

# Changes in Nutrition and Health in Japan

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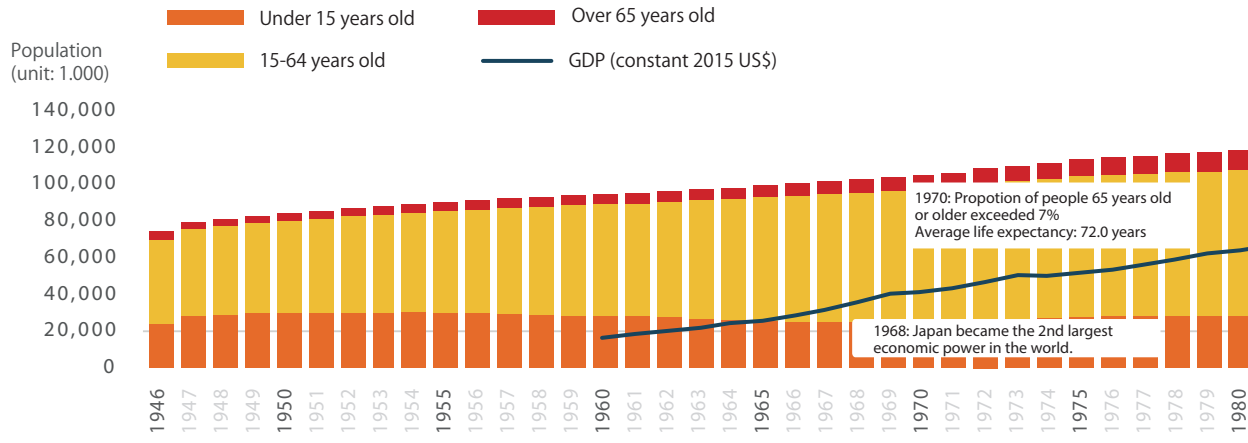
# Changes in nutritional and health status of the Japanese with economic growth.

