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What Are the Benefits of Having a Balanced Diet?

How is having a balanced diet related to our health? Here's what we found out based on studies conducted with Japanese people.



Benefits of Having a Balanced Diet



- Meals consisting of staple food, a main dish and side dishes are related to a balanced diet.
- There are dietary patterns that are associated with a reduced risk of illness.
- A well-balanced diet is associated with longevity.

What does a meal consisting of staple food, a main dish, and side dishes look like?

Side dishes

Vegetables, potatoes, beans (excluding soybeans), mushrooms, seaweed, etc., which serve as the source of various vitamins, minerals and food fiber



Main dishes

Meat, fish, eggs, soybeans and soy products, which serve as the source of protein



Staple dishes

Carbohydrate sources such as rice, bread, noodles and pasta

When making or choosing a meal, make sure to combine staple foods, a main dish, and side dishes, and your diet will be well-balanced in terms of nutrition and appearance.

Meals consisting of staple food, a main dish and side dishes are related to a balanced diet.

Studies show that meals consisting of staple food, a main dish and side dishes are related to a balanced diet.

Benefits of Having Meals Consisting of Staple Food, a Main Dish and Side Dishes

Compared to those who do not, people who often eat meals consisting of staple food, a main dish, and side dishes tend to...

- ① Take in more balanced nutrients and foods.*¹
- ② Be less prone to vitamin and other nutrient deficiencies.*²



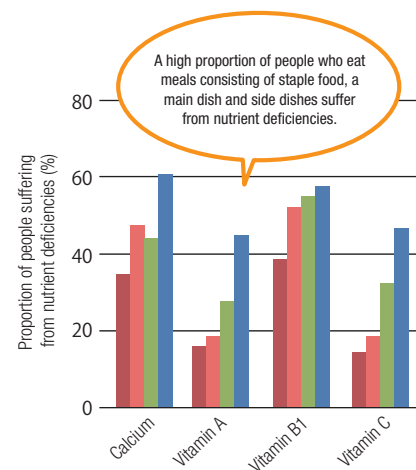
Research Note

People who have meals consisting of staple food, a main dish and side dishes less often tend to develop nutrient deficiencies!?

Who were the subjects?	299 adult males and females in their 40s and 50s working at a factory in Toyama Prefecture
What was this study about?	The study measured the number of meals consisting of staple food, a main dish and side dishes in four meal surveys (the 24-hour recall method), and examined the relationship between the number of such meals and nutrient intake.
What was found out?	The results showed that those who eat meals consisting of staple food, a main dish, and side dishes less frequently had less energy, protein-to-energy ratio, and sodium, potassium, calcium, iron, vitamin B1, vitamin B2, and vitamin C intakes. In addition, those who eat such meals less than once a day had a higher chance of suffering from a deficiency* of calcium, vitamin A, vitamin B1, or vitamin C compared to those who have more of such meals.

*Levels below the estimated average required amount shown in the Dietary Reference Intakes for Japanese (2015). Koyama T, et al. Relationship of Consumption of Meals Including Grain, Fish and Meat, and Vegetable Dishes to the Prevention of Nutrient Deficiency: The INTERMAP Toyama Study. J. Nutr. Sci. Vitaminol, 2016, 62, p.101-107 [Article No. 3]

Relationship between the number of meals consisting of staple food, a main dish and side dishes and the proportion of people suffering from nutrient deficiencies



Number of meals consisting of staple food, a main dish and side dishes per day

■ Group with the highest numbers
 ■ Group with relatively high numbers
 ■ Group with small numbers
 ■ Group with the smallest number (Less than once a day)

*1 Article No. (Balanced Diet: Staple Food, Main Dish, Side Dishes): 3, 4, 6

*2 Article No. (Balanced Diet: Staple Food, Main Dish, Side Dishes): 3, 6

The list of articles can be found here (MAFF website): <http://www.maff.go.jp/j/syokuiku/evidence/index.html>

Some dietary patterns are associated with a reduced risk of illness.

