	49.1	76.5	
Price	44.6	67.4	50.8	72.3*	47.7	64.1	
Convenience	8.6*	13.4	10.6	16.3	12.0	17.4	
None	8.8*	3.9	7.6*	2.2	3.1	2.3	
Mean numbers of the criteria selected	3.4*	4.7*	3.8*	5.2*	4.1	5.3	

[†] The income of households where the participants were derived from applied to each of the participants.

^{*}Multiple logistic regression (for proportions) and analysis of covariance (for means) were used to compare the participants by the household income category (reference: household income 6,000,000 yen or more); * <0.05.

[§] Adjusted for age (six categories: 20-29 years, 30-39 years, 40-49 years, 5-59 years, 60-69 years and 70 years and over) and the number of persons in a household (three categories: 1, 2, 3 and more). Proportions were calculated using the directly methods while means were calculated using analysis of covariance.

Participants who responded "none" was not included in the calculation.

Part II. Results of basic items

Chapter 1. Physical Condition and Diabetes

1. Status Regarding Obesity and Underweight

The proportion of obesity (BMI \geq 25 kg/m²) was 28.7% in men and 21.3% in women, with no significant change over the past 10 years in both the sexes.

The proportion of underweight (BMI $< 18.5 \text{ kg/m}^2$) was 5.0% in men 10.4% in women and, with a significant increase in the number of women, over the past 10 years. Additionally, the proportion of underweight women aged 20-29 years was 17.4%.

The proportion of elderly individuals aged 65 years or above with low BMI (\leq 20 kg/m²) was 17.8%, with no significant change in the proportion over the past 10 years.

* Evaluation of obesity: BMI (Body mass index[kg/m²]: body weight [kg]/(height [m])²) was used to evaluate obesity (Obesity Criteria-Reviewing Committee of Japan Society for the Study of Obesity, 2011).

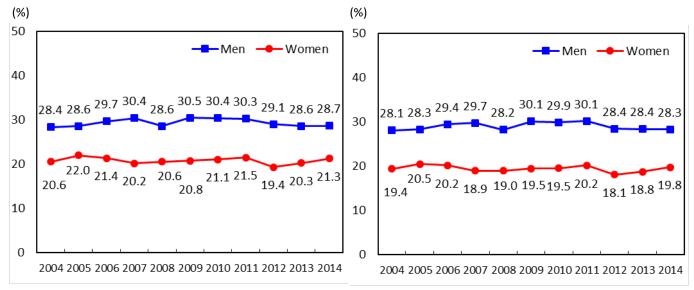


Figure 1-1. Annual changes in the proportion of obesity $(BMI \ge 25 \text{ kg/m}^2)$ (aged 20 years and over) (2004 to 2014)

Figure 1-2. Annual changes in the age-adjusted proportion of obesity (BMI $\geq 25 \text{ kg/m}^2$) (aged 20 years and over) (2004 to 2014)

^{*} Pregnant women excluded.

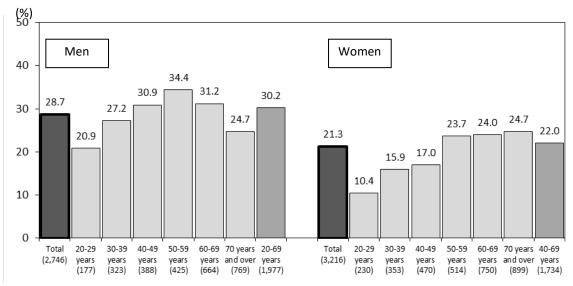


Figure 2. Proportion of obesity (BMI \geq 25 kg/m²) (aged 20 years and over, based on age and sex).

^{*} Pregnant women excluded.

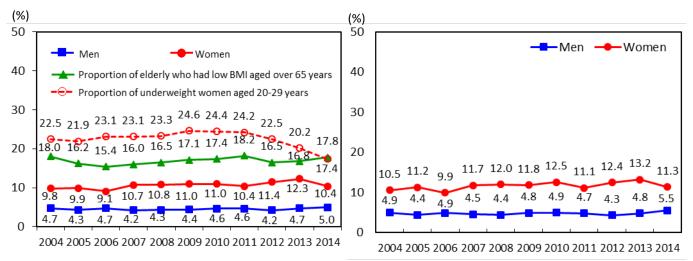


Figure 3-1. Annual changes in the proportion of underweight persons (BMI<18.5 kg/m²) (aged 20 years and over) or those with Malnutrition (BMI \leq 20 kg/m²) (aged 65 years and over) (2004 to 2014)

Figure 3-2. Annual changes in the age-adjusted proportion of underweight persons (BMI<18.5 kg/m²) (aged 20 years and over) (2004 to 2014)

* Pregnant women excluded.

* Annual changes in the proportion of underweight women aged 20-29 years were calculated based on the results standardized with moving averages.

* Moving average: to minimize the variation of the results on the graphs, the mean of the annual results and those before and after the year were calculated. However, in the case of 2014, the results of single year data were represented.

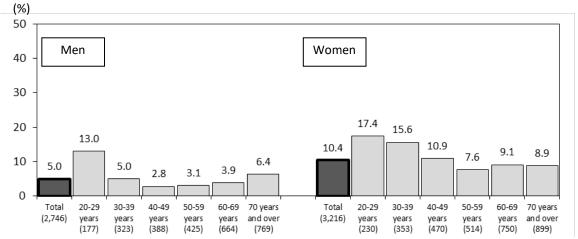


Figure 4. Proportion of underweight persons (BMI < 18.5 kg/m²) (aged 20 years and over, based on age and sex)

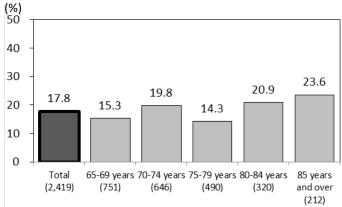


Figure 5. Proportion of those with malnutrition (BMI ≤ 20 kg/m²) (aged 65 years and over, men and women, based on age)

2. Status Regarding Those in Whom Diabetes is Strongly Suspected

The proportion of "those in whom diabetes is strongly suspected" was 15.5% in men and 9.8% in women, which has not changed significantly in the past 8 years.

* "Those in whom diabetes is strongly suspected" was defined as those with a hemoglobin A1c (NGSP) value of 6.5% or higher, or who responded "Yes" to the question "Have you ever received diabetes treatment?"

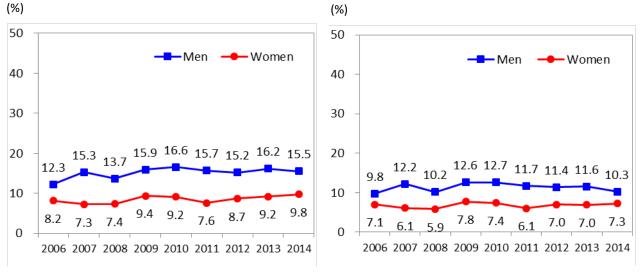


Figure 6-1. Annual changes in the proportion of "those in whom diabetes is strongly suspected" (aged 20 years and over) (2004 to 2014)

Figure 6-2. Annual changes in the age-adjusted proportion of "those in whom diabetes is strongly suspected" (aged 20 years and over) (2004 to 2014)

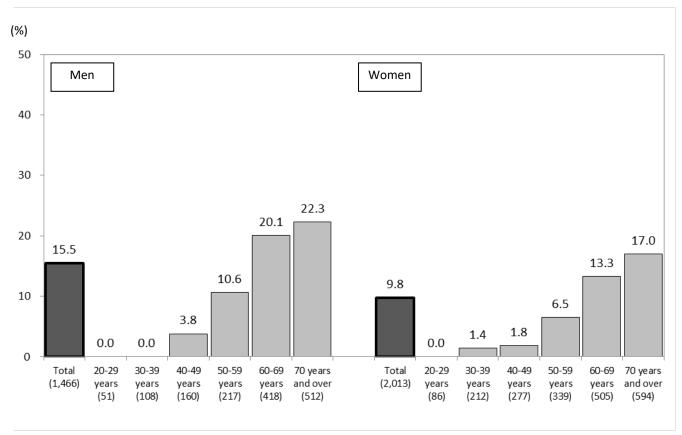


Figure 7. Proportion of "those in whom diabetes is strongly suspected" (aged 20 years and older, based on age and sex)

3. Status Regarding Blood Pressure

The mean systolic blood pressure was 135.3 mmHg in men and 128.7 mmHg in women. The values in both men and women have significantly decreased over the past 10 years.

The proportion of those with a systolic blood pressure of 140 mmHg or higher was 36.2% in men and 26.8% in women. These values have decreased significantly in both men and women, over the past 10 years.