## 1945

After experiencing food insecurity, Japan entered the era of food abundance

### Transition of real GDP and population

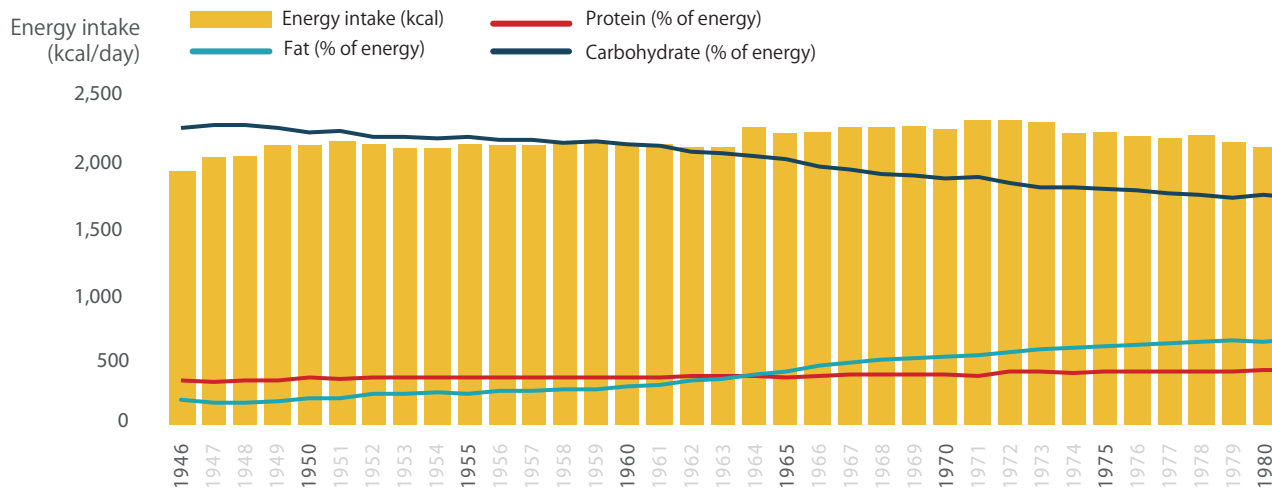
Society and economy



[Source](GDP)Based on the "World Bank: GDP (c

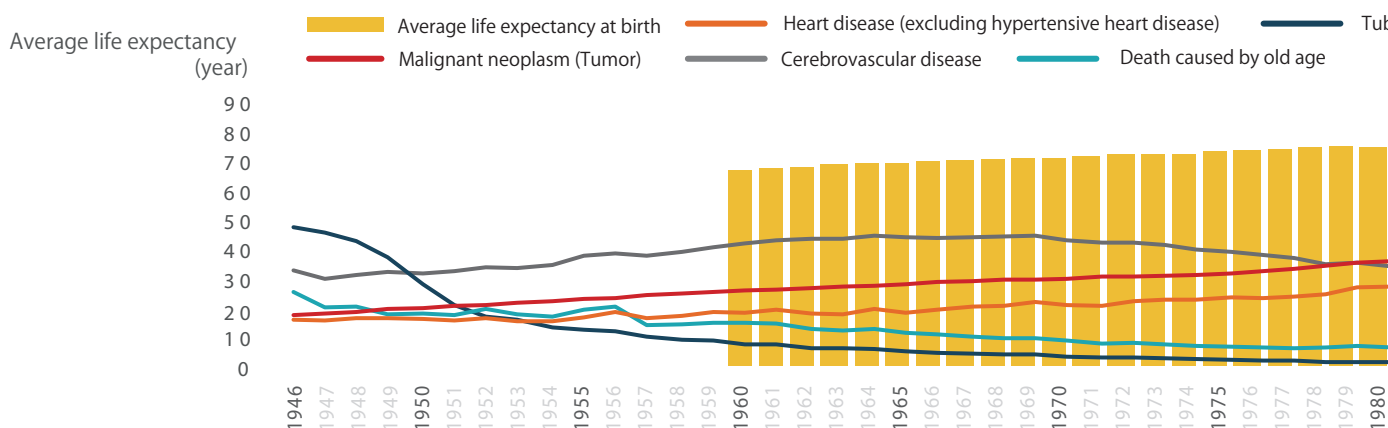
### Annual changes in intake of energy and energy-providing nutrients (macro-nutrients; namely protein, fat, carbohydrate) (aged 1 year and older)

Nutrition and dietary habits



### Trends in average life expectancy at birth and death rates from leading causes of death

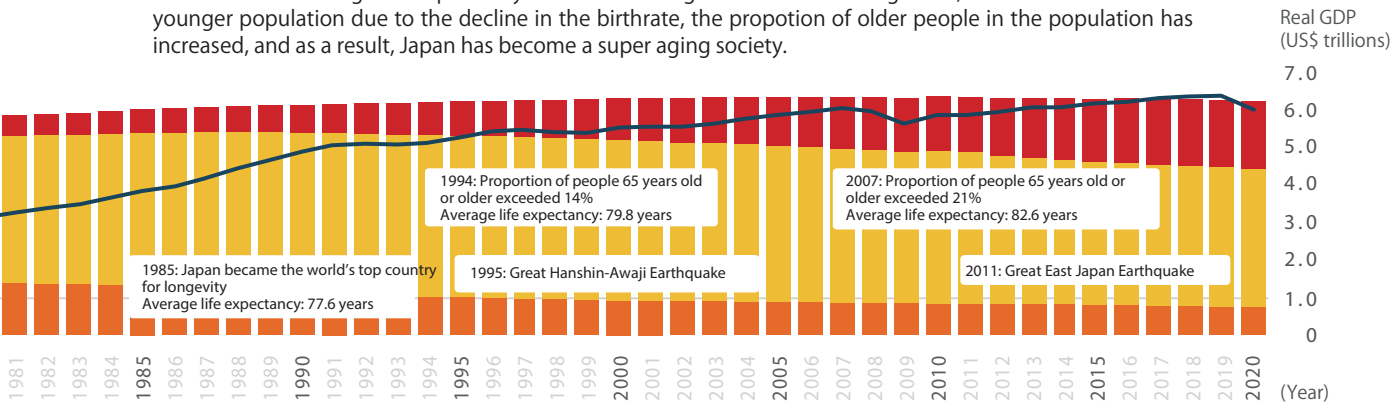
Health condition



[Source](Average life expectancy) Based on "O

Abundance of food have changed the health status of Japanese people

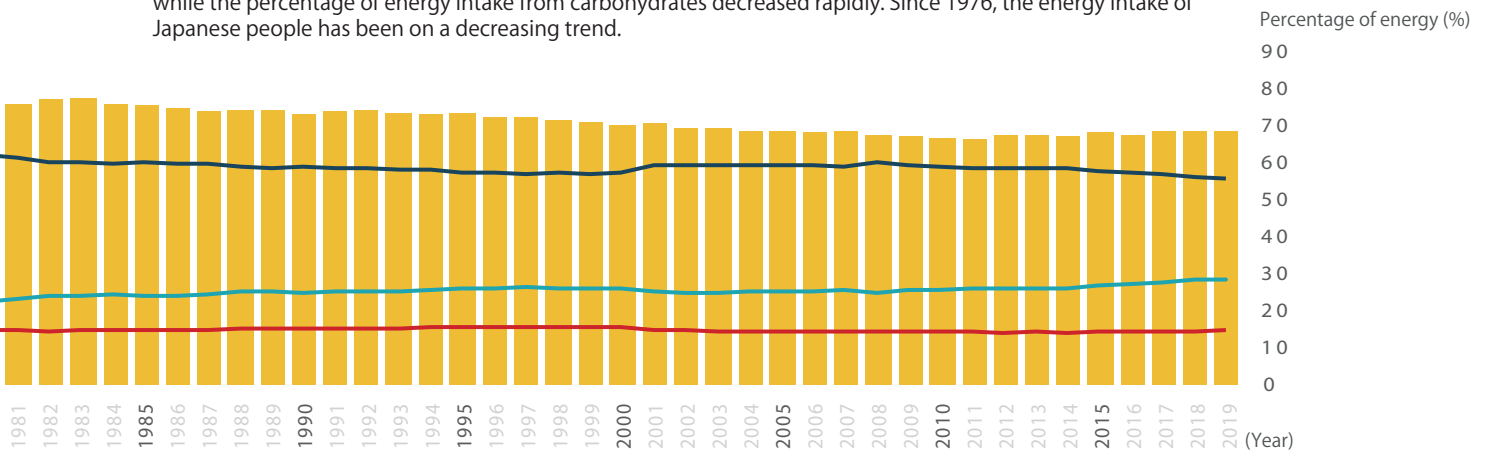
After the end of WWII, Japan achieved rapid economic growth and in 1968, it became the second largest economic power in the world. The proportion of the age group under 15 years old in Japanese population has been almost constantly decreasing since the early 1950s to the present. Meanwhile, the proportion of the age group 15-64 reached its peak in the early 1990s, and it has since been decreasing as well. Because of the increase of the average life expectancy that comes along with the economic growth, and the decrease of the younger population due to the decline in the birthrate, the proportion of older people in the population has increased, and as a result, Japan has become a super aging society.



