

Thickness of subcutaneous fat at anterior calf (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.4	0.7	104	2.4	0.8	80	2.0	0.7	73	2.3	0.8	83	2.5	1.1	28	2.3	0.8	368
Female	3.9	1.3	91	3.3	1.3	76	3.3	1.8	74	3.3	1.4	88	3.4	1.6	26	3.5	1.5	355
Total	3.1	1.2	195	2.8	1.2	156	2.7	1.5	147	2.8	1.3	171	2.9	1.4	54	2.9	1.3	723

Thickness of musculus tibialis anterior (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	25.8	3.4	104	26.1	3.2	80	24.6	3.1	73	23.8	2.8	83	21.4	3.4	28	24.8	3.4	368
Female	22.0	2.9	91	21.7	3.0	76	21.9	2.9	74	20.9	2.7	88	20.6	3.3	26	21.6	2.9	355
Total	24.0	3.7	195	24.0	3.8	156	23.2	3.3	147	22.3	3.1	171	21.0	3.4	54	23.2	3.6	723

Thickness of subcutaneous fat at upper-arm (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.2	1.8	104	5.9	1.9	80	5.2	1.4	73	5.6	1.6	83	4.7	1.7	28	5.7	1.7	368
Female	10.0	2.4	91	10.1	2.4	76	10.5	3.0	74	9.7	2.6	88	9.1	2.6	26	10.0	2.6	355
Total	8.0	2.8	195	8.0	3.0	156	7.9	3.6	147	7.7	3.0	171	6.8	3.1	54	7.8	3.1	723

Thickness of musculus triceps brachi (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	23.6	5.4	104	24.1	4.6	80	21.5	5.2	73	19.8	4.6	83	16.3	4.0	28	21.9	5.4	368
Female	18.0	5.0	91	18.2	4.6	76	19.0	4.2	74	17.9	4.3	88	16.5	4.6	26	18.1	4.6	355
Total	21.0	5.9	195	21.2	5.5	156	20.2	4.9	147	18.8	4.5	171	16.4	4.3	54	20.0	5.3	723

Thickness of subcutaneous fat at posterior mid-thigh (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.6	1.5	104	5.1	1.5	80	4.4	1.3	73	4.7	1.3	83	4.8	1.8	28	5.0	1.5	368
Female	9.2	2.5	91	8.4	3.2	76	8.1	3.4	74	7.4	3.1	88	7.6	3.6	26	8.2	3.2	355
Total	7.3	2.7	195	6.7	3.0	156	6.2	3.2	147	6.1	2.8	171	6.1	3.1	54	6.6	2.9	723

Thickness of subcutaneous fat at posterior calf (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4.8	1.3	104	4.3	1.3	80	3.9	1.2	73	4.2	1.3	83	4.1	1.4	28	4.3	1.3	368
Female	7.1	1.4	91	6.2	1.5	76	6.0	2.0	74	5.4	1.8	88	5.4	1.5	26	6.1	1.8	355
Total	5.9	1.8	195	5.2	1.7	156	4.9	2.0	147	4.8	1.7	171	4.7	1.6	54	5.2	1.8	723

Thickness of musculus gastrocnemius and soleus (mm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	57.6	6.4	104	56.3	5.4	80	52.7	6.7	73	52.6	5.8	83	49.6	6.0	28	54.6	6.6	368
Female	50.2	6.0	91	48.8	6.6	76	48.0	6.8	74	46.7	5.4	88	47.5	7.7	26	48.4	6.4	355
Total	54.2	7.2	195	52.7	7.1	156	50.3	7.1	147	49.6	6.3	171	48.6	6.9	54	51.6	7.2	723

4) Intra-abdominal fat area, Subcutaneous fat area at umbilicus level  
(CT scan, SCT-6800TX; Shimadzu, Fat Scan; N2 Corp.)