Studies show that diet is associated with diseases such as cancer and cardiovascular disease.

Benefits of a Dietary Pattern That Include a Lot of Vegetables, Fruits, Beans, Seaweeds, and Dairy Products, and a Moderate Amount of Meat

- ① It reduces the risk of developing stomach cancer, colon cancer, and breast cancer.*¹
- ② It reduces the risk of death from cerebrovascular and heart disease.*²
- ③ It reduces the risk of developing diabetes.*³



Relationship between disease and dietary patterns

Typical dietary pattern	Food groups associated with the dietary pattern (Mainly consumed food groups)	Cancer	Cardiovascular disease	Diabetes
Example: Healthy dietary pattern	Vegetables	↓	↓	↓
	Potatoes			↓
	Fruits	↓	↓	↓
	Beans (soybeans and soy products)	↓	↓	↓
	Seaweed		↓	↓
	Seafood		↓	
Example: Western-style dietary pattern	Dairy products	↓	↓	
	Meat and processed meat	↑	↑	
	Alcoholic beverages	↑		
	High-sodium foods	↑		
	Fatty foods		↑	



The healthy dietary pattern is that of people who often eat vegetables, potatoes, fruits, beans, seaweeds, seafood, and dairy products. The table shows that a dietary pattern associated with a reduced risk of diabetes mainly consists of vegetables, potatoes, fruits, beans, and seaweeds. Read the table in the same manner for cancer and cardiovascular disease.

Food groups that are often consumed in dietary patterns related to a **reduced risk of the disease** (↓) and those related to an **increased risk of the disease** (↑).

*A dietary pattern is a combination of foods determined based on the statistical analysis of the intake and frequency of foods/food groups obtained through dietary surveys. Although each dietary pattern is associated with the intake of several foods or food groups, dietary patterns are defined differently among different studies. Researchers name dietary patterns based on their characteristics when examining their relationship with diseases. Therefore, even when dietary patterns from different studies have the same name, their definitions may be different.

*1 Article No. (Balanced Diet: Cancer): 2, 5, 7, 9, 12, 14, 15

*2 Article No. (Balanced Diet: Cardiovascular Disease): 2, 4, 5, 6, 7

*3 Article No. (Balanced Diet: Diabetes): 1, 2, 5

The list of articles can be found here (MAFF website): <http://www.maff.go.jp/j/syokuiku/evidence/index.html>

A well-balanced diet is associated with longevity.

Studies show that a balanced diet is associated with a reduced risk of death.

Benefits of a Balanced Diet

Compared to those who do not, people who eat a balanced diet tend to...

- ① Have a reduced risk of death.*¹



Research Note

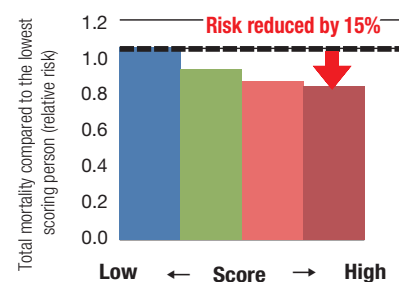
People who have a dietary pattern according to the Japanese Food Guide Spinning Top live longer!?

Who were the subjects?	Approximately 80,000 adult males and females aged 45-75 at 11 locations across Japan
What was this study about?	To evaluate to what degree people follow the Japanese Food Guide Spinning Top, a questionnaire survey was conducted to determine the frequency of food intake. The study calculated the energy intake from staple foods, side dishes, main dishes, milk and dairy products, fruits, total energy, and confectionery and beverages. The results were expressed on a 0-10 point scale for these seven categories respectively. The total score (the full score is 70 points) was used as a score to indicate the degree of compliance with the Japanese Food Guide Spinning Top ("compliance score"). The study conducted follow-up surveys over about 15 years to track changes in the compliance score.
What was found out?	The risk of mortality for the group with the highest compliance score (the group with a diet that is most consistent with the Japanese Food Guide Spinning Top) was reduced by 15% compared to the group with the lowest score (the group with a diet that is most inconsistent with the Japanese Food Guide Spinning Top).
What did a different study find out?	A study conducted with about 30,000 adult males and females in Takayama City also reported that females with higher compliance scores had a lower risk of total mortality (Oba et al. 2009).