constant 2015 US\$), Japan (1960-2020)"(Population) Based on "the Population Estimates (1946-2020)" of the Ministry of Internal Affairs and Communications

at and

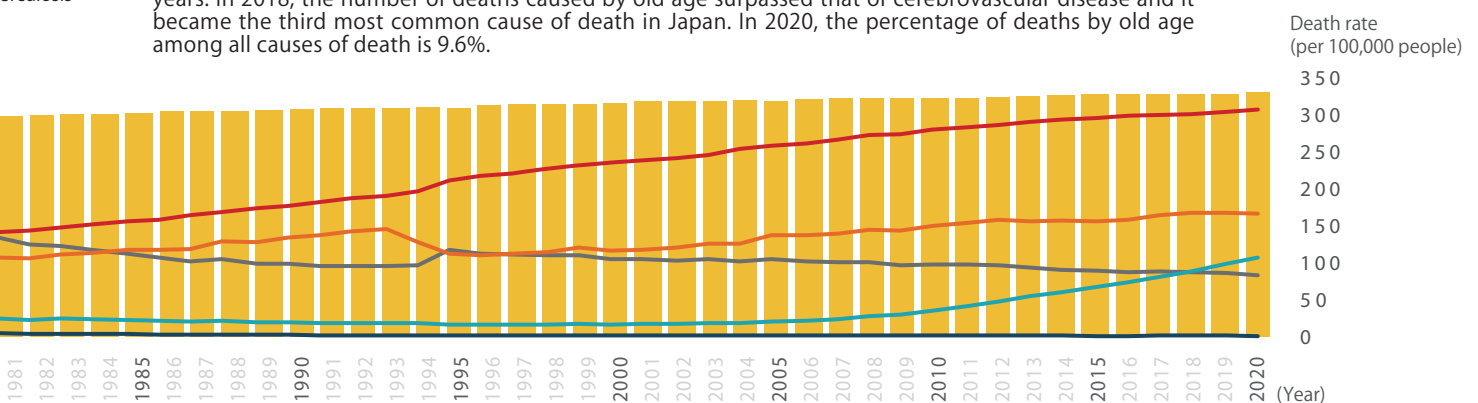
The economic growth of Japan after WWII provided its people with abundance of food. From the 1960s to 1970s, as the energy intake of Japanese people increased, their intake of protein and fat increased as well, while their intake of carbohydrates decreased. As a result, the percentage of energy intake from fat increased, while the percentage of energy intake from carbohydrates decreased rapidly. Since 1976, the energy intake of Japanese people has been on a decreasing trend.



[Source]Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1946-2019) of the Ministry of Health, Labour and Welfare

tuberculosis

In Japan, since the end of WWII, the disease structure has changed dramatically. While the number of infectious diseases such as tuberculosis has decreased because of improvements of living environment and advances in medicine, the number of cases of non-communicable diseases such as cancer and cardiovascular diseases has increased. The average life expectancy at birth of Japanese people in 2020 is 84.7 years. In 2018, the number of deaths caused by old age surpassed that of cerebrovascular disease and it became the third most common cause of death in Japan. In 2020, the percentage of deaths by old age among all causes of death is 9.6%.