Intra-abdominal fat area at umbilicus by CT (cm2)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	80.3	37.2	104	89.7	39.4	78	94.1	46.1	73	96.1	43.3	82	73.5	42.2	28	88.1	41.8	365
Female	37.1	31.4	91	56.4	30.7	76	72.0	50.1	74	80.8	38.3	87	72.7	32.2	24	61.8	41.1	352
Total	60.1	40.7	195	73.3	39.0	154	82.9	49.3	147	88.2	41.4	169	73.1	37.5	52	75.2	43.4	717

Subcutaneous fat area at umbilicus by CT (cm2)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	129.3	51.7	104	120.4	41.4	78	106.0	45.7	73	109.7	44.4	82	94.0	41.6	28	115.6	47.1	365
Female	139.8	62.7	91	174.1	68.3	76	184.8	79.8	74	179.8	67.0	87	169.3	73.2	24	168.6	71.3	352
Total	134.2	57.2	195	146.9	62.3	154	145.7	76.0	147	145.8	67.0	169	128.8	69.1	52	141.6	65.8	717

Waist circumference at umbilicus by CT (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	87.4	8.1	104	87.5	7.1	78	85.6	8.1	73	86.7	8.5	82	82.8	9.2	28	86.6	8.1	365
Female	81.1	8.9	91	86.2	8.7	76	88.9	11.4	74	90.0	9.1	87	88.7	9.3	24	86.5	10.1	352
Total	84.4	9.0	195	86.9	7.9	154	87.3	10.0	147	88.4	8.9	169	85.5	9.6	52	86.6	9.1	717

# Nutritional Examinations

## Nutritional Examinations

### Three days dietary record (3DR)

Foods and nutrition intakes were assessed by the three-consecutive-day weighing dietary records. On this method, foods and dietary supplements were weighed separately with scales before or after cooked. If the subjects did not weigh foods, they asked to record food size by portion. The subjects were asked to take the photos before and after eating foods using disposable camera. The dietary records were checked and coded by nutritionists. The average intakes of food and nutrition per day were calculated according to the 5th edition Standard Tables of Foods Consumption edited by the Science and Technology Agency in Japan and others. The substituted food composition table for Japanese foods were developed by National Cancer Center for the assessment of fatty acid intakes (Sasaki et al., *J Epidemiol*, 9: 190-207, 1999).

### Dietary supplement frequency questionnaire (DSFQ)

Dietary supplements were defined as any products intended for ingestion as a supplement to the diet from unnatural food forms such as capsules, tablets, or powders, but not from functional foods or modified foods. It contains vitamins, minerals, herbs, botanicals, and other substances such as enzymes, organ tissues, metabolites, concentrates, and constituent extracts of these substances.

Dietary supplement was grouped into seven major categories according to primary nutrient contents. It contains vitamin, mineral, fat, protein, dietary fiber, others, and drug (which contains some nutrients, for example a remedy for the cold contains vitamin C.)

Dietary supplement user was defined as a subject who used one or more dietary supplement once or more times in previous one year.

### Questionnaire for beverage and citrus intake

Beverages intakes were assessed for previous one year. Frequency and volume of alcoholic beverages and frequency of non-alcoholic beverage were obtained in a questionnaire with interview. Average ethanol intake was estimated from the frequency and volume of each alcoholic beverage consumed with the ethanol content of the corresponding beverage. The seasonal citrus and orange juice intakes were assessed by the questionnaire. Frequency and volume of citrus and orange juice were obtained with interview. Average citrus and orange juice intakes were estimated from the frequency and volume of each citrus fruits and orange juice.

## Three days dietary record

### 1) Food intake (3DR)

- Cereals
- Potatoes and starches
- Sugars and sweeteners
- Pulses
- Nuts and seeds
- Vegetables
- Fruits
- Mushrooms
- Seaweeds
- Fishes and shellfishes
- Meats
- Eggs
- Milks
- Fats and oils
- Confectioneries
- Beverages
- Seasonings and spices
- Prepared foods

### 2) Nutrient intake from foods (3DR)

- Energy
- Water
- Protein
- Lipid
- Carbohydrate
- Ash
- Sodium
- Potassium
- Calcium
- Magnesium
- Phosphorus
- Iron

Zinc  
Copper  
Retinol  
Carotene  
Retinol equivalents  
Vitamin D  
Vitamin E  
Vitamin K  
Thiamin  
Riboflavin  
Niacin  
Vitamin B<sub>6</sub>  
Vitamin B<sub>12</sub>  
Folate  
Pantothenic acid  
Vitamin C  
Cholesterol  
Water soluble dietary fibers  
Water insoluble dietary fibers  
Total dietary fibers  
Salt  
Manganese  
Nitrogen  
Isoleucine  
Leucine  
Lysine  
Methionine  
Cystine  
Sulfur-containing amino acids  
Phenylalanine  
Tyrosine  
Aromatic amino acids  
Threonine  
Tryptophan  
Valine