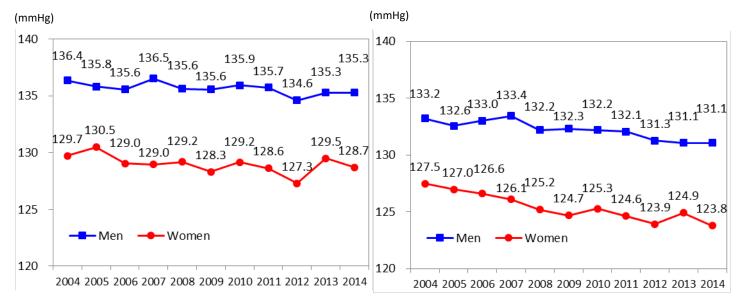


Figure 8-1. Annual changes in the mean systolic blood pressure (aged 20 years and over) (2004 to 2014)

Figure 8-2. Annual changes in the age-adjusted mean systolic blood pressure (aged 20 years and over) (2004 to 2014)

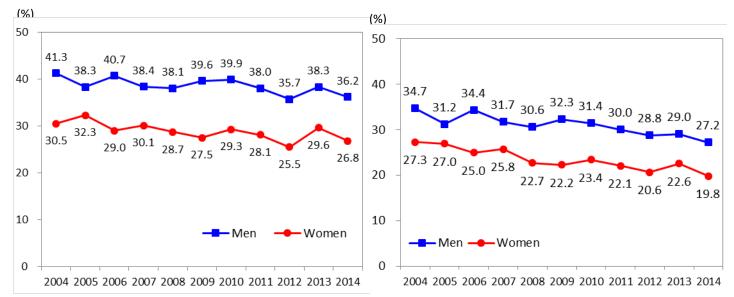


Figure 9-1. Annual changes in the proportion of those with **Figure 9-2.** Annual changes in the age-adjusted proportion a systolic blood pressure of 140 mmHg or higher (aged 20 years and over) (2004 to 2014) mmHg or higher (aged 20 years and over) (2004 to 2014)

^{*} Shown are the mean values of two measurements.

^{*} In persons in whom the blood pressure was measured only once, the single value was adopted.

4. Status Regarding Blood Cholesterol

The mean serum total cholesterol levels were 196.6 mg/dL in men and 207.2 mg/dL in women. There was no significant change in these levels over the past 10 years.

The proportion of those with a serum total cholesterol level of 240 mg/dL or higher was 10.8% in men and 17.4% in women. There was no significant change in these proportions over the past 10 years.

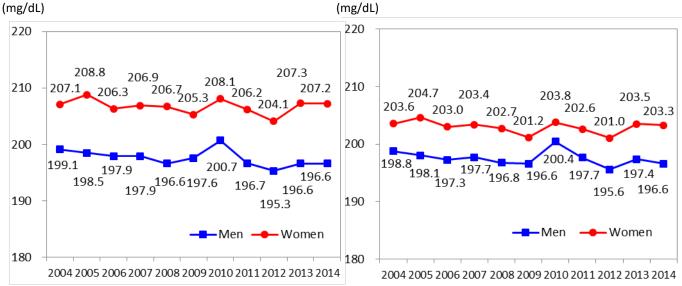


Figure 10-1. Annual changes in the mean serum total cholesterol level (aged 20 years and over) (2004 to 2014)

Figure 10-2. Annual changes in the age-adjusted mean serum total cholesterol level (aged 20 years and over) (2004 to 2014)

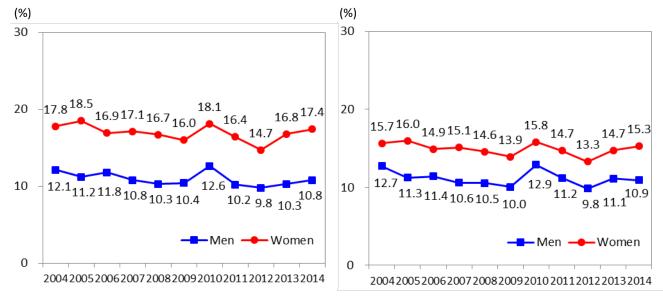


Figure 11-1. Annual changes in the proportion of those with serum total cholesterol level of 240 mg/dL or higher (aged 20 years and over) (2004 to 2014)

Figure 11-2. Annual changes in the age-adjusted proportion of those with serum total cholesterol level of 240 mg/dL or higher (aged 20 years and over) (2004 to 2014)

Chapter 2. Status Regarding Nutrition/Dietary Habits

1. Salt Intake

The mean salt intake was 10.0 g in total participants, and 10.9 g in men and 9.2 g in women. These values show a significant decrease in all participants, men, and women over the past 10 years.

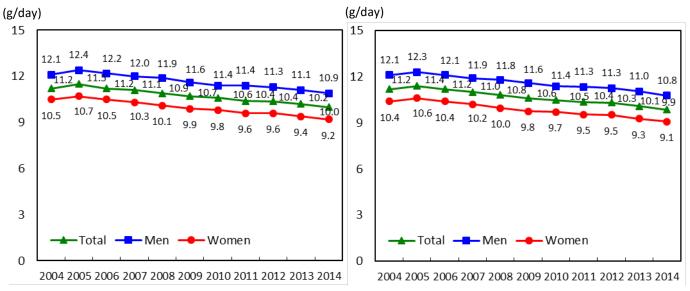


Figure 12-1. Annual changes in the mean salt intake (aged 20 years and over) (2004 to 2014)

Figure 12-2. Annual changes in the age-adjusted mean salt intake (aged 20 years and over) (2004 to 2014)

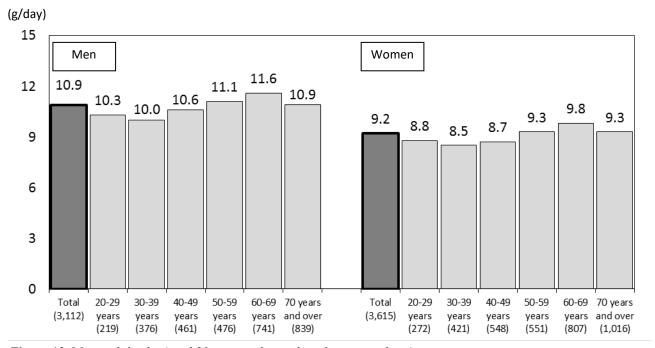
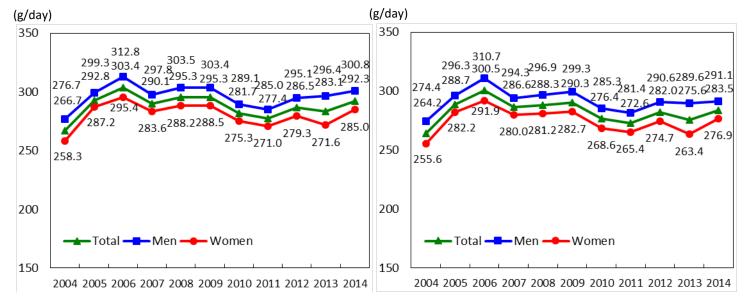


Figure 13. Mean salt intake (aged 20 years and over, based on age and sex)

2. Vegetable Intake

The mean vegetable intake was 292.3 g in total participants, and 300.8 g in men and 285.0 g in women. There was no significant change in the intake over the past 10 years.

The persons aged 20 to 29 years had the lowest vegetable intake among both men and women.



(aged 20 years and older) (2004 to 2014)

Figure 14-1. Annual changes in the mean vegetable intake Figure 14-2. Annual changes in the age-adjusted mean vegetable intake (aged 20 years and older) (2004 to 2014)

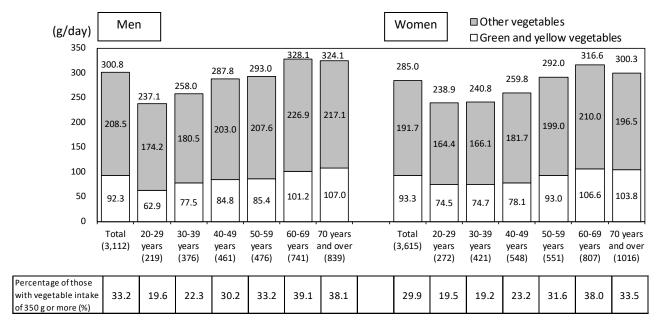


Figure 15. Mean vegetable intake (aged 20 years and over, based on age and sex)

3. Food Choice

3-1. Important criteria for food choice

The proportion of those who responded "taste" as important criteria for food choice was the highest in both men and women and was 69.7% and 75.5%, respectively. The highest proportion of those who responded "taste" as important criteria was observed among all age categories except for those aged 20 to 29 years in men. While in women, the proportion of those who responded "price" as important criteria was the highest among individuals aged 40 to 59 years and those who responded "freshness" as important criteria were highest among individuals aged 60 to 69 years.

