



## Reducing Salt (Sodium) Intake Campaign in Thailand

**Kantachuvesiri S.**

*Chairman, Thai low salt network, Renal Division, Ramathibodi Hospital, Mahidol university, Bangkok, Thailand*

The World Health Organization is currently running a project with the specific goal of reducing morbidity and mortality of the people, affected by five non-communicable diseases (NCDs) namely diabetes mellitus, hypertension, coronary heart disease, cerebrovascular accident and cancer. The 4<sup>th</sup> national health survey in Thai adults older than 15 years was carried out in 2008-2009 and revealed increased prevalence of these NCDs<sup>(1,2)</sup>. The prevalence of these diseases were reported as follows: diabetes mellitus 6.9% or 3.8 million people, hypertension 21.4% or 11.5 million people, stroke 1.1% or 0.5 million people, ischemic heart disease 1.4% or 0.75 million people, overweight/obesity 19.1% or 10 million people. In 2010, the prevalence of chronic kidney disease among Thai adults was studied nationwide by the Nephrology Society of Thailand and it was found that 17.5% or 7.6 million people were affected<sup>(3)</sup>.

Evidence has shown that salt/sodium intake in our population is higher than optimal and may contribute to common chronic diseases especially hypertension, cardiovascular disease, cerebrovascular accident (CVA) and chronic kidney disease. High sodium intake leads to high blood pressure in human and animal studies. Lower salt composition in diet (3 grams per day less of current intake of salt)

can reduce blood pressure up to 5-10 mmHg and substantially reduce cardiovascular events and medical costs<sup>(4)</sup>. The World Health Organization (WHO) also recommended that the target salt reduction should be 30% from baseline in all member states within the year 2025.

A survey of sodium chloride intake among Thais using food frequency questionnaires by the Department of Health, the Ministry of Public Health in 2009, showed that the average sodium chloride intake is 10.8 gram/day (4.3 gram of sodium). It is approximately 2.2 times higher than the current recommendation of 2 grams of sodium intake per day by WHO. Two main sources of sodium chloride for consumption are salt-containing condiments (80%) and food products containing salt (20 %). The most common source of salt-containing condiments include fish sauce, salt, soy sauce, anchovy paste, instant noodles, canned fish, seasoning powder or cube, oyster sauce, fermented fish, flavouring sauce, curry paste, black soy sauce and chilli sauce. Popular salty food consumed includes instant noodles, canned fish, steamed mackerel, chilli paste, steamed corn, meatballs, crispy pork skin, potato chips, and salted eggs.

In 2012, the Royal College of Physicians of Thailand (RCPT) and their affiliated societies including



**Figure 1** Thailand Low salt network first establishment at Royal College of Physician

the Nephrology Society and the Hypertension Society, the Ministry of Public Health including the NCD network, international health policy programs, academic sectors including the Institute of Nutrition, Faculty of Public Health, Mahidol University, Kasetsart University, Chulalongkorn University, food scientists, food and drug administration (FDA) representatives, and the Thai health promotion foundation launched a national campaign with the target of reducing fifty percent of salt intake in the population (figure 1). They collaborated and implemented the sodium reduction program that includes 1) Public health campaigns and mass media coverage 2) Research directions for dietary salt/sodium reduction and monitoring methods in the Thai population. Four specific research projects initiated by the RCPT and Thai Health were: 2.1) Networking for the reformulation of common salty food in promoting good health for Thais (led by Dr. Nednapis Vatanasuchart). 2.2) Nutritional labeling project (led by Mr Araya Rojjanawanicharkorn from Thai FDA). 2.3) Outcome and evaluation of the effectiveness of salt reduction campaign strategies among Thai people (led by Dr. Kitti Srancharoenpong, Institute of nutrition, Mahidol university) and 2.4) The development of sodium content database in commonly

consumed food for the monitoring of sodium levels and reformulation (led by Dr. Uraiporn Chittchang, institute of nutrition, Mahidol university). The outcome of these projects are meant to propel the national campaign for salt/sodium reduction one step further towards primary prevention of chronic diseases.

