



Viewpoint

The Japanese diet of 1975 and health promotion: What can we learn from Japan?

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Abstract

Japan has one of the longest life expectancies in the world, which is often attributed to the Japanese diet. While this diet is likely to have contributed to increased life expectancy in the past, the growing popularity of Western food may now be leading to an increase in lifestyle-related diseases in Japan. Evidence from animal and human studies suggests that the Japanese diet in 1975 was healthier and more beneficial for life expectancy than the typical Japanese diet today. Key ingredients in the 1975 Japanese diet that appear to have health benefits include fish, fruit, vegetables, seaweed, soybean products, dashi soup stock, fermented seasonings and green tea. Other distinguishing features of this diet include the 'ichijū-sansai' dining style, which involves a wide variety of ingredients and low intake of sugary beverages. Main nutrient intake in Japan was almost ideal in the 1970s, except for high salt and low calcium intake. Further exploration, development and promotion of the Japanese diet of 1975 is of worldwide interest, as it is a way to maintain good health and delay ageing.

Die japanische Ernährung von 1975 und Gesundheitsförderung: Was können wir von Japan lernen?

Japan hat eine der höchsten Lebenserwartungen weltweit, was oft auf die japanische Ernährung zurückgeführt wird. Während diese Ernährung in der Vergangenheit wahrscheinlich zu einer höheren Lebenserwartung beigetragen hat, könnte die wachsende Beliebtheit westlicher Lebensmittel nun zu einem Anstieg lebensstilbedingter Erkrankungen in Japan führen. Erkenntnisse aus Tier- und Humanstudien deuten darauf hin, dass die japanische Ernährung im Jahr 1975 gesünder und für die Lebenserwartung vorteilhafter war als die typische japanische Ernährung heute. Zu den wichtigsten Bestandteilen der japanischen Ernährung von 1975, die offenbar gesundheitliche Vorteile bieten, gehören Fisch, Obst, Gemüse, Algen, Sojaprodukte, Dashi-Brühe, fermentierte Würzmittel und grüner Tee. Weitere charakteristische Merkmale dieser Ernährung sind der Essstil „Ichijū-Sansai“, der eine große Vielfalt an Zutaten vorsieht, sowie der geringe Konsum zuckerhaltiger Getränke. Die Nährstoffaufnahme in Japan war in den 1970er Jahren nahezu ideal, abgesehen von einem hohen Salzkonsum und einer geringen Kalziumzufuhr. Die weitere Erforschung, Entwicklung und Verbreitung der japanischen Ernährungsweise von 1975 sind von weltweitem Interesse, da sie einen Weg darstellt, die Gesundheit zu erhalten und den Alterungsprozess zu verlangsamen.

健康づくりと1975年の日本の食生活：日本から何を学ぶことができるか？

日本は世界でも最高水準の平均寿命を誇っており、日本人の食生活がしばしばその要因として挙げられる。かつてはこの食生活が平均寿命の延伸に寄与していたと思われるが、現在では洋食人気の高まりが日本における生活習慣病の増加を招いている可能性がある。動物と人間を対象とした研究の結果から、1975年の日本の食事は今日の典型的な日本の食事よりも健康的であり、平均寿命を延ばしていたことが示唆されている。1975年の日本の食卓にのぼる、健康に良い効果をもたらすと思われる主な食材には、魚、果物、野菜、海藻、大豆製品、出汁、発酵調味料、緑茶などが挙げられる。この食生活のその他の特徴としては、多種多様な食材を取り入れる「一汁三菜」という食形式や、糖分が入った飲料の摂取量が少ないことがある。1970年代の日本の栄養素摂取量は、塩分摂取が多いこととカルシウム摂取が少ないことを除けばほぼ理想的であった。1975年の日本の食生活は健康を維持し、老化を遅らせる一つの方法であり、そのさらなる研究、発展、普及は世界中の関心を集めている。

Keywords: Japanese cuisine; Japanese diet of 1975; Health; Ageing; Life expectancy; Public health.