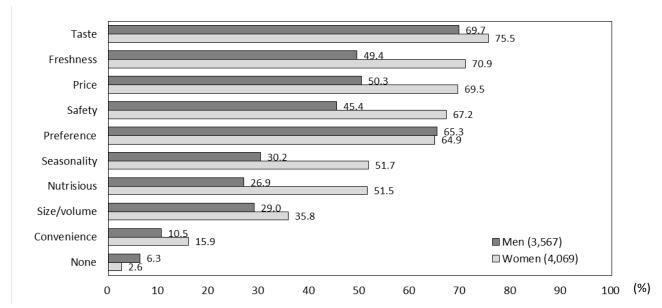


Figure 16. Important criteria for food choice (aged 20 years and over, based on sex)

Table 5. Important criteria for food choice (aged 20 years and over, based on age and sex)

	Tot	tal	20-29	years	30-39	years	40-49	years	50-59	years	60-69	years	70 ye and o	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Men	3,567	-	259	-	451	-	541	-	543	-	846	-	927	-
Taste	2,486	69.7	189	73.0	328	72.7	390	72.1	392	72.2	585	69.1	602	64.9
Preference	2,329	65.3	210	81.1	306	67.8	356	65.8	383	70.5	534	63.1	540	58.3
Size/volume	1,036	29.0	119	45.9	184	40.8	200	37.0	148	27.3	199	23.5	186	20.1
Nutrisious	960	26.9	52	20.1	92	20.4	119	22.0	136	25.0	228	27.0	333	35.9
Seasonality	1,079	30.2	41	15.8	93	20.6	129	23.8	155	28.5	315	37.2	346	37.3
Safety	1,619	45.4	73	28.2	162	35.9	223	41.2	253	46.6	419	49.5	489	52.8
Freshness	1,763	49.4	74	28.6	165	36.6	226	41.8	269	49.5	493	58.3	536	57.8
Price	1,794	50.3	134	51.7	250	55.4	323	59.7	288	53.0	415	49.1	384	41.4
Convenience	376	10.5	40	15.4	50	11.1	54	10.0	61	11.2	86	10.2	85	9.2
None	225	6.3	10	3.9	22	4.9	22	4.1	25	4.6	52	6.1	94	10.1
Women	4,069	-	323	-	483	-	617	-	613	-	905	-	1,128	-
Taste	3,074	75.5	258	79.9	390	80.7	484	78.4	489	79.8	690	76.2	763	67.6
Preference	2,639	64.9	262	81.1	334	69.2	406	65.8	400	65.3	591	65.3	646	57.3
Size/volume	1,455	35.8	141	43.7	207	42.9	229	37.1	228	37.2	333	36.8	317	28.1
Nutrisious	2,096	51.5	93	28.8	221	45.8	318	51.5	326	53.2	540	59.7	598	53.0
Seasonality	2,104	51.7	83	25.7	201	41.6	313	50.7	364	59.4	568	62.8	575	51.0
Safety	2,735	67.2	135	41.8	306	63.4	429	69.5	461	75.2	706	78.0	698	61.9
Freshness	2,883	70.9	118	36.5	308	63.8	430	69.7	485	79.1	759	83.9	783	69.4
Price	2,828	69.5	232	71.8	377	78.1	484	78.4	497	81.1	661	73.0	577	51.2
Convenience	647	15.9	52	16.1	77	15.9	101	16.4	114	18.6	149	16.5	154	13.7
None	105	2.6	8	2.5	1	0.2	7	1.1	3	0.5	14	1.5	72	6.4

^{*} The breakdown total is not 100% because multiple answers allowed.

^{*} Multiple answers allowed

^{*} The shaded cells show the most selected point for each age category.

3-2. Purchase of food for economic reasons

The proportion of "those who have refrained from purchasing or were unable to purchase food for economic reasons"* in the past year was 35.5% in men and 40.6% in women.

According to the frequency of the experience in refraining from purchasing or being unable to purchase food for economic reasons, the proportion of those who responded "price" as important criteria for food choice was the highest in those who "often" have refrained from purchasing or could not purchase food for economic reasons. While in the others, the proportion of those who responded "taste" as important criteria was the highest.

* "Those who have refrained from purchasing or were unable to purchase food for economic reasons" refers to those who responded "often", "sometimes", or "rarely" to the question on the experience in refraining from purchasing or being unable to purchase food for economic reasons.

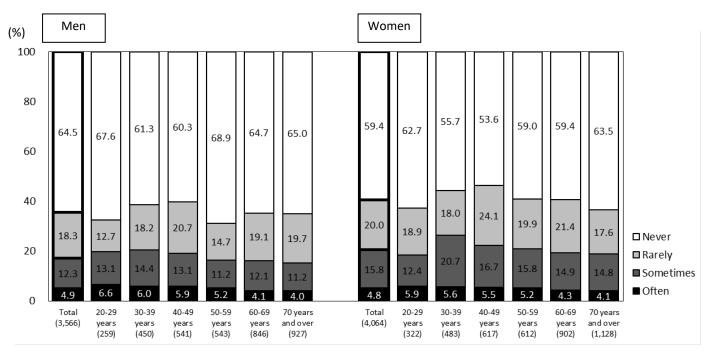


Figure 17. Experience in refraining from purchasing or being unable to purchase food (except for snacks and beverages) for economic reasons (aged 20 years and over, based on age and sex)

Table 6. Important criteria for food choice according to the frequency of the experience in refraining from purchasing or being unable to purchase food (except for snacks and beverages) for economic reasons (aged 20 years and over, total of men and women)

	Oft	en	Some	times	Rar	ely	Never		
	n	%	n	%	n	%	n	%	
Total	373	-	1,078	-	1,463	1	4,715	-	
Taste	250	67.0	787	73.0	1,100	75.2	3,417	72.5	
Preference	222	59.5	702	65.1	973	66.5	3,067	65.0	
Size/volume	136	36.5	383	35.5	531	36.3	1,437	30.5	
Nutrisious	147	39.4	452	41.9	644	44.0	1,810	38.4	
Seasonality	135	36.2	451	41.8	677	46.3	1,918	40.7	
Safety	198	53.1	632	58.6	919	62.8	2,602	55.2	
Freshness	217	58.2	679	63.0	955	65.3	2,791	59.2	
Price	281	75.3	776	72.0	1,034	70.7	2,526	53.6	
Convenience	58	15.5	159	14.7	206	14.1	599	12.7	
None	15	4.0	25	2.3	32	2.2	258	5.5	

^{*} The breakdown total is not 100% because multiple answers allowed.

^{*} The shaded cells show the most selected point for each age category.

4. Breakfast Skipping

The breakfast skipping rate was 14.3% in men and 10.5% in women. The highest proportion of those skipping breakfast was observed among individuals aged 20 to 29 years in both men and women, and the proportion was 37.0% and 23.5%, respectively.

- * The breakfast skipping rate was defined as the proportion of individuals who skipped breakfast on the day of the survey (any one day).
- * Skipping breakfast refers any of the following: not eating at all, consuming only dietary supplements such as tablets or nutrient fortified beverages, or consuming only foods/drinks such as confectionery, fruits, dairy products, or soft drinks.

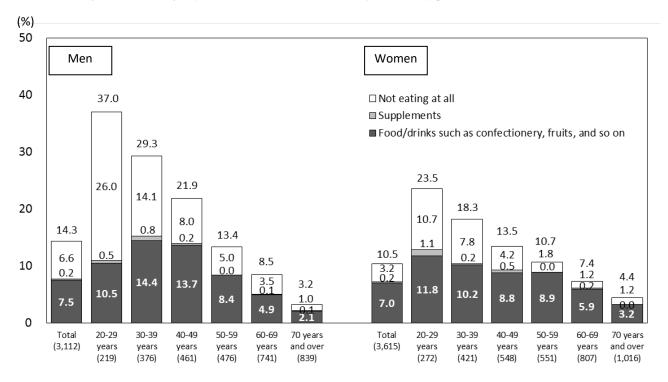


Figure 18. Details of breakfast skipping (aged 20 years and over, based on age and sex)

Table 7. Annual changes in breakfast skipping rate (aged 20 years and over, based on age and sex) (2004 to 2014)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Men	14.3	14.3	14.2	14.7	15.8	15.5	15.2	16.1	14.2	14.4	14.3
20-29 years	34.3	33.1	30.5	28.6	30.0	33.0	29.7	34.1	29.5	30.0	37.0
30-39 years	25.9	27.0	22.8	30.2	27.7	29.2	27.0	31.5	25.8	26.4	29.3
40-49 years	19.0	16.2	20.8	17.9	25.7	19.3	20.5	23.5	19.6	21.1	21.9
50-59 years	10.6	11.7	13.1	11.8	15.1	12.4	13.7	15.0	13.1	17.8	13.4
60-69 years	4.3	5.6	5.8	7.4	8.1	9.1	9.2	6.3	7.9	6.6	8.5
70 years and over	2.8	2.8	2.2	3.4	4.6	4.9	4.2	3.7	3.9	4.1	3.2
Women	9.4	9.3	8.9	10.5	12.8	10.9	10.9	11.9	9.7	9.8	10.5
20-29 years	22.0	23.5	22.5	24.9	26.2	23.2	28.6	28.8	22.1	25.4	23.5
30-39 years	15.0	15.0	13.9	16.3	21.7	18.1	15.1	18.1	14.8	13.6	18.3
40-49 years	7.8	10.3	11.0	12.8	14.8	12.1	15.2	16.0	12.1	12.2	13.5
50-59 years	9.1	8.3	7.7	9.7	13.4	10.6	10.4	11.2	9.2	13.8	10.7
60-69 years	5.0	5.5	4.6	5.1	8.6	7.2	5.4	7.6	6.5	5.2	7.4
70 years and over	2.9	2.8	2.2	3.8	5.2	4.7	4.6	3.8	3.6	3.8	4.4

^{*} Values are presented as percentages.

Chapter 3. Physical Activity, Exercise, and Sleep

1. Exercise Habits

The proportion of those who exercised regularly was 31.2% in men and 25.1% in women. These proportions showed no significant change in men over the past 10 years but showed a decrease in women. The lowest proportion of those who exercised regularly was observed among individuals aged 30 to 39 years in men and individuals aged 20 to 29 years in women.

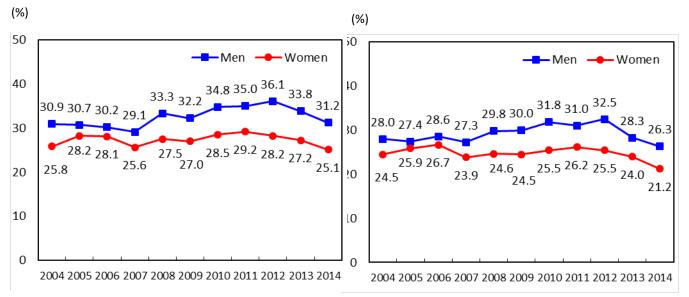


Figure 19-1. Annual changes in the proportion of those who exercised regularly (aged 20 years and over) (2004 to 2014)

Figure 19-2. Annual changes in the age-adjusted proportion of those who exercised regularly (aged 20 years and over) (2004 to 2014)

^{*} Regular exercise was defined as exercise activities for 30 minutes or longer per session, twice a week or more for at least one year.