Histidine  
Alginine  
Alanine  
Aspartic acid  
Glutamic acid  
Glycine  
Proline  
Serine  
Total fatty acids  
Saturated fatty acids  
Monounsaturated fatty acids  
Polyunsaturated fatty acids  
Unsaturated fatty acids  
n-6 fatty acids  
n-3 fatty acids  
Butyric acid  
Hexanoic acid  
Octanoic acid  
Decanoic acid  
Decenoic acid  
Lauric acid  
Myristic acid  
Myristoleic acid  
Pentadecanoic acid  
Pentadecenoic acid  
Palmitic acid  
Palmitoleic acid  
Hexadecatrienoic acid  
Heptadecanoic acid  
Heptadecenoic acid  
Stearic acid  
Oleic acid  
Linoleic acid  
Linolenic acid  
 $\gamma$ -Linolenic acid



Octadecatetraenic acid  
Arachidic acid  
Eicosenoic acid  
Eicosadienoic acid  
Eicosatrienoic acid  
Eicosatetraenoic acid  
Arachidonic acid  
Eicosapentaenoic acid  
Behenic acid  
Docosenoic acid  
Docosadienoic acid  
Docosapentaenoic acid (n-3)  
Docosapentaenoic acid (n-6)  
Docosahexaenoic acid  
Lignoceric acid  
Tetracosenoic acid  
Alcohol

### 3) Nutrient intake from foods and dietary supplements (3DR)

Energy  
Water  
Protein  
Lipid  
Carbohydrate  
Ash  
Sodium  
Potassium  
Calcium  
Magnesium  
Phosphorus  
Iron  
Zinc  
Copper  
Retinol  
Carotene

Retinol equivalents  
Vitamin D  
Vitamin E  
Vitamin K  
Thiamin  
Riboflavin  
Niacin  
Vitamin B<sub>6</sub>  
Vitamin B<sub>12</sub>  
Folate  
Pantothenic acid  
Vitamin C  
Cholesterol  
Water soluble dietary fibers  
Water insoluble dietary fibers  
Total dietary fibers  
Salt  
Manganese  
Nitrogen  
Isoleucine  
Leucine  
Lysine  
Methionine  
Cystine  
Sulfur-containing amino acids  
Phenylalanine  
Tyrosine  
Aromatic amino acids  
Threonine  
Tryptophan  
Valine  
Histidine  
Alanine  
Aspartic acid

Glutamic acid  
Glycine  
Proline  
Serine  
Total fatty acids  
Saturated fatty acids  
Monounsaturated fatty acids  
Polyunsaturated fatty acids  
Unsaturated fatty acids  
n-6 fatty acids  
n-3 fatty acids  
Butyric acid  
Hexanoic acid  
Octanoic acid  
Decanoic acid  
Decenoic acid  
Lauric acid  
Myristic acid  
Myristoleic acid  
Pentadecanoic acid  
Pentadecenoic acid  
Palmitic acid  
Palmitoleic acid  
Hexadecatrienoic acid  
Heptadecanoic acid  
Heptadecenoic acid  
Stearic acid  
Oleic acid  
Linoleic acid  
Linolenic acid  
 $\gamma$ -Linolenic acid  
Octadecatetraenic acid  
Arachidic acid  
Eicosenoic acid  
Eicosadienoic acid

Eicosatrienoic acid  
Eicosatetraenoic acid  
Arachidonic acid  
Eicosapentaenoic acid  
Behenic acid  
Docosenoic acid  
Docosadienoic acid  
Docosapentaenoic acid (n-3)  
Docosapentaenoic acid (n-6)  
Docosahexaenoic acid  
Lignoceric acid  
Tetracosenoic acid  
Alcohol

4) State of using supplement in previous 1 year (Frequency questionnaire)

5) Frequency of supplement intake (DSFQ)

6) Beverage and citrus fruits intakes

1) Food intake - Three days dietary record (3DR)

Cereals (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	524.9	142.7	65	492.2	104.8	67	484.9	106.9	68	491.7	104.7	72	485.7	131.7	12	497.5	116.3	284
Female	383.9	89.0	54	380.7	98.5	61	410.7	109.0	56	394.6	91.5	55	389.4	106.6	9	392.2	97.6	235
Total	460.9	139.9	119	439.1	115.8	128	451.4	113.6	124	449.7	110.0	127	444.4	128.3	21	449.8	120.2	519