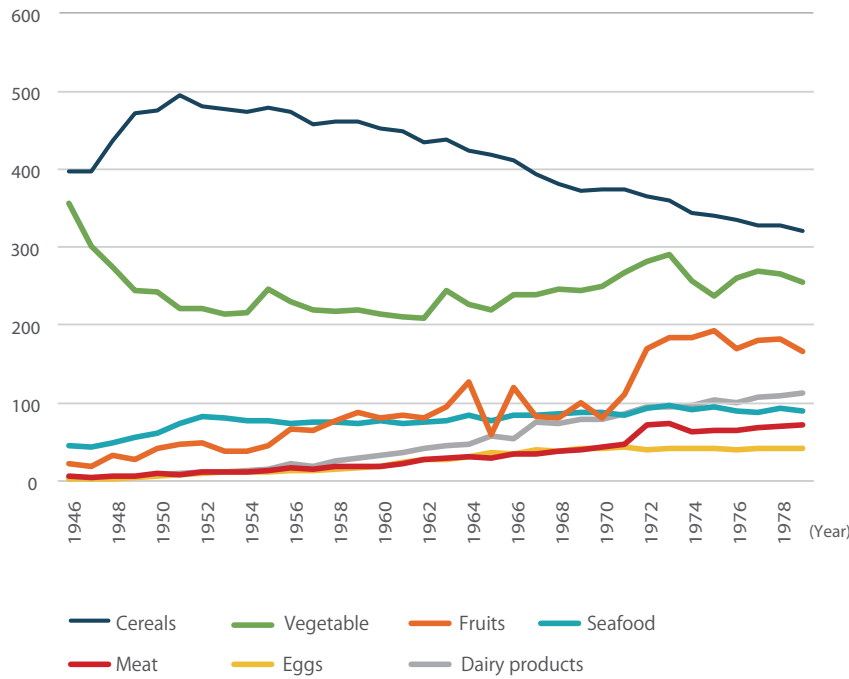


EC: Life expectancy at birth(Total), Japan (1960-2020)(Mortality rate of causes of death)Based on "the Vital Statistics Survey (1946-2020)" of the Ministry of Health, Labour and Welfare

# After experiencing food insecurity, Japan entered the era of food abundance (end of WW)

## [Foods] Transition of consumption of each food group (of people over 1 year old)

Consumption of each food group (g/day)

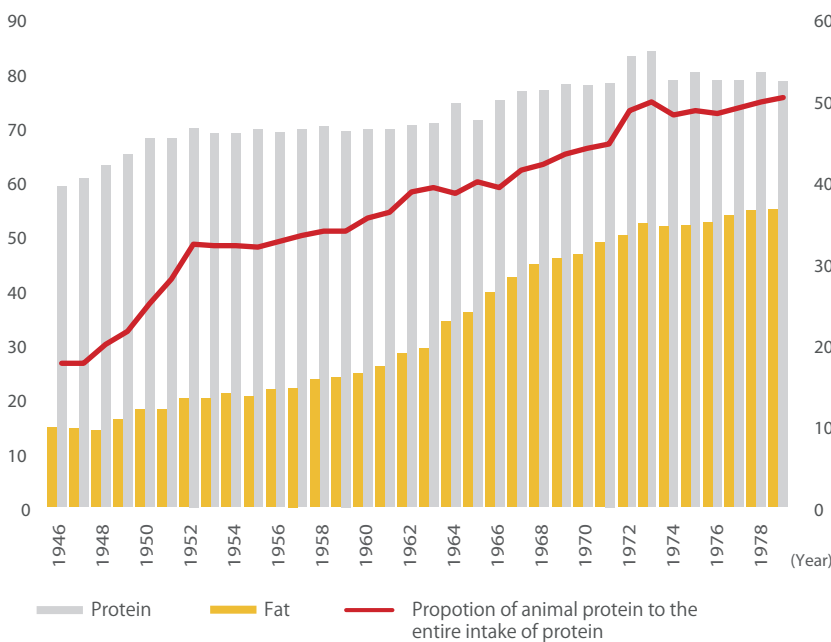


During Japan's high economic growth period, there was a change in the diets of Japanese people. That change is known as the "westernization of dietary habits". As a result, the consumption of cereals including rice decreased, and the consumption of meat and dairy products increased. Also, the consumption of fruits had significantly increased until the 1970s.

[Source]Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1946-1979) of the Ministry of Health, Labour and Welfare

## [Nutrients] Transition of intake of protein and fat (of people over 1 year old)

intake of protein and fat (g/day)