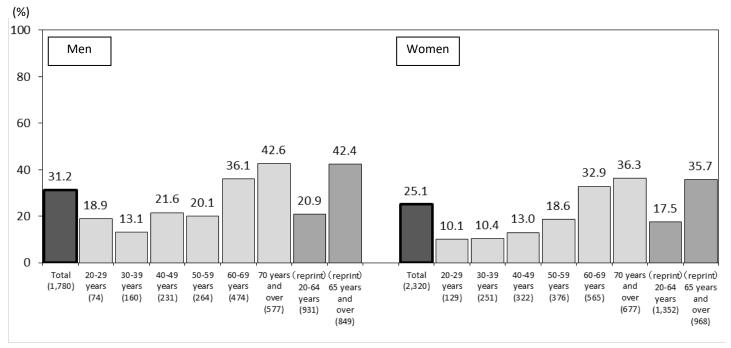


Figure 20. Proportion of those with regular exercise (aged 20 years and over, based on age and sex)

2. Number of Steps Taken Daily

The mean number of steps walked were 7,043 in men and 6,015 in women, and these numbers showed no significant changes over the past 10 years.

The mean number of steps for men and women aged 20-64 years was 7,860 and 6,794, respectively, while that for men and women aged 65 years and over was 5,779 and 4,736, respectively.

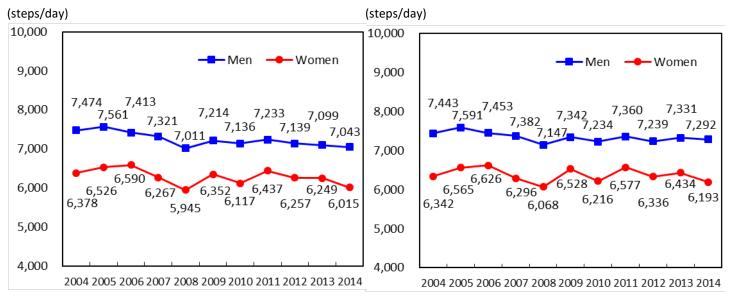


Figure 21-1. Annual changes in the mean number of steps (aged 20 years and over) (2004 to 2014)

Figure 21-2. Annual changes in the age-adjusted mean number of steps (aged 20 years and over) (2004 to 2014)

^{*} The persons taking less than 100 steps or 50,000 steps and over were excluded from the 2012 survey.

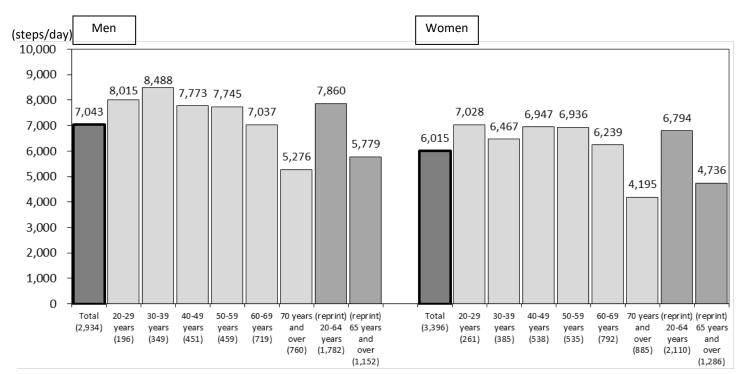


Figure 22. Mean number of steps (aged 20 years and over, based on age and sex)

^{*} The persons taking less than 100 steps or 50,000 steps and over were excluded.

3. Sleep Duration

The proportion of those whose mean sleeping duration during the past month was 6-7 hours/day was the highest and the value was 34.4% in men and 33.9% in women.

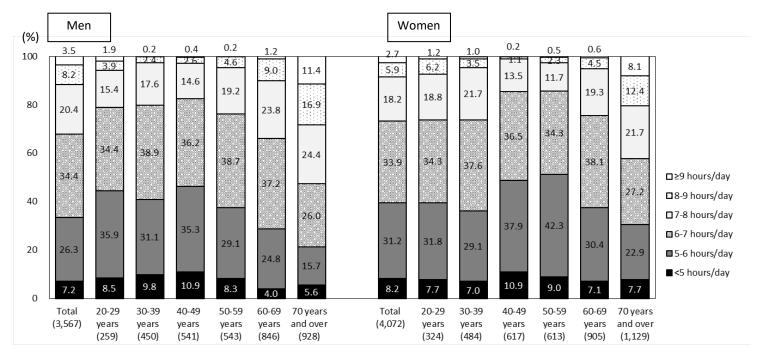


Figure 23. Proportion of mean sleep duration per day (aged 20 years and over, based on age and sex)

4. Sleep

The proportion of those without enough sleep during the past one month was 20.0% and the proportion showed a significantly increasing trend when compared to the findings of 2009, 2012, and 2014 surveys. The proportion was the highest in both men and women aged 40 to 49 years.

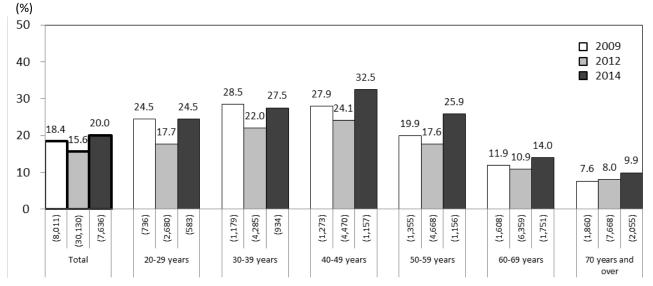


Figure 24. Annual changes in the proportion of those with not enough sleep (aged 20 years and over, total of men and women, based on age) (2009, 2012, and 2014)

^{*} Those without enough sleep were those who responded that resting during sleep was "not enough" or "no sleep."

Chapter 4. Alcohol Consumption and Smoking Status

1. Alcohol Consumption

The proportions of regular drinker were 34.6% in men and 8.2% in women. The proportions of those who consume alcohol at a level which increases the risk of lifestyle-related diseases were 15.8% in men and 8.8% in women. When compared to the findings of 2009, 2012, and 2014 surveys, a significant increase was observed in women (but not in men). The highest proportions were observed in men aged 50 to 59 years and women aged 40 to 49 years.

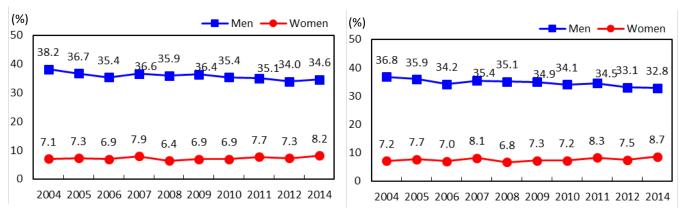


Figure 21-1. Annual changes in the proportion of those with drinking habit (aged 20 years and over) (2004 to 2014)

Figure 21-2. Annual changes in the age-adjusted proportion of those with drinking habit (aged 20 years and over) (2004 to 2014)

- * Regular drinker refers to those who answered that they consumed 180mL or more of sake three times or more per week.
- * No survey was conducted in 2013.

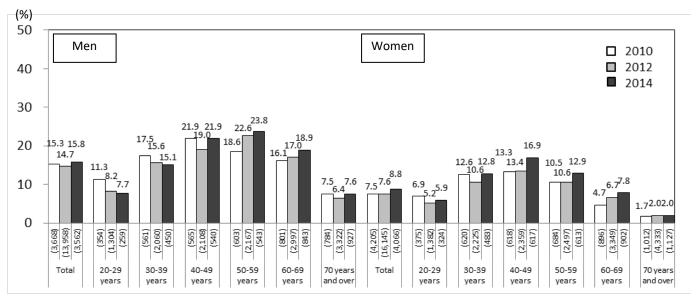


Figure 26. Annual changes in the proportion of those who consume alcohol at a level which increases the risk of lifestyle-related diseases (aged 20 years and over, based on age and sex) (2010, 2012, and 2014)

- * "Those who consume alcohol at a level which increases the risk of lifestyle-related diseases" refers to men and women who consumed 40 g or more and 20 g or more, respectively of pure alcohol daily. This included:
- (1) Men who consumed 360 mL or more of sake every day, 360 mL or more 5 to 6 times a week, 540 mL or more 3 to 4 times a week, 900 mL or more once or twice a week or 900 mL or more 1 to 3 times a month.
- (2) Women who consumed 180 mL or more of sake every day, 180 mL or more 5 to 6 times a week, 180 mL or more 3 to 4 times a week, 540 mL or more once or twice a week or 900 mL or more 1 to 3 times a month.
- * The age-adjusted proportions of men and women who consumed alcohol at a level which increases the risk of lifestyle-related diseases were 15.3% and 8.0%, respectively in 2010, 16.5% and 8.9%, respectively in 2011, 14.6% and 7.9%, respectively in 2012, and 15.7% and 9.5%, respectively in 2014. Compared to the trends from 2010, there was no significant change in men, but a significant increase was observed in women.