Potatoes and starches (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	59.0	59.7	65	51.5	32.6	67	66.8	43.5	68	71.5	54.1	72	48.0	29.6	12	61.8	48.3	284
Female	62.0	51.0	54	58.4	33.6	61	81.4	55.1	56	67.6	47.1	55	42.1	41.1	9	66.2	47.5	235
Total	60.3	55.7	119	54.8	33.1	128	73.4	49.4	124	69.8	51.0	127	45.5	34.1	21	63.8	48.0	519

Sugars and sweeteners (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.4	12.3	65	7.5	6.5	67	9.6	8.9	68	10.1	6.7	72	9.1	8.7	12	9.2	8.8	284
Female	7.6	5.5	54	11.4	9.4	61	11.1	8.4	56	9.8	8.0	55	4.9	3.5	9	9.8	8.0	235
Total	8.6	9.8	119	9.4	8.2	128	10.3	8.7	124	10.0	7.3	127	7.3	7.1	21	9.5	8.5	519

Pulses (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	76.7	51.0	65	93.0	61.3	67	88.1	49.5	68	81.9	58.3	72	94.4	47.1	12	85.4	55.0	284
Female	73.6	66.8	54	76.2	59.1	61	82.4	65.7	56	92.0	44.6	55	83.8	44.0	9	81.1	59.1	235
Total	75.3	58.5	119	85.0	60.6	128	85.5	57.2	124	86.3	52.8	127	89.9	45.0	21	83.4	56.9	519

Nuts and seeds (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.2	10.5	65	6.1	10.1	67	4.8	6.2	68	5.2	7.3	72	3.7	8.6	12	5.5	8.6	284
Female	7.6	10.9	54	6.3	8.9	61	8.8	11.1	56	5.0	8.9	55	5.1	8.1	9	6.9	9.9	235
Total	6.8	10.6	119	6.2	9.5	128	6.6	9.0	124	5.1	8.0	127	4.3	8.2	21	6.1	9.3	519

## Vegetables others (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	208.3	118.7	65	184.6	84.3	67	238.0	109.1	68	216.4	95.1	72	234.8	117.1	12	213.0	104.1	284
Female	175.3	91.9	54	188.4	78.4	61	203.4	85.7	56	210.6	106.0	55	204.4	91.6	9	194.8	91.0	235
Total	193.3	108.2	119	186.4	81.2	128	222.3	100.4	124	213.9	99.6	127	221.8	105.5	21	204.7	98.7	519

## Vegetables dark green or yellow vegetables (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	92.7	54.6	65	87.6	48.2	67	125.2	53.5	68	141.2	65.6	72	146.0	69.0	12	113.8	60.7	284
Female	73.3	50.4	54	107.5	63.2	61	115.3	56.0	56	140.8	87.5	55	148.9	97.3	9	110.9	70.9	235
Total	83.9	53.4	119	97.1	56.5	128	120.8	54.6	124	141.1	75.5	127	147.3	80.1	21	112.5	65.5	519

## Fruits (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	93.9	85.5	65	123.6	112.2	67	159.6	125.3	68	231.1	163.2	72	184.0	106.7	12	155.2	134.3	284
Female	108.4	94.2	54	176.4	103.5	61	192.4	112.9	56	229.8	142.8	55	255.4	190.1	9	180.1	125.4	235
Total	100.5	89.4	119	148.8	110.9	128	174.4	120.5	124	230.5	154.1	127	214.6	148.4	21	166.5	130.8	519

## Mushrooms (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	18.7	17.1	65	17.8	15.3	67	19.6	21.5	68	17.2	14.9	72	19.1	16.5	12	18.3	17.3	284
Female	20.0	19.2	54	17.5	16.6	61	24.6	20.4	56	19.6	20.9	55	12.0	11.1	9	20.0	19.1	235
Total	19.3	18.0	119	17.6	15.9	128	21.8	21.1	124	18.2	17.7	127	16.1	14.6	21	19.1	18.1	519

## Seaweeds (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	24.0	27.2	65	24.5	29.4	67	27.6	26.9	68	35.8	50.3	72	16.6	18.5	12	27.7	34.9	284
Female	16.2	23.0	54	19.4	20.6	61	23.1	31.2	56	17.8	16.8	55	8.0	9.4	9	18.8	23.2	235
Total	20.5	25.5	119	22.1	25.6	128	25.6	28.9	124	28.0	40.3	127	12.9	15.6	21	23.6	30.4	519