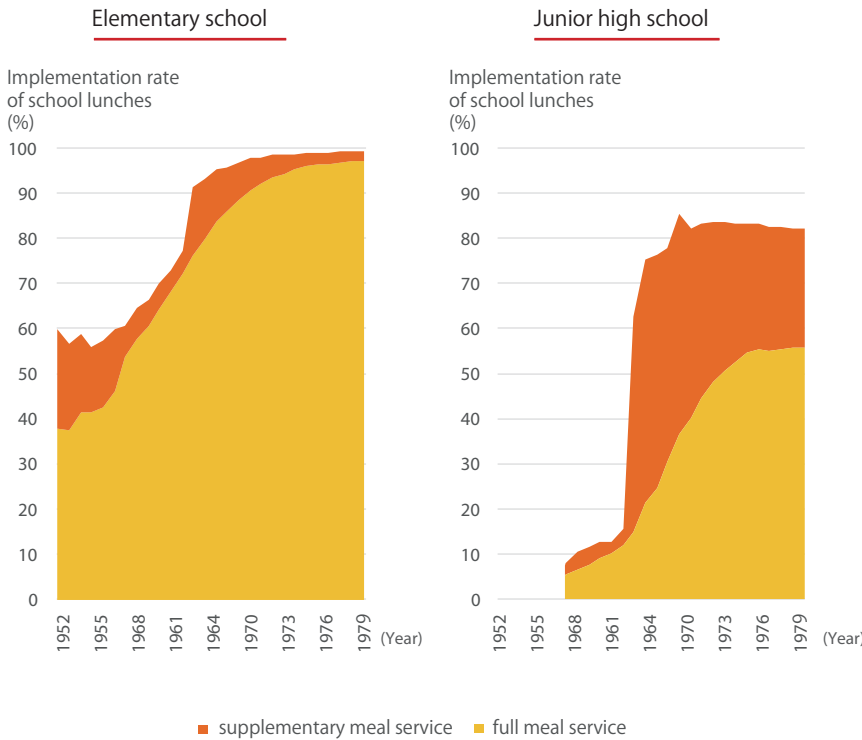
Proportion of animal protein to the entire intake of protein (%)

Since the end of WWII, the intake amounts of protein and fat have been increasing every year. Because people have a greater opportunity to eat food from animals such as meat, dairy products and eggs, the proportion of animal protein in their nutrient intake has been increasing.

[Source]Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1946-1979) of the Ministry of Health, Labour and Welfare

ll to the 1970s)

[Dietary environment] Transition of the implementation rate of school lunches



It is said that the history of Japanese school lunches started in 1889, when Chuai Elementary School, a private school in Tsuruoka Town (currently known as Tsuruoka City), Yamaguchi Prefecture started to offer meals in order to encourage poor children to enter school. In 1954, "the School Lunch Program Act" was established, and with supports such as the state subsidy for skim milk (in FY 1963), it has become common in Japan. In 1976, the implementation rate of school lunches in elementary schools was 99.4%, which was the total of the implementation rate of full meal service (97.4%) and the implementation rate of supplementary meal service (2.0%), and in junior high schools, the rate was 81.8%, which was the total of the rate of full meal service (55.7%) and the rate of supplementary meal service (26.2%).

[Source]Based on "Educational Standards in Japan (the White Paper on Education)"(1959 ed.,1964 ed. and 1970 ed.),the Ministry of Education1)"Survey of School Lunch Provision",the Ministry of Education2) 1)elementary school:1952-1969, junior high school: 1958-1969 2)elementary school: 1970-1979, junior high school: 1970-1979

[Physical] Transition of physique at school age (6 years old and 11 years old)

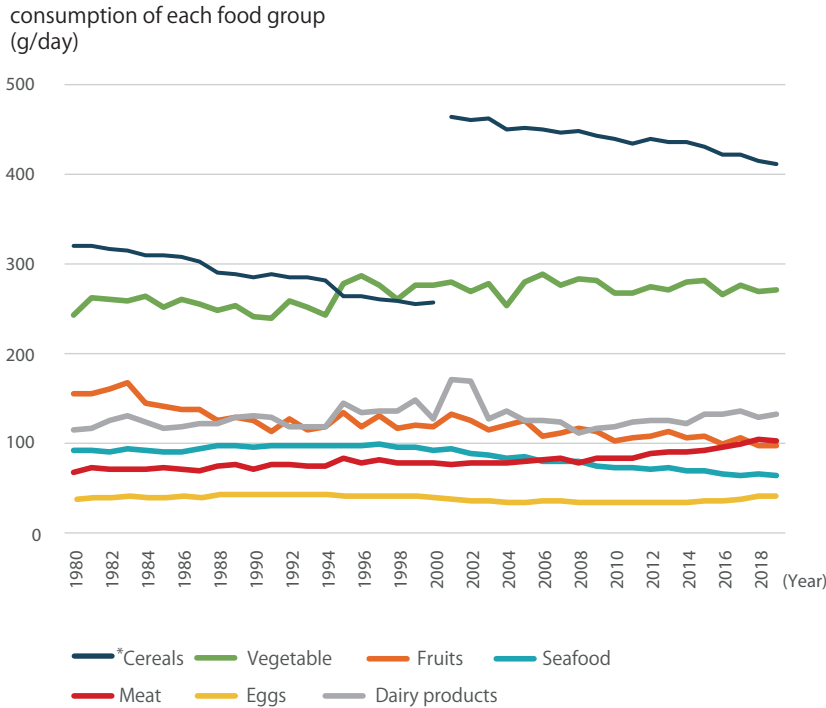


The system of school lunches was established in the era of food insecurity right after the WWII, in order to provide nutritional support to children. The average height and weight of both boys and girls at school age (specifically, at 6 years old and 11 years old) has been increasing. This shows that as the implementation rate of school lunches increases, the physique of children at school age improves.