Kurotani K, et al. Quality of diet and mortality among Japanese men and women: Japan Public Health Center based prospective study. BMJ, 2016, 352:i1209.

Oba S, et al. Diet Based on the Japanese Food Guide Spinning Top and Subsequent Mortality among Men and Women in a General Japanese Population. J Am Diet Assoc, 2009, 109(9), p.1540-7.

Relationship between compliance scores and risk of mortality



Compliance with the Japanese Food Guide Spinning Top

Having a diet that complies with the Japanese Food Guide Spinning Top will lead to longevity.

*1 Article No. (Balanced Diet: Mortality): 1, 2, 3

The list of articles can be found here (MAFF website): <http://www.maff.go.jp/j/syokuiku/evidence/index.html>

What Is a Balanced Diet?

The Japanese Food Guide Spinning Top shows the desired combination of staple foods, side dishes, main dishes, milk and dairy products, and fruits and their appropriate volume (approximate) as the number of dishes.

- In March 2000, the then Ministry of Education, the then Ministry of Health and Welfare and MAFF cooperated to formulate the Dietary Guidelines for Japanese (partially revised in June 2016).

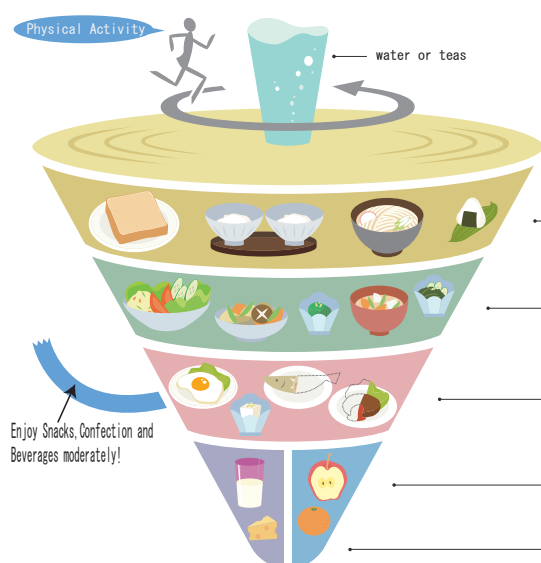


- The Dietary Guidelines for Japanese encourage people to eat a balanced diet consisting of staple foods, main dishes, and side dishes made with various kinds of ingredients. The Guidelines also state that it is important to have grains such as rice in combination with vegetables and fruits, milk and dairy products, beans, and fish.



- In 2005, the Ministry of Health, Labour, and Welfare (MHLW) and MAFF created the Japanese Food Guide Spinning Top, as a measure to link the above Guidelines to concrete actions.

- The Japanese Food Guide Spinning Top shows the desired combination of meals and the appropriate approximate volume using a spin-shaped figure to help people consider what and how much they should eat per day.



Japanese Food Guide Spinning Top

Do you have a well-balanced diet?

for one day	Example of dishes or food
5~7 Grain dishes (Rice, Bread, Noodles, and Pasta)	1sv = = = = 1.5sv = 2sv = = =
5~6 Vegetable dishes	1sv = = = = = 2sv = = =
3~5 Fish and Meat dishes (Meat, Fish, Egg and Soy-bean dishes)	1sv = = = 2sv = = = 3sv = = =
2 Milk (Milk and Milk products)	1sv = = = 2sv =
2 Fruits	1sv = = = = =

※ SV is an abbreviation of "Serving", which is a simply countable number describing the approximated amount of each dish or food served to one person

Decided by Ministry of Health, Labour and Welfare and Ministry of Agriculture, Forestry and Fisheries.