## Fishes and shellfishes (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	85.2	47.3	65	116.9	66.6	67	115.1	54.7	68	113.0	51.1	72	115.2	41.1	12	108.2	55.9	284
Female	87.5	37.6	54	94.0	39.3	61	85.0	43.4	56	96.2	44.3	55	75.9	41.5	9	90.2	41.2	235
Total	86.2	43.0	119	106.0	56.3	128	101.5	51.9	124	105.7	48.8	127	98.4	44.9	21	100.0	50.6	519

## Meats (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	123.1	56.8	65	101.6	49.7	67	89.7	47.2	68	78.8	45.6	72	67.5	24.8	12	96.4	51.7	284
Female	80.9	45.0	54	64.0	26.6	61	67.3	39.9	56	59.6	39.0	55	82.3	36.7	9	68.3	38.5	235
Total	103.9	55.7	119	83.7	44.4	128	79.6	45.3	124	70.5	43.8	127	73.8	30.6	21	83.7	48.2	519

## Eggs (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	50.5	25.8	65	63.9	34.0	67	64.7	29.3	68	51.6	23.0	72	63.6	35.4	12	57.9	29.1	284
Female	47.9	24.7	54	46.6	27.2	61	53.3	32.8	56	54.5	22.8	55	42.1	41.5	9	50.2	27.8	235
Total	49.4	25.3	119	55.6	32.0	128	59.6	31.3	124	52.9	22.9	127	54.4	38.7	21	54.4	28.8	519

## Milks (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	149.9	118.3	65	165.6	162.6	67	150.7	128.4	68	169.8	128.7	72	144.0	109.3	12	158.6	133.9	284
Female	161.5	127.8	54	178.5	131.1	61	178.1	126.6	56	179.7	114.3	55	202.1	163.5	9	175.7	126.0	235
Total	155.2	122.3	119	171.8	148.0	128	163.1	127.8	124	174.1	122.3	127	168.9	134.7	21	166.3	130.6	519

## Fats and oils (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	12.2	5.8	65	11.9	5.9	67	11.5	5.7	68	9.1	5.4	72	10.1	4.8	12	11.1	5.7	284
Female	11.2	4.9	54	10.4	5.9	61	9.9	5.6	56	8.2	4.9	55	7.3	6.0	9	9.9	5.5	235
Total	11.7	5.4	119	11.2	5.9	128	10.8	5.7	124	8.7	5.2	127	8.9	5.4	21	10.5	5.6	519

Confectioneries (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	66.8	61.2	65	41.9	42.3	67	36.7	43.3	68	46.2	42.7	72	56.7	48.9	12	48.1	48.8	284
Female	59.8	46.2	54	62.9	47.0	61	58.8	54.9	56	53.8	41.4	55	59.7	60.7	9	59.0	47.8	235
Total	63.6	54.8	119	51.9	45.6	128	46.7	49.9	124	49.5	42.2	127	58.0	52.9	21	53.0	48.6	519

Beverages (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1122.4	544.1	65	1059.0	560.6	67	1086.3	542.0	68	852.6	369.4	72	814.7	335.5	12	1017.4	511.0	284
Female	699.4	272.3	54	808.0	484.9	61	831.5	506.1	56	785.9	416.2	55	748.6	389.9	9	781.2	429.9	235
Total	930.4	488.5	119	939.4	538.8	128	971.2	539.2	124	823.7	390.2	127	786.4	351.9	21	910.4	489.9	519

Seasonings and spices (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	114.3	131.5	65	99.7	78.9	67	104.7	100.3	68	83.4	47.8	72	67.0	27.3	12	98.7	92.3	284
Female	82.2	71.1	54	69.9	34.3	61	87.8	61.8	56	74.0	32.7	55	50.3	11.9	9	77.2	51.7	235
Total	99.8	109.1	119	85.5	63.4	128	97.1	85.2	124	79.3	42.0	127	59.8	23.2	21	89.0	77.3	519



2) Nutrition intake from food - Three days dietary record (3DR)