[Source]Based on "the School Health Examination Survey" (1948-1979) of the Ministry of Education, Culture, Sports, Science and Technology

# Abundance of food have changed the health status of Japanese people (1980s to present)

## [Foods] Transition of consumption of each food group (of people over 1 year old)

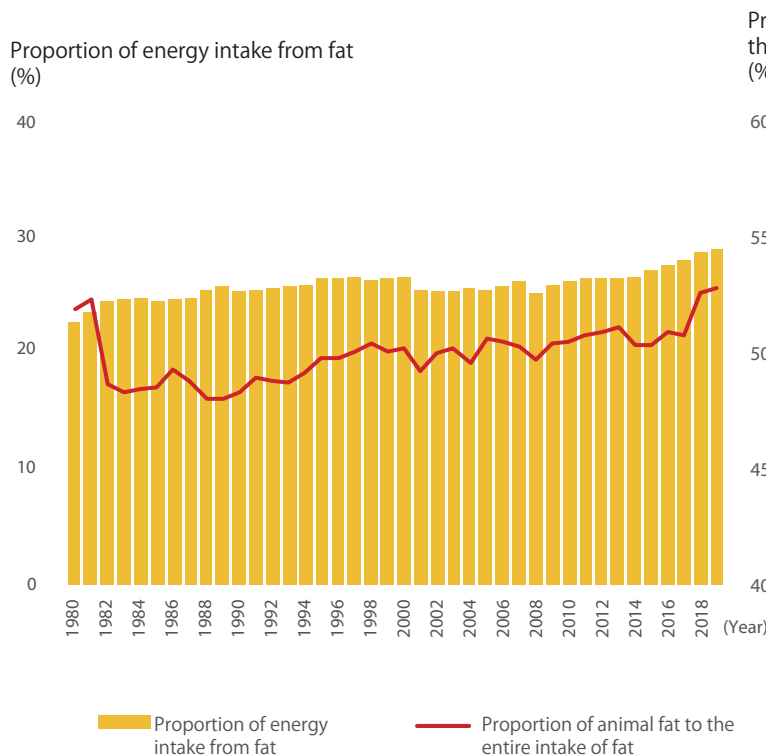


The consumption of cereals has been on a declining trend, while consumption of vegetables, meat and dairy products has been on an increasing trend. The consumption of seafood has also been decreasing every year, and in the late 2000s, the consumption of meat started to exceed the consumption of seafood.

[Source]Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1980-2019) of the Ministry of Health, Labour and Welfare

\*The calculation method for cereals was changed in 2001.

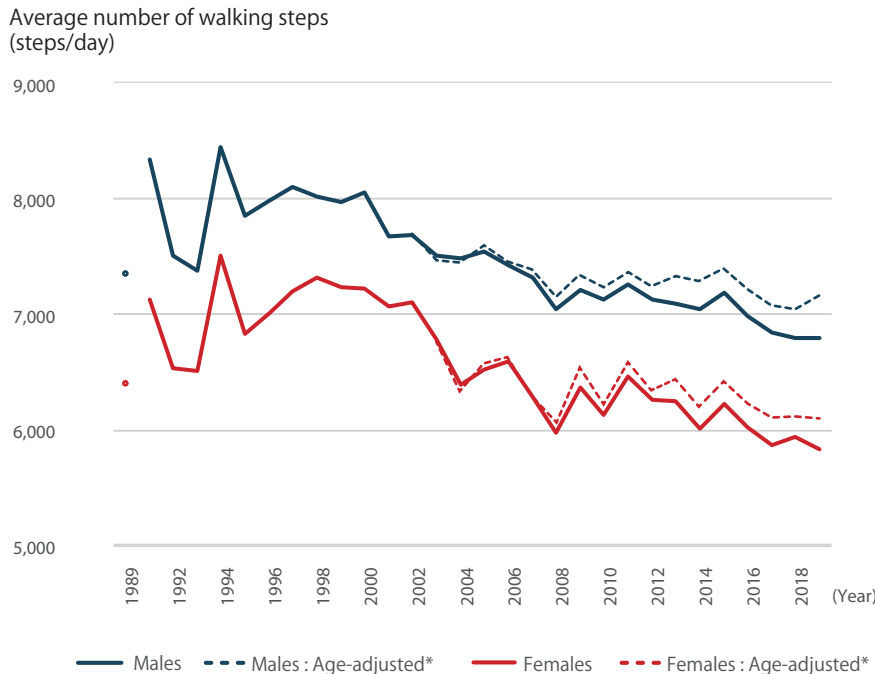
## [Nutrients] Transition of energy intake from fat and the proportion of animal fat to the total intake of fat (of people over 1 year old)



The proportion of energy intake from fat (proportion of energy intake from total fat to the entire energy intake), and the proportion of animal fat to the entire intake of fat has been increasing every year. Ministry of Health, Labour and Welfare states in "the Dietary Reference Intakes for Japanese People (2020)" that the goal (range) of the proportion of energy intake from fat for preventing life-style related diseases is 20 to 30%.