2. Smoking Status

The proportion of regular smokers was 19.6% in total participants, and 32.2% in men and 8.5% in women. There has been a significant decrease in the numbers of regular smokers among both men and women over the past 10 years although the proportion has been maintained at approximately 20% in total, 33% in men and 9% in women since 2010. The highest proportion of regular smokers was observed among individuals aged 30 to 39 years in both men and women.

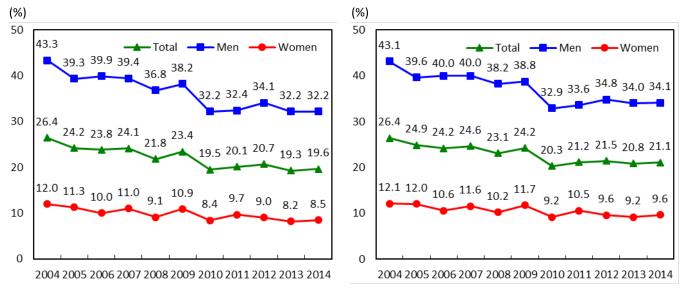


Figure 27-1. Annual changes in the proportion of regular smokers (aged 20 years and over) (2004 to 2014)

Figure 27-2. Annual changes in the age-adjusted proportion of regular smokers (aged 20 years and over) (2004 to 2014)

*"Regular smokers" refers to those who reported: smoking every day or sometimes (after 2013); smoking every day or sometimes during the past month (in respondents who reported smoking cigarettes) (from 2011 to 2012); and smoking (or had smoked) 100 cigarettes or more in a total or 6 months or longer (from 2004 to 2010).

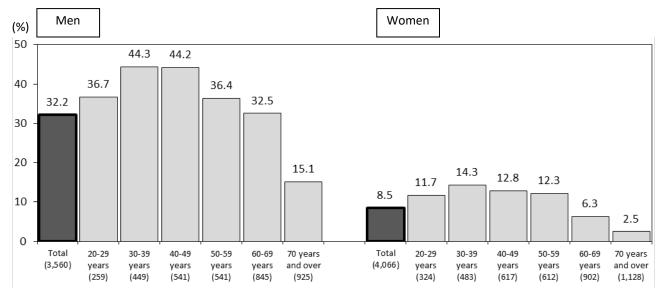


Figure 28. Proportion of regular smokers (aged 20 years and over, based on age and sex)

3. Number of Cigarettes and Willingness to Quit Smoking

Among the regular smokers, the proportion of those smoking 21 or more cigarettes per day was 15.2 % in men and 5.5% in women. There has been a significant decrease in the proportion among men (but not women) over the past 10 years.

Among the regular smokers, the proportion of those willing to quit smoking was 26.5 % in men and 38.2% in women. There was neither a significant increase nor decrease in both men and women since 2007.

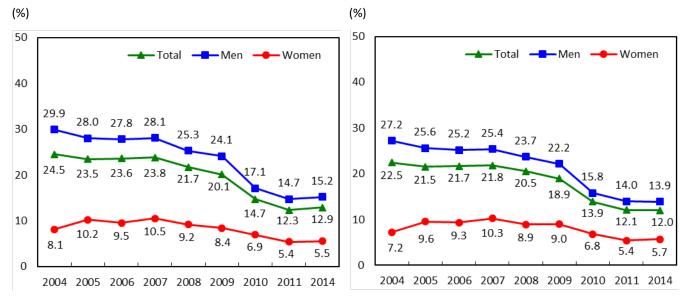


Figure 29-1. Annual changes in the proportion of those smoking 21 or more cigarettes per day (aged 20 years and over) (2004 to 2014)

Figure 29-2. Annual changes in the age-adjusted proportion of those smoking 21 or more cigarettes per day (aged 20 years and over) (2004 to 2014)

^{*} No survey was conducted in 2012 and 2013.

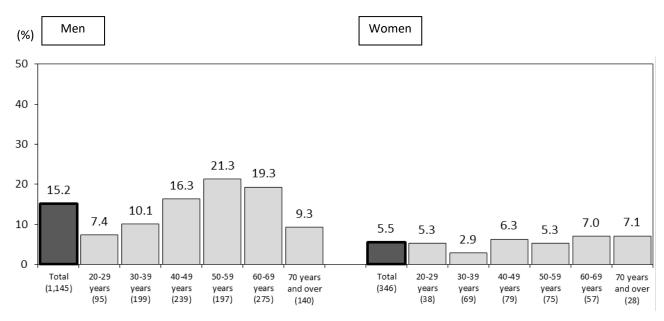


Figure 30. Proportion of those smoking 21 or more cigarettes per day (aged 20 years and over, based on age and sex)

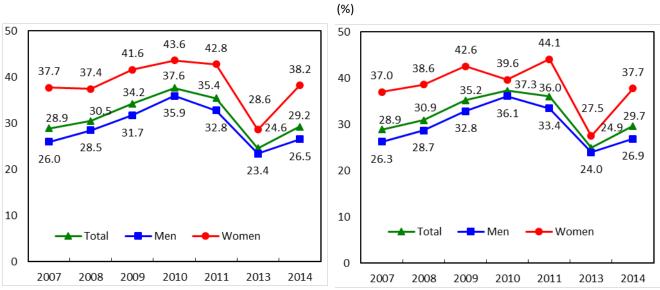


Figure 31-1. Annual changes in the proportion of those willing to quit smoking among regular smoker (aged 20 years and over) (2004 to 2014)

Figure 31-2. Annual changes in the age-adjusted proportion of those willing to quit smoking among regular smoker (aged 20 years and over) (2004 to 2014)

^{*} No survey was conducted in 2012.

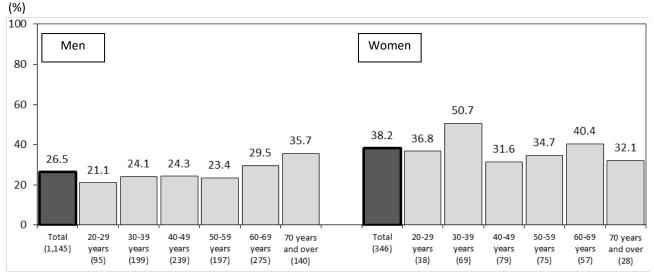


Figure 32. Proportion of those willing to quit smoking among regular smoker (aged 20 years and over, based on age and sex)

Chapter 5. Status Regarding Medical Checkup

1. Medical Checkup Status and Lifestyle

The proportion of those who did not undergo a medical checkup* (those without checkup) during the previous year was 27.8% in men and 37.1% in women. The highest proportion of those without medical checkup was among individuals aged 70 years and over in men and individuals aged 30 to 39 years in women.

Regarding the status of lifestyle (smoking, exercise, physical condition, and blood pressure) by with or without medical checkup status, the proportion of obese women was significantly higher in the "without checkup" group, and the proportion of regular smokers and those without exercise habit as well as the mean blood pressure were significantly higher in the "without checkup" group among both men and women.

*In the survey, "medical checkup" refers to medical checkup, health checkup, or complete medical checkup.

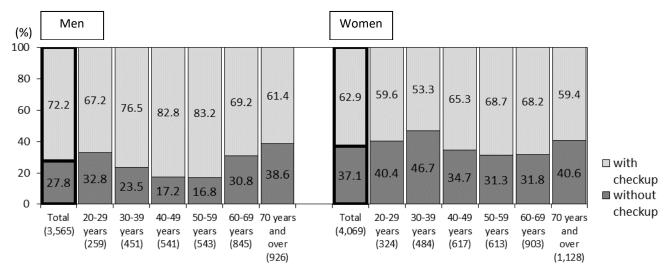


Figure 33. Proportion of those who underwent medical checkup during the previous year (aged 20 years and over, based on age and sex)