Energy (kcal)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2326.2	468.3	65	2282.9	402.8	67	2220.6	360.1	68	2197.8	401.1	72	2083.2	282.8	12	2247.9	406.6	284
Female	1851.9	333.0	54	1862.3	282.2	61	1875.8	351.5	56	1811.7	286.9	55	1794.6	374.8	9	1848.7	314.7	235
Total	2110.9	474.3	119	2082.4	407.9	128	2064.9	394.4	124	2030.6	403.5	127	1959.5	348.7	21	2067.1	417.8	519

Water (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2326.8	703.1	65	2425.4	709.4	67	2534.4	660.9	68	2402.1	663.7	72	2222.4	543.4	12	2414.4	679.3	284
Female	1869.4	622.4	54	2110.2	599.1	61	2275.6	631.9	56	2275.6	556.2	55	2207.4	812.3	9	2136.7	627.4	235
Total	2119.3	703.1	119	2275.2	675.3	128	2417.5	658.2	124	2347.3	620.3	127	2216.0	653.0	21	2288.7	670.1	519

Protein (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	82.3	19.7	65	83.6	18.3	67	85.9	16.1	68	82.7	19.5	72	78.7	11.5	12	83.4	18.2	284
Female	69.5	14.5	54	69.6	12.5	61	71.9	14.2	56	71.2	13.4	55	71.1	17.0	9	70.5	13.7	235
Total	76.5	18.6	119	76.9	17.2	128	79.6	16.7	124	77.7	18.0	127	75.5	14.3	21	77.6	17.5	519

Lipid (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	67.1	18.5	65	64.8	18.8	67	58.4	14.9	68	54.9	16.2	72	49.7	12.8	12	60.7	17.7	284
Female	59.1	14.5	54	54.5	13.1	61	50.8	14.6	56	46.9	13.5	55	50.4	13.0	9	52.7	14.5	235
Total	63.5	17.2	119	59.9	17.1	128	55.0	15.2	124	51.4	15.5	127	50.0	12.6	21	57.1	16.8	519

Carbohydrate (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	313.4	67.5	65	292.9	53.2	67	299.6	54.7	68	318.8	59.3	72	302.9	48.9	12	306.2	59.0	284
Female	251.6	50.0	54	264.6	45.0	61	275.9	61.0	56	271.5	51.1	55	260.6	69.1	9	265.7	53.0	235
Total	285.3	67.5	119	279.4	51.3	128	288.9	58.6	124	298.3	60.5	127	284.7	60.7	21	287.9	59.8	519

## Ash (g)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	19.3	4.6	65	19.5	4.4	67	22.1	4.2	68	21.5	4.4	72	19.9	3.8	12	20.6	4.5	284
Female	16.5	3.9	54	17.6	3.7	61	19.0	3.7	56	19.6	4.2	55	18.8	6.1	9	18.2	4.1	235
Total	18.0	4.5	119	18.6	4.2	128	20.7	4.2	124	20.7	4.4	127	19.4	4.8	21	19.5	4.5	519

## Sodium (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4525	1018	65	4479	1074	67	5078	1026	68	4675	876	72	4510	836	12	4684	1013	284
Female	3864	947	54	3843	835	61	4226	969	56	4316	861	55	3989	1163	9	4056	929	235
Total	4225	1037	119	4176	1015	128	4694	1084	124	4519	884	127	4287	998	21	4399	1024	519

## Potassium (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2628	708	65	2608	675	67	3106	753	68	3168	758	72	2909	765	12	2887	765	284
Female	2314	746	54	2606	578	61	2815	625	56	2857	694	55	2818	1161	9	2656	710	235
Total	2486	739	119	2607	628	128	2974	710	124	3034	744	127	2870	929	21	2782	749	519

## Calcium (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	569.1	191.4	65	588.7	235.6	67	623.8	206.8	68	687.9	290.0	72	611.4	202.9	12	618.7	236.8	284
Female	563.2	271.8	54	570.0	194.0	61	629.1	232.9	56	628.8	221.0	55	781.5	356.8	9	604.4	238.6	235
Total	566.4	230.4	119	579.8	216.2	128	626.2	218.0	124	662.3	263.0	127	684.3	284.6	21	612.2	237.5	519

## Magnesium (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	283.2	73.4	65	296.4	73.5	67	328.1	69.8	68	326.2	77.9	72	305.6	66.2	12	308.9	75.4	284
Female	240.7	76.4	54	265.1	66.0	61	288.9	75.3	56	283.7	63.4	55	266.0	87.1	9	269.6	72.7	235
Total	263.9	77.5	119	281.5	71.5	128	310.4	74.7	124	307.8	74.8	127	288.6	76.5	21	291.1	76.7	519

