

# THE BATTLE TO REDUCE SALT AND SAVE LIVES

Overcoming Asia's major lifestyle-related killers — hypertension and stroke — is a **COMPLEX TASK THAT REQUIRES CUTTING SALT** from diets. Could alternative flavour enhancers, such as umami, or nutritional profiling systems, be part of the solution?

**Asia is one of the few regions of the world where high salt intake is a leading risk factor for mortality**, says Kenji Shibuya of the Tokyo Foundation for Policy Research, a Japanese think tank. Excessive salt intake is linked to high blood pressure, heart disease and stroke — and the World Health Organization (WHO) estimates that reducing intake could prevent nearly 2.5 million deaths each year.

"We need no more than five grams of salt a day," says Bridget Holmes, of the Food and Nutrition Division of the Food and Agricultural Organization (FAO) of the United Nations in Rome. "But currently, Asia is at about twice these levels — and east and central Asia have some of the highest intake levels globally."

Shibuya and Holmes were among 11 experts that gave talks or participated in panel discussions at the 'Healthy Eating and Nutritional Profiling in Asia' symposium held in Bangkok on 25 January. This was a satellite event of the Prince Mahidol Award Conference, which was focused on public health and climate change.

The event was organized by Ajinomoto Group — a leading global corporation from Japan focused on food, amino acids and biotechnology — in collaboration with Nature Research Custom Media, and Thailand's Mahidol University.

Interestingly, there is a different story of salt — sodium chloride — consumption in the nations of Europe and North

America, compared to those of east Asia. Diverse histories in these different regions have led to differing levels of both salt intake and sources of salt within diets.

The source of salt in some Asian countries may make the problem harder to tackle, says Shibuya. For instance, roughly 60% of dietary salt comes from processed, pre-packaged food in the United Kingdom, while in Japan, big contributors are seasonings and sauces, such as miso paste and soy sauce, which

together account for 45%.

Hence, while government and industry pushes to reduce salt in processed food have had some success at cutting salt in the UK, such measures have been less effective in Japan, where a larger proportion is added during cooking or at the table. Making progress in Asia is therefore more reliant on altering consumer behaviour, which is notoriously challenging, says Shibuya.

He and others believe that substituting salt for healthier alternative flavour enhancers —

such as monosodium glutamate (MSG), which imparts a satisfying umami savouriness; or potassium chloride salt, which tastes similar to sodium salt but has health benefits — could be part of the solution.

Shibuya cites a study in the UK published in *Food Science & Nutrition*, and co-authored by scientists including himself and Ajinomoto Group researchers, which found that when salt was replaced by MSG in specific foods, salt intake in adults could be reduced by more than 18%.



Kraisid Tontisirin, a professor emeritus with Mahidol University in Bangkok, formerly of the FAO, believes that the farming history of nations such as Thailand, led to diets packed with energy-dense rice, which helps fuel physical work, but requires salty sauces and condiments for palatability. "In poorer areas, monotonous diets of staples are often consumed. In order to eat enough staples to fulfil your energy needs, you need salty, spicy, tasty toppings," he says.

Both Shibuya and Tontisirin note that higher salt intake continues to be correlated with lower socio-economic status, highlighting the importance of cheap and accessible solutions to salt reduction.

#### IMPORTANCE OF TASTE

Pichet Itkor, with Singapore-based industry group the ASEAN Food and Beverage Alliance, says there is a need for strong industry participation alongside government regulation to reformulate packaged foods, such as instant noodles, in ways that consumers will accept.

Rather than just healthy, foods must also be tasty or consumers will not buy them, he explains. He also says that while Thailand has taxes on high-sugar beverages, there is a greater range of foods that use salt to enhance flavour. For this reason, he argues that introducing taxes on high-salt foods, to force industry's hand, is not an effective approach.

Salt not only enhances food palatability, but helps preserve it, points out Naoko Yamamoto, with the International University of Health and Welfare in Tokyo and a former assistant director-general of the WHO. She argues that furthering government support for small food producers in Japan and elsewhere could increase the

## HEALTHY EATING AND NUTRITIONAL PROFILING IN ASIA

**THIS SATELLITE EVENT OF THE PRINCE MAHIDOL AWARD CONFERENCE** was held on 25 January 2023 in Bangkok, Thailand.

**Opening address:** Chalot Santivarangkna, *Director of the Institute of Nutrition, Mahidol University, Bangkok*

**Keynote presentation:** Thanawat Tiensin, *Director, Animal Production and Health Division (NSA), Food and Agriculture Organization of the United Nations (FAO), Rome*

#### Panel 1 — Healthy eating in Asia:

##### How can we fight excess salt intake?

Kenji Shibuya, *Research Director, Tokyo Foundation for Policy Research*

Bridget Holmes, *Nutrition and Food Systems Officer, FAO*

Kraisid Tontisirin, *Professor Emeritus, Mahidol University*

Naoko Yamamoto, *International University of Health and Welfare, Tokyo*

Pichet Itkor, *Board member of the ASEAN Food and Beverage Alliance, Singapore*

#### Panel 2 — Nutrient profiling in Asia: How can we use labelling to promote healthier diets?

Junichiro Kojima, *Executive Officer and General Manager, Institute of Food Sciences and Technologies, Ajinomoto Co., Inc., Tokyo*