Japan is renowned for having one of the highest life expectancies in the world. This may be partly related to the Japanese diet. In the 20th century, it evolved from a subsistence level in 1900 to a high standard that is matched by only a few other countries worldwide (FAO, 2011). At the end of the 1940s, Japanese life expectancy at birth was around 50 years for men and 54 years for women. The diet was low in energy, protein, fat, vitamins and minerals, resulting in widespread nutritional deficiencies. This led to high infant mortality rates and a high prevalence of tuberculosis and other infectious diseases, resulting in low life expectancy (Nakamura, 2022). However, rapid economic growth since the 1950s has improved the nutritional situation in Japan, with the country now ranking at the top of the global life expectancy table for both males and females. In 2016, life expectancy at birth was 81.1 years for men and 87.1 years for women (Tsugane, 2021). Furthermore, the Japanese population enjoys an exceptionally high *healthy* life expectancy, defined as the period of life spent free from major illness or disease (72.6 years for men and 76.9 years for women in 2016) (Tsugane, 2021). In 2013, Japan attained the world's highest life expectancy and longest healthy life expectancy (Murray et al., 2015). While Japan's extended life expectancy is primarily the result of improved living standards and advances in medical care, the impact of the Japanese diet has also sparked global interest (Lange and Nakamura, 2024; 2025a; 2026a). However, the Japanese diet has evolved over time, with a continuous trend towards westernisation evident in the decline of plant-based food and fish consumption as well as the increased consumption of bread, dairy products, animal-based foods, and oils (Murakami et al., 2018). Many believe that the growing popularity of Western food and eating habits in Japan is contributing to a significant increase in lifestyle-related diseases. This raises the question of how long the trend towards healthy longevity will continue.

While numerous studies have examined the impact of particular components of the Japanese diet on physical and mental health (Lange, 2022; Lange and Nakamura, 2025b, 2026b; Lange et al., 2022a, 2022b; Wang et al., 2022), few have considered the diet as a whole. Investigating the long-term health effects of diets in humans requires analysing dietary habits over many years. In epidemiological studies, scientists can observe associations between diets and health-related parameters over extended periods. However, they cannot control exposure and establish cause-and-effect relationships. Randomised controlled intervention trials, in which participants are randomly assigned to different diets, are considered the gold standard for investigating the causal effect of diet. As it is not feasible to conduct such trials on humans in order to investigate the long-term health effects of diet, animal experiments are required to assess the impact of diet over the entire lifespan. The effects of Japanese diets on health and life expectancy have therefore been examined in several rodent studies.

A feeding trial in rats examined various health indicators following exposure to typical Japanese and American diets from the late 1990s (Tsuduki et al., 2008). Japanese and American

meals were prepared, freeze-dried, and homogenised before being fed to two groups of rats for three weeks. Compared to those on the American diet, rats on the Japanese diet showed increased expression of liver genes associated with carbohydrate and lipid metabolism, and decreased expression of stress-response genes. The Japanese diet group also had lower blood lipid levels and less visceral fat (Tsuduki et al., 2008). Thus, the Japanese diet led to an accelerated metabolism and a reduced risk of obesity. As the ratios of carbohydrates, fats, and proteins were similar in both diets, the different outcomes may be related to qualitative differences, such as the primary sources of carbohydrates (e.g. rice versus wheat) and protein (e.g. fish, soybeans, or meat). In conclusion, the Japanese diet appeared to offer greater health benefits than the American diet.

The prevalence of non-communicable diseases in Japan has increased as dietary habits have become more westernised over the last few decades. This calls into question the health benefits of the modern Japanese diet. In order to determine the most effective diet for maintaining good health, the contents of Japanese dietary patterns from different years were examined. Typical Japanese diets from 1960, 1975, 1990 and 2005 were recreated in powdered form and fed to mice for eight months (Honma et al., 2013). The 1975 Japanese diet was found to be the most beneficial. It suppressed the accumulation of visceral and liver fat as well as hyperglycaemia. Furthermore, it promoted gene expression associated with high energy expenditure, enhanced triglyceride degradation, suppressed fatty acid synthesis and increased cholesterol catabolism (Honma et al., 2013). Compared to the other groups, mice fed the 1975 Japanese diet exhibited reduced white adipose tissue weight and increased gene expression related to glucose and lipid metabolism (Kitano et al., 2014). These animal studies suggest that traditional Japanese cuisine is more effective than modern diets in preventing obesity and metabolic syndrome.