Table 8. Medical Checkup Status and Lifestyle

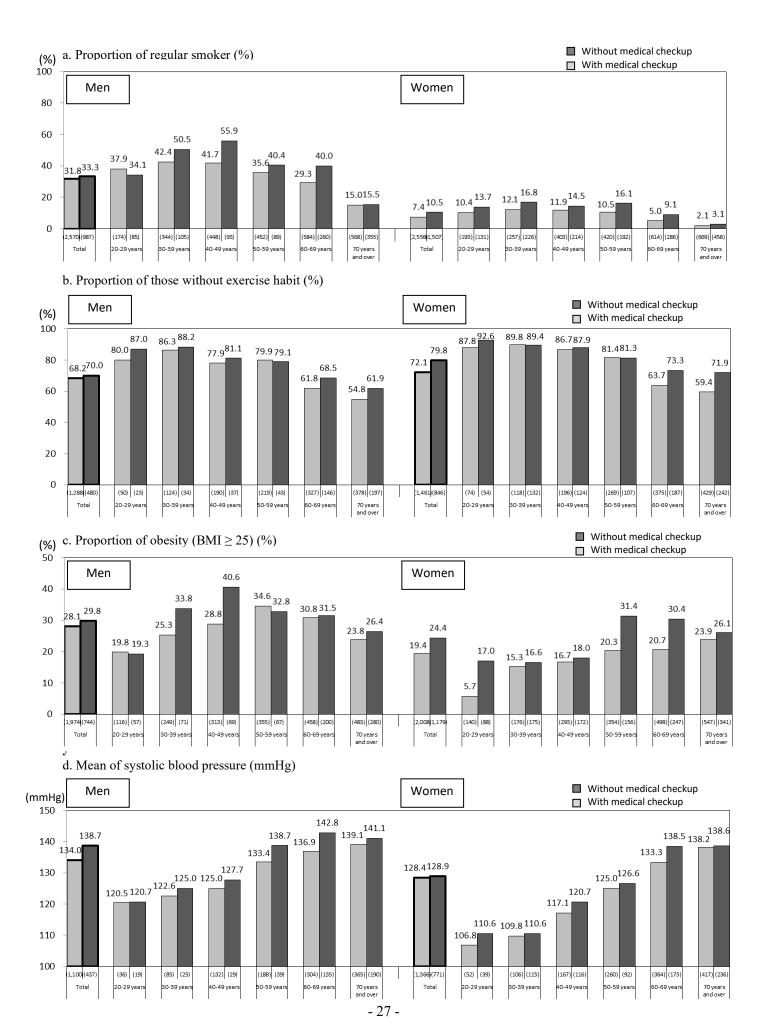
	With	medical	checkup	Withou	ıt medical	checkup [†]	
	Total	(Cases	Total	Cases		
	n	n	proportion	n	n	proportion	
Proportion of regular smoker (%) [‡]							
Men	2570	816	31.8	987	329	33.3*	
Women	2556	188	7.4	1507	158	10.5*	
Proportion of those without exercise habit (%)§							
Men	1288	879	68.2	480	336	70.0*	
Women	1461	1054	72.1	846	675	79.8*	
Proportion of obesity (BMI \geq 25) (%)							
Men	1974	555	28.1	744	222	29.8	
Women	2008	390	19.4	1179	288	24.4*	
	n	ı	mean	n	r	nean	
Mean of systolic blood pressure (mmHg)	-		_			-	
Men	1110		134.0	437		138.7*	
Women	1366		128.4	771		128.9*	

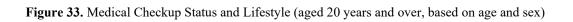
[†] The data was analyzed by Cochran-Mantel-Haenszel tests for the proportion and analysis of covariance for means after adjusting for age (six categories: 20 to 29 years, 30 to 39 years, 40 to 49 years, 50 to 59 years, 60 to 69 years, 70 years and over); * <0.05.

^{*} The following are not included in medical checkup: cancer checkup only, pregnancy checkup, dental checkup, and checkups for treatments in hospitals or clinics.

^{*&}quot;Regular smokers" refers to those who reported smoking every day or sometimes.

^{§ &}quot;Those without regular exercise habit" defined as those who do not exercise activities for 30 minutes or longer per session, twice a week or more for at least one year.





Chapter 5. Dental Health (Oral Health)

1. Dental Health (Oral Health)

The proportion of those with 20 teeth or more was 72.8%, and a significant increasing trend was observed when compared to the findings of 2004, 2009, and 2014 surveys.

The proportion of those with gingival inflammation was 23.1% and a significant decreasing trend was observed when compared to the findings of 2004, 2009, and 2014 surveys.

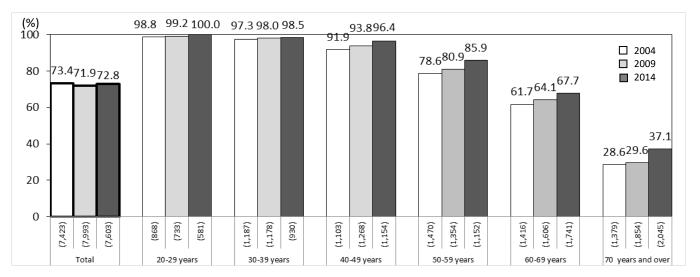


Figure 35. Annual changes in the proportion of those with 20 teeth or more (aged 20 years and over, total of men and women, based on age) (2004 to 2014)

*The age-adjusted proportions (total number) of those with more than 20 teeth were 73.6% in 2004, 75.0% in 2009, and 78.6% in 2014 with a significantly increasing trend from 2004 to 2014.

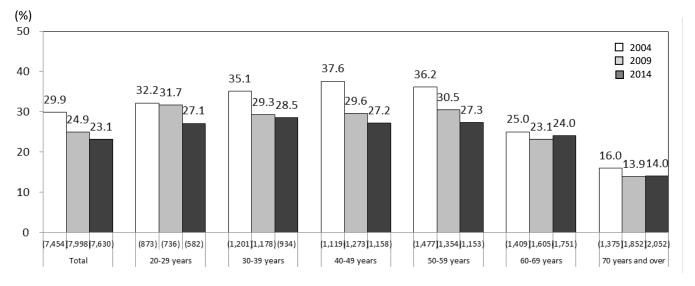


Figure 36. Annual changes in the proportion of those with gingival inflammation (aged 20 years and over, total of men and women, based on age)

^{* &}quot;Persons with gingival inflammation" refers to those who responded to have "swollen gums" or "bleeding during brushing teeth" on the question about the status of the gums.

^{*} The age-adjusted proportions (total number) of those with gingival inflammation were 29.7% in 2004, 25.7% in 2009, and 24.2% in 2014 with a significantly decreasing trend from 2004 to 2014.

< Appendix > Status of Intake by Nutrients/Food Groups

1. Intake of Nutrients

Table 9. Age-dependent nutrient intake

Nutrients		Total	1- 6	7-14	15-19	20-29	30-39	40-49	50-59	60-69	70 years	(reprint) 20 years
			years	years	years	years	years	years	years	years	and over	and over
Participants	n	8,047	345	620	355	491	797	1,009	1,027	1,548	1,855	6,727
Energy	kcal	1,863	1,249	1,964	2,064	1,874	1,873	1,877	1,929	1,955	1,776	1,875
Protein	g	67.7	43.1	70.6	72.6	66.9	65.9	66.0	70.6	72.7	66.4	68.4
Animal protein	g	36.3	24.1	40.6	41.0	37.3	35.7	35.1	38.1	38.2	34.3	36.3
Fat	g	55.0	40.5	63.8	67.8	62.7	58.4	57.1	57.5	55.7	45.8	54.3
Animal fat	g	27.7	20.9	34.7	35.5	31.8	29.2	28.1	28.4	27.6	22.9	27.0
Saturated fatty acid	g	14.89	12.48	19.72	18.92	17.31	15.94	15.16	15.10	14.52	11.93	14.36
Monosaturated fatty acid	g	18.97	13.78	21.35	23.84	22.47	20.71	20.29	20.18	19.07	15.05	18.76
Omega-6 fatty acid	g	9.41	6.40	10.01	11.22	10.26	9.95	9.96	10.07	9.73	8.01	9.41
Omega-3 fatty acid	g	2.14	1.20	1.89	2.13	2.04	2.03	2.03	2.20	2.46	2.24	2.21
Cholesterol	mg	306	201	317	390	326	301	304	325	318	284	306
Carbohydrate	g	256.8	174.6	269.2	281.3	249.9	252.2	251.5	257.9	268.7	259.2	258.5
Dietary fiber	g	14.3	8.4	13.0	12.8	12.1	12.5	13.1	14.5	16.4	16.1	14.8
Water-soluble	g	3.3	2.1	3.2	3.0	2.8	3.0	3.0	3.3	3.8	3.6	3.4
dietary fiber												
Water-insoluble	g	10.4	6.0	9.5	9.3	8.8	9.1	9.6	10.6	12.1	11.8	10.8
dietary fiber												
Vitamin A RE	μ gRE	514	399	523	494	504	440	444	545	547	566	521
Vitamin D	μg	7.2	3.7	5.5	6.0	5.8	5.7	5.7	7.6	9.0	8.7	7.6
Vitamin E	mg	6.4	4.2	6.0	6.6	6.3	6.0	6.2	6.8	7.1	6.5	6.6
Vitamin K	μg	231	121	189	202	187	215	218	239	270	260	242
Vitamin B ₁	mg	0.83	0.55	0.90	0.89	0.85	0.82	0.84	0.87	0.88	0.80	0.84
Vitamin B ₂	mg	1.12	0.76	1.23	1.16	1.07	1.02	1.03	1.16	1.21	1.15	1.13
Niacin	mg	14.1	7.3	12.0	12.8	13.3	13.7	14.2	15.6	15.8	14.2	14.7
Vitamin B ₆	mg	1.08	0.68	1.01	1.02	0.98	0.99	1.01	1.13	1.22	1.16	1.11
Vitamin B ₁₂	μg	6.0	3.0	5.1	5.0	5.5	5.1	4.9	6.2	7.2	6.8	6.2
Folate	μg	284	155	233	247	242	242	258	302	332	326	298
Pantothenic acid	mg	5.33	3.81	5.93	5.65	5.01	5.02	5.03	5.40	5.69	5.41	5.34
Vitamin C	mg	94	55	69	71	69	68	75	95	118	123	100
Sodium	mg	3,807	2,092	3,475	3,744	3,712	3,637	3,770	3,975	4,209	3,940	3,929
Salt equivalent	g	9.7	5.3	8.8	9.5	9.4	9.2	9.6	10.1	10.7	10.0	10.0
Potassium	mg	2,214	1,412	2,135	2,003	1,887	1,949	2,027	2,295	2,507	2,441	2,273
Calcium	mg	497	402	625	490	437	434	429	491	535	524	490
Magnesium	mg	236	142	220	218	208	214	223	251	268	252	244
Phosphorus	mg	962.3	654.2	1,053.3	996.5	914.0	903.0	914.2	994.5	1,037.4	966.8	968.0
Iron	mg	7.4	4.3	6.6	7.3	7.0	6.7	7.0	7.9	8.3	7.9	7.6
Zinc	mg	7.92	5.17	8.67	9.08	8.05	7.79	7.88	8.25	8.21	7.59	7.93
Copper	mg	1.1	0.7	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.1
Fat-energy ratio	%	26.3	28.4	29.0	29.4	29.8	27.6	27.2	26.7	25.5	23.0	25.8
Carbohydrate-energy ratio	%	59.0	57.8	56.5	56.4	55.7	58.1	58.6	58.5	59.5	62.0	59.5
Animal protein ratio	%	51.8	54.1	56.5	55.1	54.2	51.9	51.5	51.9	50.7	49.5	51.1
Cereal-energy ratio	%	42.2	38.8	41.8	44.9	43.5	44.6	43.6	41.0	40.3	42.5	42.2

Abbreviations: RE, retinol equivalents

^{*} Nutrient values are shown as the mean value per person per day.