Wantanee Kriengsinyos, *Institute of Nutrition, Mahidol University*

Matt Kovac, *Chief Executive Officer, Food Industry Asia, Singapore*

Hidemi Takimoto, *Department Chief at the Department of Nutritional Epidemiology of Japan's National Institutes of Biomedical Innovation, Health and Nutrition, Tokyo*

Bruce Neal, *Executive Director, The George Institute for Global Health, Sydney*

**Closing address:** Chika Morishima, *Executive Officer in charge of sustainability and communications, Ajinomoto Co., Inc.*

**MC and moderation:** John Pickrell, *Executive Editor APAC and China, Nature Research Custom Media*



▲ Top, from left: Thanawat Tiensin, Kenji Shibuya and Junichiro Kojima gave enlightening presentations at the Bangkok event. Bottom, from left: Pichet Itkor, Naoko Yamamoto, Kraisid Tontisirin, Bridget Holmes and Kenji Shibuya participated in a spirited discussion on reducing salt intake.

amount of locally produced, fresh food that people are eating, cutting preservatives.

### NUTRIENT PROFILING

One approach proven to help improve diets is food labelling — such as health star ratings — based on nutrient profiling systems that classify food according to nutritional composition.

“Some nutrient profiling models have been well received and understood, and some front-of-pack labelling has been associated with changing the behaviour of consumers in selecting products with healthier nutritional values,” says Junichiro Kojima, who heads up the Institute of Food Sciences and Technologies at Ajinomoto Co. Inc., in Tokyo.

While nutrient profiling has had some success in Europe and the US — studies, for example, show it has been effective at reducing obesity — its implementation has been patchy in Asia and many countries are still in the early stages of developing systems. Even Japan, an economic leader, is examining the feasibility of making its system more bespoke, says Hidemi Takimoto, with Japan’s National Institutes of Biomedical Innovation, Health and Nutrition.

Given the large dietary differences between the west and Asia, and even among nations within Asia, many panellists concurred that a one-system-fits-all approach is challenging.

The importance of “unique nutrient profiling models for different regions” is increasingly being realized, adds Kojima. “Diet varies in different countries and regions of the world, meaning there is a need to assess not just macronutrients, but micronutrients.”

For example, some systems not only look at quantity of protein in a diet, but source of protein and proportion of



▲ From left: Bruce Neal, Hidemi Takimoto, Matt Kovac, Wantanee Kriengsinyos and Junichiro Kojima delved into the pros and cons of nutritional profiling, moderated by Nature Research Custom Media editor John Pickrell.

different amino acids, he says, “and there is a movement to incorporate these into current nutrient profiling models.”

In his keynote presentation, Thanawat Tiensin, with the FAO in Rome, also noted that access to meat and dairy from land-based livestock is relatively low in some regions of Asia, potentially impacting levels of micronutrients, such as specific amino acids, selenium, zinc, Vitamin B12 and calcium. These therefore might be important components of Asian nutritional profiling systems, he says.

**“THE WAY FORWARD FROM A PUBLIC HEALTH PERSPECTIVE IS TO HAVE ALL THE PLAYERS AROUND THE TABLE.”**

As roughly a third of death and disability in the world is caused by “either undernutrition or overnutrition” — whatever approach used, the benefits are likely to be clear argues Bruce Neal, executive director of the George Institute for Global Health in Sydney, Australia.

“There have been a number of studies that have quantified the quality of diets using nutrient profiling methods,” he says. “You see very clear effects. The people who ate foods that profiled well do better. They’re less likely to have strokes and heart attacks and die

prematurely. So, this looks like a fundamentally solid system for making a difference.”

The benefits are so obvious, he adds, that it may be wisest for countries without such systems to rapidly implement those already proven elsewhere.

In western nations nutrient profiling systems have had some success in impacting public health via health score labelling on packaged foods. But in countries such as Thailand and Japan — where a larger proportion of the diet consists of sources such as home-cooked food and street food — there is a great need to extend profiling beyond supermarket products.

### HOME COOKING

Ajinomoto Group is tackling this issue by developing a new nutrient profiling model for foods cooked from scratch, notes Kojima. It is still in the early stages, but is designed to evaluate Japanese dishes for salt, saturated fatty acids, proteins and vegetable content.

Developing systems like this for home cooked food is important, but controlling for portion size can be problematic, agreed panellists including Wantanee Kriengsinyos, of Mahidol University’s Institute of Nutrition, who was instrumental in developing food health labelling in Thailand.

To develop nutritional profiling systems across Asia, accurate and comprehensive data is needed, but what’s

currently available is patchy and limited, say the experts.

Holmes and Tiensin concur that there are big gaps in nutrient profiling data submitted by many Asian nations to the FAO, meaning it is hard to understand the full extent of problems such as salt consumption and poor diet, as well as whether interventions have been effective.

Finding solutions to diet-related health problems in Asia will require collaboration between industry, governments, academics, health organizations and international bodies.

“The way forward from a public health perspective is to... have all the players around the table, thinking ‘What’s the problem? What are the potential technical solutions?’,” and then have governments regulate those decisions and industries implement them, says Neal.

It emerged from the day’s discussions that reducing salt alone is not enough, and that finding replacement flavour enhancers may be crucial for keeping foods tasty; and also that nutritional profiling models must be expanded beyond packaged foods to home cooking. ■

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