[Source]Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1980-2019) of the Ministry of Health, Labour and Welfare

**[Physical activity] Transition of average number of walking steps per day (of people over 20 years old)**

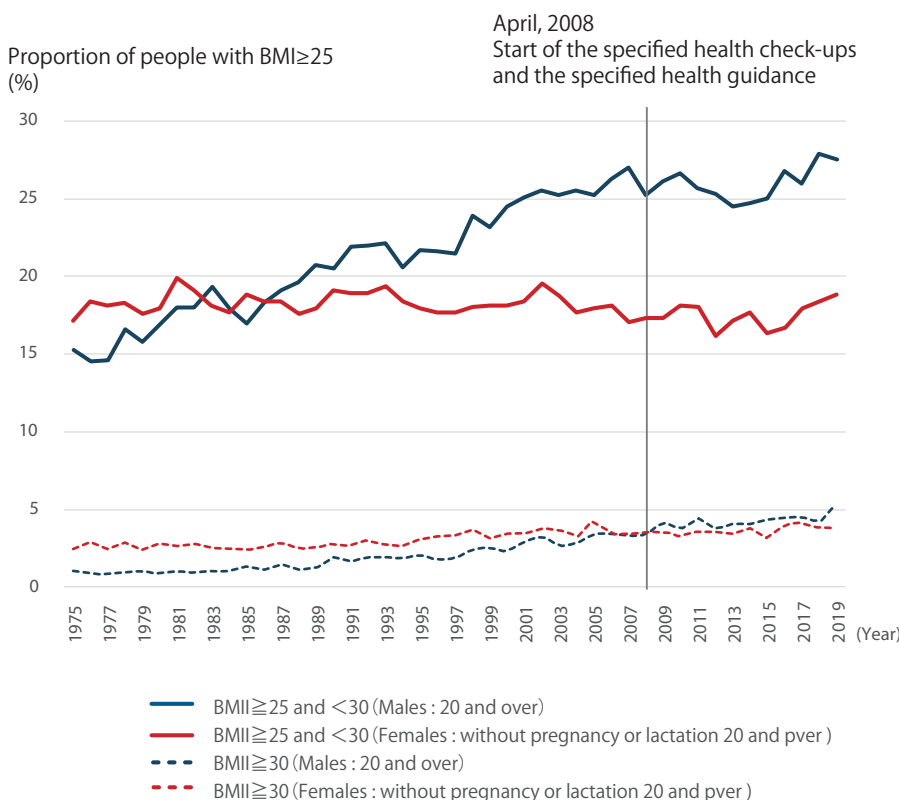


“Health Japan 21 (the second term)” of the Ministry of Health, Labour and Welfare states that in order to prevent the development of non-communicable diseases and extend healthy life expectancy, people should walk a certain distance every day. The goals of average walking distance per day are set as follows: 9,000 steps for men of 20 to 64 years old and 8,500 steps for women of the same age group; 7,000 steps for men over 65 years old and 6,000 steps for women of the same age group. Average walking distance of both Japanese males and females has been decreasing every year, and the goals have not been achieved.

[Source]Based on “the National Health and Nutrition Survey” (the National Nutrition Survey) (1989-2019) of the Ministry of Health, Labour and Welfare

\*Age-adjusted values of people over 20 years old were calculated with standard population calculated based on the National Census of 2010 (there are 6 age classifications in the standard population, which are: age 20-29; age 30-39; age 40-49; age 50-59; age 60-69; and age 70 or older).

**[Body size] Transition in the proportion of overweight (BMI>25) adults, and the effect of specified health checkup policy**

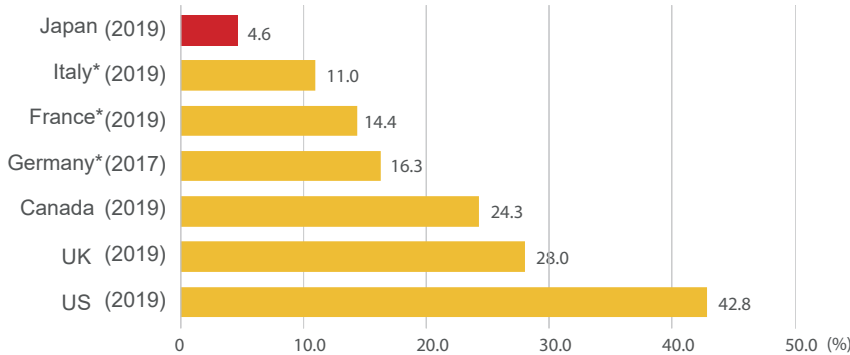


Proportion of Japanese males (over 20 years old) whose BMI is 25 or more were on an increasing trend until 2007. In April, 2008, the specified health checkups and the specified health guidance started in Japan. The specified health checkups are health checkups focusing on the metabolic syndrome. The specified health guidance is made to provide support from specialized staff (public health nurses, registered dietitian, etc.) to help those considered to be at high risk of non-communicable diseases, as a result of the specified health checkups, reconsider their lifestyle, and those expected to be likely to be able to prevent development of non-communicable diseases by improving their lifestyle. Currently, the proportion of Japanese males (over 20 years old) whose BMI is 25 or more to the entire male population is suppressed to about 35% or lower. As for females, the ratio is suppressed to about 25% or lower.