### Public health campaign strategy

Communication strategies through mass media such as TV spots, radio spots, newspapers, magazines and social networks were employed. With limited resources, we were able to spread the message and employ educational programs through our network by media coverage of events, and giving talks in health programs. The website of Thai low salt network ([www.lowsaltthailand.com](http://www.lowsaltthailand.com)) and facebook page was created. The TV spot was distributed over the internet in order to gain public interest, spread the message and induce people awareness. The target groups were people in all ages, policy makers, health personnel, students and teachers in schools and universities. In regard to children, the importance of a good diet for good health should be integrated into their curriculum.

The events were held in many parts of Thailand



**Figure 2** Her Royal Highness Princess Soamsawali graciously presided over the world kidney day event with the aim to raise awareness of the importance of the low salt diet.

were to educate both the population and health personnel. In March 2013, Her Royal Highness Princess Soamsawali graciously presided over the World Kidney Day event in Bangkok organized by the Thai lowsalt network and the Nephrology Society of Thailand which aimed to raise awareness of the importance of the low salt diet. This event was broadcasted nationwide on all TV channels and received much attention from the public.

The education of health personnel and health volunteers in rural areas is essential since they are responsible for the care of the majority of the population. To help them change their eating habits, there must be appropriate healthy choices for them such as low salt food menus in restaurants, street foods, and ready-meals in convenience stores.

### Food Reformulation

Our food scientists took the lead and organized meetings for nutrition experts to discuss and agree on food items to be selected for reformulation. The selected food was reformulated by adding some herbs and/or low sodium salt to maintain the original taste. These reformulated items will then be distributed to the public small restaurants and street food vendors.

Meetings with the food industry was also initiated in which some companies started to lower their sodium content in their products while some are still reluctant to reformulate due to consumer preference of high salt products. The success in food reformulation will depend on the effectiveness of campaigns. Raising public awareness would result in an increased demand of low sodium products. The logo of healthy diet approved by the Thai FDA on their shops is another strategy to boost their demands. Furthermore, we plan to expand it and create high demand for low sodium menus for hospitalized patients. This may stimulate the companies to increase their supply of low salt products and the patients will continue to consume these products at home.

### Food labelling and law enforcement

Currently the food companies are not required to display the sodium content on the food label. The law enforces the display of their nutrition contents as Guideline Daily Amounts (GDA) in only some children snacks. The activities of the Thai FDA, a part of our network, involved the survey of food products in supermarkets on the precision of food labeling, sodium content and health claims. The manufacturers were

reprimanded and corrected. They also set up a database of sodium content in their products. The result was reported to the media and will help the people to identify high salt products. We also raised people's awareness of the importance of reading food labels before purchasing. There were several meetings of experts to update on the current situation of salt labelling by the processed foods manufacturer. Food manufacturers were consulted for possible implementation of salt reduction strategies and law enforcement although they were able to defend any compulsory reduction of salt in their manufactured food.

### Policy and Advocacy

Several experts met to discuss the current policy of salt reduction and to develop advocacy tools for implementation at both the government and the public level. It is needed for the Thai FDA to regulate high sodium products either voluntary or by law. This needs strong and undisputable background knowledge and literature. A future concern is the free flow of processed foods among the ASEAN countries where there is no common law for salt labelling.

### The database of sodium content in commonly consumed diet

We developed a database of sodium content in commonly consumed food and products for the monitoring of sodium levels and reformulation. This information is needed for consumers when making food choices. The Thai FDA has pointed out that there are other forms of sodium used for food preparation such as in some bread. It adds up to a total of 12 types of sodium.

### Summary

Our low salt network has been established with the aim of reducing the prevalence of diseases related to high sodium intake in Thailand. Several strategies were employed to reach the target of a 50% reduction of salt intake among Thais. It is quite a challenge since the Thai diet contains high amounts of sodium and many Thais are addicted to salt in their daily meals. The campaign to raise awareness is the key strategy but food reformulation/labeling and regulation can also be used in complement to enable people easier access to low salt food. We hope that with this program we can accomplish the goals set and result in a more healthy lifestyles for Thais.

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