Another rodent study examined the impact of Japanese diets on ageing and life expectancy (Yamamoto et al., 2016). Four groups of mice were fed a standard laboratory diet supplemented with 30% Japanese food from the years 1960, 1975, 1990 or 2005 throughout their lifetime. The mice were all reared until their natural death in order to determine the average lifespan of each group. At 24 weeks, the groups were similar in terms of physical ageing. However, by 48 weeks, the signs of ageing were more pronounced in the 2005 group than in the 1975 and 1990 groups. Ageing progressed most slowly in the 1975 group. In terms of learning and memory, the four groups showed little difference at 24 weeks. However, by 48 weeks, the 1975 group demonstrated less memory and learning impairment than the 2005 group. Comparisons of the average lifespan of the 2005 diet group with that of groups fed previous Japanese diets revealed that the 1975 diet group had a significantly longer lifespan. The 1990 group also tended to have a longer lifespan than the 2005 group (Yamamoto et al., 2016). In conclusion, these findings suggest that the 1975 diet is more effective at preserving cognitive function and extending the lifespan of mice than the modern Japanese diet.

It remains to be established whether the positive health outcomes of the Japanese diet in 1975 apply to humans. The available evidence supports the findings of the above-described animal studies. In a randomised controlled trial, the effects of the 1975 diet were compared with those of a modern Japanese diet in young adults (Sugawara et al., 2018). After consuming their respective diets for four weeks, statistically significant reductions were found in body weight, body fat mass, body fat percentage, serum triglyceride levels, and serum low-density lipoprotein ('bad') cholesterol levels in humans (Sugawara et al., 2018). Another randomised controlled trial showed that the 1975 diet significantly reduced body mass index, fat mass, and low-density lipoprotein cholesterol levels while increasing high-density lipoprotein ('good') cholesterol levels compared to a modern diet (Asano et al., 2019). These findings suggest that the 1975 Japanese diet has beneficial effects on human lipid metabolism and may reduce the risk of obesity. In summary, the available human research suggests that the traditional Japanese diet of 1975 is healthier than the typical Japanese diet today.

The role of the gut microbiota in the health benefits of the traditional Japanese diet of 1975 was investigated in young adults. A randomised controlled trial analysed the faecal microbiota composition after consuming either the 1975 Japanese diet or a modern Japanese diet three times a day for four weeks (Kushida et al., 2019). Evaluation of the intestinal microbiota revealed significant changes in four bacterial genera following consumption of the 1975 diet. Correlation analyses revealed a relationship between these changes and reductions in biological parameters indicating a higher risk of lifestyle-related diseases (Kushida et al., 2019). Therefore, changes in intestinal bacteria may contribute to the health benefits of the 1975 Japanese diet.

This raises the question of which elements of the 1975 Japanese diet are critical regarding health and life expectancy. Using mass spectrometry and principal component analysis, Iwagaki et al. (2017) identified components of this diet that were particularly prevalent in 1975, but less so in 1960, 1990, and 2005. These components were found in the following foods: histamine (fish); histidine (dried bonito); naringin (fruit); pyridoxamine (vegetables); catechin (fruit, tea); chromium (seaweed, seafood); boron (seaweed); isoleucine (dried bonito); arachidonic acid (fish); glycitein (soybean foods); stearidonic acid (fish); daidzein (soybean foods); tyramine (fermented foods); and leucine (dried bonito).

Research on health effects shows that the Japanese diet of 1975 is characterised by the consumption of fish, fruit, vegetables, seaweed, soybean products, dashi soup stock (made with kelp and often dried bonito), and fermented seasonings such as soy sauce. Based on the observed health benefits and increased life expectancy of mice fed this diet, a modified version incorporating more of these foods was created (Iwagaki et al., 2017). Compared to those fed the original diet, mice fed the modified diet showed significant reductions in liver total cholesterol and serum low-density lipoprotein levels as well as a downward trend in serum total cholesterol. There were also

reductions in indicators of oxidative stress and inflammation (Iwagaki et al., 2017). Modifying the 1975 diet appears to have resulted in a healthier diet. However, the relevance of these findings for humans requires further investigation.