[Source]Based on “the National Health and Nutrition Survey” (the National Nutrition Survey) (1989-2019) of the Ministry of Health, Labour and Welfare

# Comparison of health issues between Japan and other countries

## Prevalence of obesity (BMI ≥30) among Japan and other developed countries

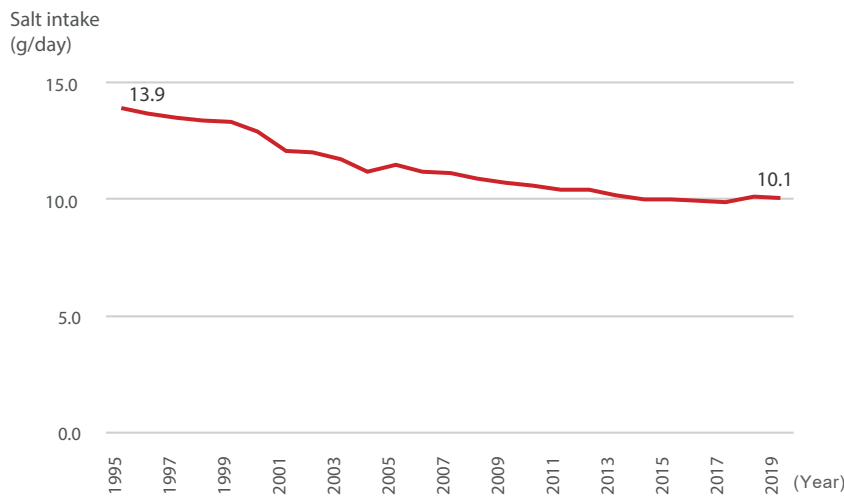


Proportion of population with obesity rate in Japan is far less than that of other developed countries.

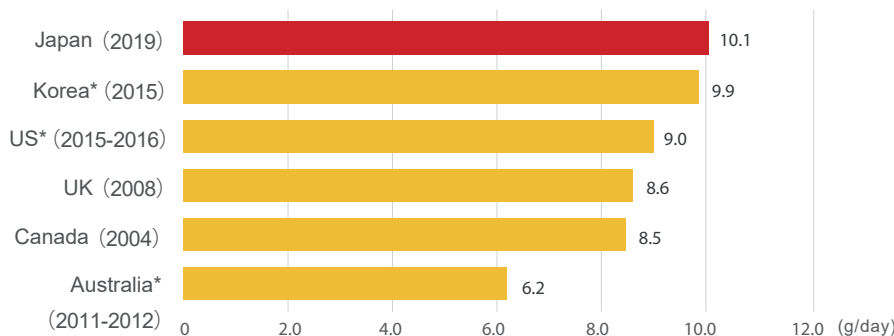
[Source]Based on OECD: [Obese population, measured (age 15+)] United States (2019), United Kingdom (2019), Japan (2019), Canada (2019) [Obese population, self-reported (age 15+)] Italy (2019), France (2019), Germany (2017)

\*data for France, Germany and Italy are based on self-reporting

## Transition of the average salt intake of Japanese people, and comparison of that with salt intake in other countries



Average consumption of salt per day among Japanese people in 2019 was 10.1g. Since 1995, it has become possible to track individual consumption of salt, and at that time, the average consumption per day was 13.9g, indicating that the average salt consumption among Japanese people has been on a declining trend over the long term. "Health Japan 21 (the second term)" of the Ministry of Health, Labour and Welfare states that the goal of salt reduction is to suppress the consumption to 8g/day, which has not been achieved yet. Meanwhile, the comparison of salt consumption with other countries shows that the consumption in Japan is usually higher than that in other countries. In fact, it is almost 2 times higher than the amount recommended by WHO (less than 5g/day)



[Source](Salt equivalent)Based on "the National Health and Nutrition Survey" (the National Nutrition Survey) (1995-2019) of the Ministry of Health, Labour and Welfare Salt intake amount of each country. Based on the National Health and Nutrition Survey in 2019 (Japan, over 20 years old); the Korean National Health and Nutrition Examination Survey, 2015 (Korea, over 1 year old); the National Health and Nutrition Examination Survey, 2015-2016. (US, over 20 years old); the United Kingdom Dietary Sodium 24 Hour Urine Sample Survey, 2008. (UK, 19-64 years old); the Canadian Community Health Survey 2.2, Nutrition, 2004. (Canada, over 1 year old); and the Australian Health Survey, 2011-2012 (Australia, over 19 years old)

\*converted from sodium content (calculation method: sodium (mg) x 2.54/1,000)