## Phosphorus (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1175	309	65	1195	291	67	1248	252	68	1254	319	72	1206	214	12	1218	291	284
Female	1007	269	54	1044	214	61	1105	247	56	1094	216	55	1155	412	9	1066	247	235
Total	1099	302	119	1123	267	128	1183	259	124	1185	289	127	1184	306	21	1149	282	519

## Iron (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.0	2.5	65	9.1	2.0	67	10.4	2.3	68	10.6	2.7	72	9.9	2.1	12	9.8	2.5	284
Female	8.0	2.6	54	8.4	2.3	61	9.1	2.7	56	9.5	2.5	55	8.9	3.3	9	8.8	2.6	235
Total	8.6	2.6	119	8.8	2.2	128	9.8	2.6	124	10.1	2.7	127	9.5	2.7	21	9.3	2.6	519

## Zinc (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.6	2.7	65	9.1	2.1	67	9.4	1.8	68	9.5	2.7	72	9.1	2.3	12	9.4	2.3	284
Female	7.8	2.1	54	7.6	1.6	61	8.2	1.6	56	8.3	2.5	55	8.5	2.3	9	8.0	2.0	235
Total	8.8	2.6	119	8.4	2.0	128	8.8	1.8	124	9.0	2.7	127	8.8	2.3	21	8.8	2.3	519

## Copper (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.30	0.34	65	1.34	0.40	67	1.46	0.32	68	1.51	0.35	72	1.53	0.30	12	1.41	0.36	284
Female	1.09	0.33	54	1.17	0.27	61	1.29	0.32	56	1.34	0.33	55	1.24	0.36	9	1.22	0.32	235
Total	1.21	0.35	119	1.26	0.35	128	1.38	0.33	124	1.43	0.35	127	1.40	0.35	21	1.32	0.36	519

## Manganese (mg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.97	1.23	65	4.15	1.58	67	4.69	1.50	68	4.49	1.28	72	4.51	0.95	12	4.34	1.41	284
Female	3.37	1.09	54	3.78	1.52	61	4.24	1.62	56	4.34	1.60	55	4.22	1.59	9	3.94	1.52	235
Total	3.69	1.20	119	3.97	1.56	128	4.49	1.57	124	4.42	1.42	127	4.38	1.24	21	4.16	1.47	519

Retinol ( $\mu\text{g}$ )

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	202	223	65	224	206	67	379	794	68	594	1394	72	660	1592	12	368	886	284
Female	175	90	54	183	116	61	265	499	56	327	611	55	274	273	9	238	395	235
Total	190	175	119	204	170	128	328	676	124	478	1128	127	494	1209	21	309	709	519

 $\alpha$ -Carotene ( $\mu\text{g}$ )

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	493	462	65	372	286	67	412	296	68	466	654	72	451	423	12	436	452	284
Female	351	315	54	396	346	61	356	284	56	382	350	55	637	674	9	382	345	235
Total	428	407	119	383	315	128	387	291	124	430	543	127	531	538	21	412	408	519

 $\beta$ -Carotene ( $\mu\text{g}$ )

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3089	1927	65	2723	1568	67	3575	1672	68	4207	2418	72	4585	2903	12	3465	2056	284
Female	2383	1514	54	3075	1639	61	3449	1763	56	3718	2337	55	4329	2960	9	3204	1945	235
Total	2769	1780	119	2891	1606	128	3518	1708	124	3995	2386	127	4475	2856	21	3347	2009	519

Cryptoxanthin ( $\mu\text{g}$ )

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	261	476	65	458	1115	67	518	928	68	656	874	72	336	609	12	472	878	284
Female	631	840	54	396	613	61	568	881	56	985	1194	55	1269	1500	9	662	951	235
Total	429	689	119	428	908	128	540	904	124	798	1034	127	736	1152	21	558	916	519

 $\beta$ -Carotene equivalents ( $\mu\text{g}$ )

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3999	2606	65	3417	2130	67	4241	1867	68	4988	2917	72	5067	3389	12	4215	2519	284
Female	3066	2022	54	3670	1903	61	4100	1952	56	4814	2798	55	5744	3970	9	3981	2366	235
Total	3576	2395	119	3537	2021	128	4178	1900	124	4913	2856	127	5357	3569	21	4109	2452	519