Other attributes that distinguish the Japanese diet of 1975 from today's westernised diet include:

- Dietary diversity, typically involving a relatively large number of small dishes. The "ichijū-sansai" dining style, usually consisting of miso soup, a main dish, two side dishes, a few pickles and rice, is a good example of this. This eating style enables people to consume a variety of foods and absorb a wide range of nutrients and micronutrients.
- A high intake of legumes, green and yellow vegetables, soy products, fruit, seaweed, seafood, mushrooms, seasonings and green tea. Dairy products, eggs and meat are consumed in moderate amounts. The intake of juice and sugar-sweetened beverages is relatively low.
- Food is mainly prepared by simmering, steaming, eating food raw, boiling or grilling rather than frying or sautéing. Deep-frying can increase the energy density and fat content of food, as well as causing the loss of some nutrients (for example, a reduction in omega-3 polyunsaturated fatty acids after frying oily fish compared to eating it raw).
- Micronutrient-rich, low-calorie dashi broth and fermented seasonings such as soy sauce, miso, mirin, vinegar and sake are used to enhance the umami flavour of foods, reducing the need for excessive salt, sugar and fat.
- Very low levels of trans fatty acids are present due to the emphasis placed on whole and minimally processed foods rather than on hydrogenated oils or commercially baked goods. This reduces the risk of metabolic syndrome (Dorfman et al., 2009; Lange, 2017a).

By the end of the 1970s, the intake of the main nutrients in Japan had almost reached an ideal level, with the exception of too much salt and insufficient calcium. In addition, the consumption of a relatively large variety of foods may be related to longevity in Japan, since dietary diversity has been found to be inversely associated with all-cause mortality (Kobayashi et al., 2020).

Salt intake is a critical dietary factor in Japan. Historically, it was extremely high, primarily due to food preservation methods (Sakata and Moriyama, 1990). Excessive salt intake is a concern as it increases the risk of hypertension, cardiovascular disease, stroke and stomach cancer (Strazzullo et al., 2009; Takachi et al., 2010). Stroke was the leading cause of death in Japan in the 1950s, with the highest stroke-related death rate worldwide (Marmot and Smith, 1989; Fujishima, 1996). However, the increased availability of fresh food and refrigeration has reduced the consumption of salt-preserved food. Consequently, stroke mortality decreased by 70% between 1960 and 1990 (Shimamoto et al., 1996). Furthermore, an inverse correlation has been found between the consumption of green and yellow vegetables and fresh fruit, and stroke mortality (Sauvaget et al., 2003; Takachi et al., 2008; Nagura et al., 2009). In Japan, consuming highly salted foods is a major risk factor for gastric

cancer. Although stomach cancer rates in Japan have declined in recent decades, the disease remains a leading cause of cancer-related deaths (Tsugane et al., 2004). Japan's relatively high salt intake, which exceeds the current recommended daily intake (Ikeda et al., 2025), is a continuing issue that requires further public health measures.

Traditionally, the Japanese have not consumed milk or dairy products, and their intake of these foods is much lower than in Europe and North America. Consequently, calcium deficiency is common, with the average calcium intake in both traditional and modern Japanese diets often falling short of national recommendations. These diets mainly rely on sources such as small fish eaten with bones, soybean products, and vegetables (Higashiguchi et al., 2010). As chronic low calcium intake plays a central role in the development of age-related reductions in bone mass and osteoporosis, an adequate calcium supply is essential (Fujita, 1990). Therefore, public health strategies are needed to effectively reduce fracture risk in populations with a lower baseline calcium intake.