^{*} The intake from fortified foods and supplements could not be determined.

Table 10. Age-dependent nutrient intake in male participants

			1- 6	7-14	15-19	20-29	30-39	40-49	50-59	60-69	70 years	(reprint)
Nutrients		Total	years	years	years	years	years	years	years	years	and over	20 years
				-	,			· ·	,			and over
Participants	n	3,786	181	320	173	219	376	461	476	741	839	-,
Energy	kcal	2,094	1,308	2,107	2,367	2,137	2,122	2,156	2,183	2,213	1,988	
Protein	g	74.7	45.0	74.7	83.0	74.5	73.8	74.0	78.9	80.1	73.0	
Animal protein	g	40.6	25.7	42.7	47.3	41.7	41.0	39.7	43.6	42.6		
Fat	g	60.0	42.8	68.0	77.1	69.8	63.9	62.4	61.8	61.3	49.4	
Animal fat	g	30.7	22.2	36.5	41.8	35.1	33.2	31.4	31.5	30.8		
Saturated fatty acid	g	16.09	13.26	20.61	21.40	19.14	17.21	16.20	15.87	15.85	12.86	15.49
Monosaturated fatty acid	g	20.86	14.79	22.93	27.16	25.09	22.93	22.39	21.86	21.28	16.29	
Omega-6 fatty acid	g	10.33	6.64	10.91	12.61	11.67	11.03	11.13	11.01	10.75	8.60	10.36
Omega-3 fatty acid	g	2.35	1.25	2.02	2.34	2.24	2.24	2.28	2.47	2.71	2.45	2.45
Cholesterol	mg	336	212	332	437	349	341	333	357	358	309	338
Carbohydrate	g	286.0	182.0	290.4	322.6	287.9	286.6	289.2	288.1	297.2	285.5	289.5
Dietary fiber	g	14.6	8.6	13.3	13.5	12.3	12.7	13.7	14.5	16.6	16.8	15.1
Water-soluble	g	3.4	2.1	3.3	3.2	2.8	3.0	3.2	3.3	3.8	3.8	3.5
dietary fiber												
Water-insoluble	g	10.6	6.1	9.6	9.9	8.9	9.2	10.1	10.5	12.2	12.3	11.0
dietary fiber												
Vitamin A RE	μgRE	538	424	533	535	531	469	455	535	608	582	545
Vitamin D	μg	7.7	4.3	5.5	6.4	5.7	6.3	6.0	8.8	9.5	9.5	8.2
Vitamin E	mg	6.7	4.4	6.3	7.0	6.5	6.3	6.6	7.0	7.4	6.9	6.9
Vitamin K	μg	239	120	202	217	177	223	231	245	283	271	252
Vitamin B ₁	mg	0.91	0.57	0.93	1.03	0.94	0.93	0.93	0.95	0.95	0.88	0.93
Vitamin B ₂	mg	1.19	0.80	1.28	1.26	1.14	1.12	1.10	1.23	1.30	1.21	1.20
Niacin	mg	15.6	7.6	12.6	14.4	14.8	15.4	16.3	17.8	17.6	15.8	16.5
Vitamin B ₆	mg	1.18	0.72	1.05	1.11	1.05	1.08	1.13	1.24	1.32	1.27	1.22
Vitamin B ₁₂	μg	6.7	3.1	5.3	5.4	5.9	5.9	5.4	7.3	8.2	7.7	7.1
Folate	μg	293	159	237	257	243	253	275	310	344	339	309
Pantothenic acid	mg	5.76	3.96	6.22	6.26	5.43	5.48	5.54	5.84	6.14	5.81	5.78
Vitamin C	mg	91	54	65	68	62	66	78	88	111	125	98
Sodium	mg	4,130	2,215	3,648	4,160	4,042	3,953	4,163	4,352	4,575	4,286	4,289
Salt equivalent	g	10.5	5.6	9.3	10.6	10.3	10.0	10.6	11.1	11.6	10.9	10.9
Potassium	mg	2,316	1,488	2,188	2,136	1,975	2,079	2,175	2,372	2,586	2,585	2,388
Calcium	mg	516	415	640	536	472	464	436	499	544	550	508
Magnesium	mg	253	147	227	237	223	231	244	268	286	273	262
Phosphorus	mg	1,044.9	681.2	1,096.9	1,116.0	995.4	996.8	1,002.5	1,085.5	1,124.2	1,053.7	1,056.8
Iron	mg	7.9	4.3	6.8	8.0	7.5	7.2	7.5	8.4	8.9	8.4	1 '
Zinc	mg	8.82	5.33	9.28	10.64	9.07	8.75	8.89	9.28	9.19	8.37	
Copper	mg	1.2	0.7	1.1	1.3	1.2	1.2	1.2	1.3	1.4		
Fat-energy ratio	%	25.5	28.6	28.8	29.3	28.8	26.5	25.8	25.3	24.7	22.2	24.8
Carbohydrate-energy ratio	%	60.1	57.7	57.0	56.5	57.1	59.5	60.4	60.2	60.8		
Animal protein ratio	%	52.5	55.2	55.9	55.8	54.5	52.9	52.2	53.2	51.5	49.8	51.8
Cereal-energy ratio	%	43.9	38.4	43.3	47.3	47.1	47.0	45.7	43.7	42.0	43.3	44.1

Abbreviations: RE, retinol equivalents

^{*} Nutrient values are shown as the mean value per person per day.

^{*} The intake from fortified foods and supplements could not be determined.

Table 11. Age-dependent nutrient intake in female participants

												(reprint)
Nutrients		Total	1- 6	7-14	15-19	20-29	30-39	40-49	50-59	60-69	70 years	20 years
			years	years	years	years	years	years	years	years	and over	and over
Participants	n	4,261	164	300	182	272	421	548	551	807	1,016	3,615
Energy	kcal	1,658	1,184	1,811	1,776	1,662	1,651	1,642	1,710	1,719	1,602	1,661
Protein	g	61.5	41.0	66.3	62.7	60.8	58.9	59.3	63.5	65.9	61.0	62.0
Animal protein	g	32.5	22.4	38.4	34.9	33.7	31.0	31.2	33.3	34.1	31.3	32.4
Fat	g	50.6	38.0	59.4	59.0	57.0	53.6	52.6	53.8	50.6	42.8	50.0
Animal fat	g	25.0	19.4	32.8	29.4	29.2	25.7	25.2	25.8	24.6	21.3	24.4
Saturated fatty acid	g	13.83	11.62	18.77	16.56	15.84	14.81	14.27	14.43	13.30	11.16	13.39
Monosaturated fatty acid	g	17.28	12.67	19.68	20.68	20.36	18.72	18.52	18.73	17.04	14.03	17.12
Omega-6 fatty acid	g	8.58	6.13	9.04	9.90	9.13	8.98	8.98	9.26	8.80	7.53	8.59
Omega-3 fatty acid	g	1.95	1.15	1.76	1.94	1.88	1.83	1.81	1.96	2.22	2.07	2.01
Cholesterol	mg	280	189	301	344	308	266	280	298	281	264	279
Carbohydrate	g	230.8	166.4	246.7	242.1	219.2	221.5	219.8	231.8	242.5	237.5	231.8
Dietary fiber	g	14.0	8.1	12.8	12.1	12.0	12.3	12.5	14.5	16.3	15.5	14.4
Water-soluble	g	3.2	2.0	3.1	2.9	2.9	2.9	3.0	3.3	3.7	3.5	3.3
dietary fiber												
Water-insoluble	g	10.2	5.9	9.3	8.8	8.8	9.0	9.2	10.6	12.0	11.3	10.6
dietary fiber												
Vitamin A RE	µgRE	494	371	514	455	483	413	434	553	491	553	500
Vitamin D	μg	6.7	3.1	5.5	5.5	5.8	5.2	5.4	6.6	8.5	8.1	7.0
Vitamin E	mg	6.1	4.0	5.8	6.2	6.1	5.8	5.9	6.6	6.8	6.2	6.3
Vitamin K	μg	224	122	176	188	195	208	207	234	258	251	234
Vitamin B ₁	mg	0.76	0.52	0.86	0.76	0.77	0.72	0.77	0.79	0.82	0.73	0.77
Vitamin B ₂	mg	1.06	0.72	1.19	1.06	1.00	0.93	0.98	1.11	1.14	1.09	1.06
Niacin NE	mgNE	12.7	6.8	11.3	11.4	12.2	12.2	12.5	13.7	14.2	12.9	13.1
Vitamin B ₆	mg	1.00	0.63	0.97	0.93	0.93	0.90	0.91	1.04	1.13	1.08	1
Vitamin B ₁₂	μg	5.3	2.9	4.9	4.7	5.1	4.4	4.5	5.3	6.3	6.0	5.5
Folate	μg	276	151	228	237	242	232	243	296	321	315	1
Pantothenic acid	mg	4.96	3.64	5.63	5.07	4.67	4.60	4.60	5.02	5.27	5.08	
Vitamin C	mg	97	56	72	74	74	69	74	101	124	122	102
Sodium	mg	3,521	1,955	3,291	3,349	3,446	3,355	3,439	3,649	3,873	3,654	
Salt equivalent	g	8.9	5.0	8.4	8.5	8.8	8.5	8.7	9.3	9.8	9.3	9.2
Potassium	mg	2,122	1,327	2,078	1,876	1,816	1,834	1,902	2,229	2,434	2,322	2,174
Calcium	mg	480	387	609	447	409	407	423	485	526	502	
Magnesium	mg	222	136	212	200	196	199	206	236	251	235	
Phos phorus Phos phorus	mg	889.0	624.3	1,006.8	882.8	848.5	819.3	839.8	915.9	957.6	895.0	
Iron	mg	7.0	4.2	6.3	6.6	6.6	6.3	6.5	7.4	7.8	7.4	
Zinc	mg	7.12	5.00	8.02	7.60	7.22	6.94	7.03	7.37	7.31	6.94	7.12
Copper	mg	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.0
Fat-energy ratio	%	27.1	28.2	29.2	29.5	30.6	28.6	28.4	28.0	26.2	23.6	
Carbohydrate-energy ratio	%	58.0	57.9	56.0	56.4	54.6	56.9	57.0	57.1	58.4	61.1	58.3
Animal protein ratio	%	51.2	52.9	57.1	54.5	54.0	51.0	51.0	50.7	50.0	49.3	50.5
Cereal-energy ratio	%	40.6	39.3	40.3	42.5	40.6	42.3	41.9	38.7	38.8	41.7	40.6