While improved hypertension treatments may be responsible for the decline in cardiovascular mortality in Japan, dietary changes, such as balancing fish and meat consumption, could also have played a part. In the past, a lack of meat in the Japanese diet could theoretically have contributed to cerebrovascular mortality. Meat consumption was banned for centuries and remains relatively low today. High intake of saturated fatty acids (e.g. from meat and dairy products) has been linked to an increased risk of arteriosclerotic cardiovascular disease (Maki et al., 2021). Furthermore, consuming large quantities of processed red meat has been associated with an increased risk of stroke (Yang et al., 2016). However, Japan's stroke rate fell when its population began to eat small amounts of meat. Too little meat intake may be problematic since meat provides the necessary cholesterol to maintain the integrity of blood vessel walls. Higher rates of haemorrhagic stroke (intracerebral bleeding due to ruptured blood vessels) have been observed in vegetarians than in non-vegetarians (Kinjo et al., 1999; Takeya et al., 1984; Tong et al., 2019). Therefore, while meat and dairy products are necessary for maintaining robust blood vessels, they should not be consumed in such large quantities that arteries become occluded due to high cholesterol levels and arteriosclerosis (Tsugane, 2021). A meta-analysis of prospective cohort studies supports this view, revealing an association between red meat consumption and ischaemic stroke (caused by blocked arteries), but not haemorrhagic stroke (Yang et al., 2016). Thus, the Japanese may have promoted health and gained longevity by balancing their diets. The average intake of trans fatty acids in Japan remains low, falling well below the maximum recommended by the World Health Organization (Yamada et al., 2010). However, the increasing consumption of highly processed foods among Japanese adults and children is a cause for concern (Shinozaki et al., 2023, 2025). Numerous studies have shown that highly processed foods are associated with adverse health effects such as cardiometabolic disease, cognitive impairment in old age, mental health issues and

increased all-cause mortality (Lane et al., 2024). As these foods account for at least one-third of Japanese adults' total energy intake (Shinozaki et al., 2023), reducing their consumption could be an effective public health strategy for improving diet quality.

Maintaining a healthy weight and avoiding obesity are important for good health throughout life. It has been argued that the relatively modest daily food energy intake in Japan is more important than the composition of the diet. Reducing energy intake has been shown to increase the lifespan of many animal species (Anderson et al., 2009). The reduced calorie intake in Okinawa over extended periods of time is thought to contribute to its high life expectancy compared to other regions in Japan (Willcox et al., 2007). Thus, the lower prevalence of being overweight or obese in Japan compared to other G7 countries likely delays the onset of age- and diet-related diseases (NCD Risk Factor Collaboration, 2017).

Older adults in Japan today were adhering to the Japanese diet of the 1970s when they were middle-aged. Thus, they enjoyed a healthy diet at an age when people become susceptible to chronic, lifestyle-related diseases. However, Japan's exceptional life expectancy may be approaching its peak and may not be maintained in the future, since younger generations consume a modern diet and lifestyle diseases such as diabetes are on the rise. Therefore, the outlook for life expectancy in Japan is uncertain. Nevertheless, timely public health interventions could reinstate the health benefits of the 1975 Japanese diet.

While diet is undoubtedly important for health, other lifestyle factors also need to be considered (Nyberg et al., 2020). One such factor is regular physical activity (Lange, 2017b, 2023, 2024, 2025), which is generally more prevalent in Japan than in many other countries (Inoue et al., 2020; Lange and Nakamura, 2025c). Therefore, future research should investigate the interaction between diet and other lifestyle factors.

In conclusion, interest in the Japanese diet has increased globally due to its potential health benefits, such as reduced total mortality and increased life expectancy. However, as dietary habits in Japan have changed since the 1950s, the question arises as to which version of the Japanese diet provides the best health outcomes. Available evidence suggests that the Japanese diet of 1975 is superior to the typical westernised diet consumed today, with the intake of main nutrients reaching an almost ideal level. It is characterised by high dietary diversity, with high intakes of vegetables, legumes, fruit, seafood and seaweed, and modest intakes of meat, milk and dairy products. Flavour relies on dashi broth and fermented seasonings, while refined sugar and salt intake is kept low. Cooking methods focus on steaming, simmering and eating food raw to preserve its nutritional value, rather than deep-frying. The 1975 diet appears to improve lipid profiles, reduce body fat, and lower the risk of chronic illnesses such as diabetes and non-alcoholic fatty liver disease, thereby potentially promoting longevity in Japan. Further exploration, development and promotion of the Japanese diet of 1975 could help to maintain good health and delay ageing worldwide.

Conflict of interest

The authors declared no conflict of interest.

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