Abbreviations: RE, retinol equivalents

^{*} Nutrient values are shown as the mean value per person per day.

^{*} The intake from fortified foods and supplements could not be determined.

2. Intake by Food Groups

Table 12. Age-dependent intake by food groups in participants

	Food groups	Total	1- 6 years	7-14 years	15-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	70 years	(reprint) 20 years
	Participants (n)	8,047	345	620	355	491	797	1,009	1,027	1,548	1,855	and over 6,727
	Cereals	435.9	257.3	449.0	510.3	451.1	461.2	452.6	438.9	439.6	421.7	439.9
	Potatoes and starches	52.9	36.3	58.5	53.4	45.0	49.1	432.0	51.3	54.2	59.9	53.2
	Sugars and sweeteners	6.3	3.3	5.3	7.2	6.7	5.8	1	6.3	7.0	7.1	6.5
	Pulses	59.4	33.5	46.6	45.6	49.3	50.3	54.6	65.6	70.4	67.8	62.6
	Nuts and seeds	2.0	0.9	1.4	1.6	1.5	1.3	1.7	2.7	2.5	2.2	2.1
	Vegetables	280.3	148.9	245.6	242.4	238.1	248.9	272.6	292.4	322.1	311.0	292.3
	Green and yellow vegetables	88.2	47.9	68.9	72.4	69.4	76.0	81.1	89.5	104.0	105.2	92.8
	Fruits	105.2	99.2	88.3	69.5	59.9	52.9	59.5	99.4	139.6	152.7	109.0
Tota	Mushrooms	15.8	7.2	13.9	12.6	14.0	14.5	15.6	17.5	18.7	16.2	16.5
la l	Seaweed	9.6	5.3	8.0	7.7	7.9	7.7	7.9	11.0	11.4	11.4	10.1
	Fish and shellfish	69.4	26.2	47.1	52.7	54.9	55.7	54.3	75.0	89.0	86.4	74.5
	Meats	89.1	61.7	111.2	126.5	115.7	108.3	107.2	97.5	78.7	58.6	86.5
	Eggs	34.8	22.2	32.5	49.9	37.6	32.9	35.1	37.9	36.2	32.0	34.9
	Milks	121.0	183.5	284.9	138.8	99.8	83.1	82.3	92.0	112.7	117.0	101.7
	Fats and oils	10.5	7.2	10.9	13.7	12.5	12.2	12.3	11.4	10.6	7.7	10.5
	Confectionaries	26.4	33.8	35.5	33.0	29.1	25.6	23.2	23.9	26.8	23.2	24.8
	Beverages	597.9	199.8	298.1	424.5	505.5	599.8	1	771.1	704.0	591.9	655.1
	Seasonings and spices Participants (n)	80.3 3,786	39.7 181	67.5 320	76.6 173	85.5 219	83.1 376	84.8 461	87.9 476	86.8 741	78.2 839	83.8 3,112
	Cereals	512.1	267.2	499.2	619.8	552.8	551.4	550.2	531.6	518.1	481.9	521.6
	Potatoes and starches	55.1	44.2	57.9	49.5	48.2	53.3	51.7	54.2	54.6	63.0	55.8
	Sugars and sweeteners	6.3	3.4	5.1	8.0	6.6	6.3	5.4	5.9	7.1	7.2	6.6
	Pulses	61.8	29.6	49.2	44.2	45.0	48.6	57.2	69.5	74.1	74.6	65.9
	Nuts and seeds	1.9	0.5	1.2	1.6	1.1	1.3	1.7	2.7	2.6	2.2	2.1
	Vegetables	287.3	151.0	247.7	260.2	237.1	258.0	287.8	293.0	328.1	324.1	300.8
	Green and yellow vegetables	87.1	50.1	66.4	69.9	62.9	77.5	84.8	85.4	101.2	107.0	92.3
_	Fruits	94.3	99.3	85.6	54.6	40.3	39.0	49.2	82.0	123.1	149.9	97.1
Men	Mushrooms	15.4	7.0	14.2	12.3	15.2	12.6	15.4	16.7	17.7	16.9	16.2
-	Seaweed	10.2	5.8	7.6	8.3	10.6	7.9	8.3	11.8	12.2	11.7	10.8
	Fish and shellfish	77.1	28.9	46.0	54.3	57.3	62.8	61.0	87.9	99.2	98.7	84.3
	Meats	104.8	65.5	124.2	157.4	139.4	129.6	129.4	114.9	93.2	65.8	102.1
	Eggs	37.7	24.1	33.1	55.9	38.6	37.2	38.3	41.6	40.6	33.5	37.9
	Milks	118.3	194.5	290.3	153.9	106.4	71.3	68.4	78.6	104.5	115.0	94.1
	Fats and oils	11.7	7.8	12.3	15.7	14.3	13.2	13.9	12.4	12.0	8.3	11.6
	Confectionaries	23.8	34.7	34.7	30.1	27.2	21.7	19.1	16.4	23.2	23.5	21.7
	Beverages	680.0 90.4	220.0 36.5	318.2 72.5	460.4 90.3	552.1 96.8	681.5 94.6	849.5 98.3	876.8 106.2	817.5 94.7	669.1 88.0	756.2 95.3
	Seasonings and spices Participants (n)	4,261	164	300	182	272	421	548	551	807	1,016	3,615
	Cereals	368.2	246.3	395.4	406.2	369.1	380.7	370.5	358.8	367.5	372.1	369.6
	Potatoes and starches	50.9	27.5	59.1	57.2	42.3	45.3	46.0	48.7	53.9	57.3	51.0
	Sugars and sweeteners	6.3	3.1	5.5	6.5	6.8			6.7	7.0		
	Pulses	57.3	37.9	43.7	46.9	52.8		1	62.2	67.0	62.1	59.8
	Nuts and seeds	2.0	1.2	1.7	1.5	1.7	1.3		2.6	2.4	2.2	2.1
	Vegetables	274.2	146.6	243.5	225.6	238.9	240.8		292.0	316.6	300.3	285.0
	Green and yellow vegetables	89.1	45.6	71.7	74.7	74.5	74.7	78.1	93.0	106.6	103.8	93.3
≨	Fruits	114.9	99.1	91.2	83.7	75.7	65.3	68.1	114.4	154.8	154.9	119.2
Women	Mushrooms	16.0	7.3	13.6	12.9	12.9	16.2	15.7	18.2	19.6	15.6	16.8
i ii	Seaweed	9.1	4.7	8.5	7.2	5.7	7.6	7.6	10.2	10.6	11.1	9.5
	Fish and shellfish	62.5	23.3	48.3	51.3	53.1	49.3		63.9	79.6	76.2	66.0
	Meats	75.2	57.6	97.2	97.1	96.6	89.3	1	82.5	65.4	52.6	73.1
	Eggs	32.2	20.1	31.8	44.2	36.9	29.1	32.4	34.8	32.2	30.7	32.2
	Milks	123.4	171.3	279.3	124.4	94.5	93.7	93.9	103.6	120.3	118.6	108.2
	Fats and oils	9.5	6.5	9.5	11.8	11.1	11.2	1	10.5	9.3	7.2	9.5
	Confectionaries	28.7	32.8	36.2	35.8	30.6	29.1	26.8	30.4	30.2	22.9	
	Beverages	525.0	177.4	276.6	390.5	468.0			679.7	599.8	528.2	568.1
	Seasonings and spices	71.4	43.1	62.2	63.5	76.4	72.7	73.5	72.0	79.6	70.2	73.8

^{*} Food values are shown in grams and are mean values per person per day. Food for specified health use is included in the regular food group.