

#### Reducing Population Salt Intake to Target Non-Communicable Diseases: From Advocacy to Strategy and Policy

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### DISCLOSURES

I have no conflict of interest to report in relation to this presentation



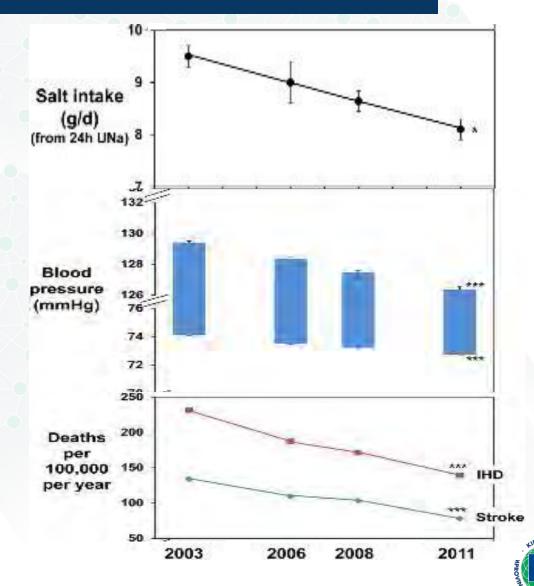
## 9 Global Targets for NCD Prevention (WHO)





### UK : Reduce Salt Consumption results in Decline in CVD and Stroke Mortality

- Voluntary salt reduction target on package food
- Food industry reluctant to comply in early state but engaged finally
- Salt intake reduction of 15% is associated with BP decline and 40% decrease in IHD and stroke



He FJ et al. BMJ Open 2014; 4: e004549.

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ESTABLISHED IN 1812

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#### Effect of Salt Substitution on Cardiovascular Events and Death

B. Neal, Y. Wu, X. Feng, R. Zhang, Y. Zhang, J. Shi,\* J. Zhang, M. Tian, L. Huang, Z. Li, Y. Yu, Y. Zhao, B. Zhou, J. Sun, Y. Liu, X. Yin, Z. Hao, J. Yu, K.-C. Li, X. Zhang, P. Duan, F. Wang, B. Ma, W. Shi, G.L. Di Tanna, S. Stepien, S. Shan, S.-A. Pearson, N. Li, L.L. Yan, D. Labarthe, and P. Elliott

> B. Neal, et al. N Engl J Med 2021; 385:1067-107



Outcomes	Salt Substitute no. of events per	Regular Salt 1000 person-yr	Rate Ratio (95% CI)	P Value
Stroke	29.14	33.65	0.86 (0.77-0.96)	P=0.006
Major Adverse CV Event	s 49.09	56.29	0.87 (0.80-0.94)	P<0.001
Death from Any Cause	39.28	44.61	0.88 (0.82-0.95)	P<0.001
Hyperkalemia	3.35	3.30	1.04 (0.80-1.37)	P=0.76

Ο



#### Thai Low Salt Network (LSN) was launched in October 2012

- Comprises of Civil Society, Academia, Consumer Protection group, The Kidney Patients Association, National Health Service and Min. of Public Health (MoPH), with technical support from Better Health Program, UK and WHO
- Funded by Thai Health Promotion Foundation, WHO, Resolve to Save Lives.
- We started from 2 prongs
  - 1. Public communication
  - 2. Research for policy advocacy





## **Example of Research Projects**

	Research Team
Food reformulation in Thai dishes	Institute of food development and research, Kasetsart University
Development of salt meter	Faculty of Engineering, Mahidol University
Food database and source of sodium	Institute of Nutrition, Mahidol University
Survey of salt in package food	Thai FDA and Kidney Patients Association
Hospital and Communities campaign	Low salt network and NCD Division, Dept. of Disease Control, MoPH

### National Health Assembly (NHA) resolution in 2015

- LSN, Disease Control Department, Mahidol Univesity, and 20 organizations proposed the national policy for sodium reduction
- In NHA, we got an endorsement with no any objection even from the industrial sector.
- LSN joined the national committee on NCD prevention, WHO CCS NCD, and Thai Kidney Disease prevention committee, Committee of Food Policy, Thai health promotion.



Thai National Strategies for Sodium Reduction 2016-2025 (Adoption from WHO guideline)





#### Thai National Strategies for Sodium Reduction, 2016-2025

- " SALTS "
- S = Surveillance
- A = Awareness
- L = Legislation and environmental reform
- T = Technology and innovation
- **S** = Scaling up stakeholder network



#### All policies are cost-saving Healthy O **Estimated impact** 888 of the policies over 10-year period Health Sodium Mandatory Food Nutrition Voluntary Communication Taxation Reformulation Labelling Subsidy Reformulation Death averted 119,208 110,173 109,053 83,244 77,962 75,578 (people) Policy cost 27 3 10 62 n/a 10 (million THB) Societal gained 70,730 61,645 60,527 34,597 29,202 26,802 (million THB) Quality-adjusted 660,121 596,005 588,049 404,361 366,680 349,664 life year (QALY) gained Cost of

sodium-related diseases without policies 2.28 trillion THB, with the majority of costs were costs of renal replacement therapy for end-stage renal disease patients





Mahidol University Faculty of Medicine Ramathibodi Hospital



#### **S** = Surveillance

# Mean Sodium Intake 3,636 mg/d (1.8 times) the WHO recommendation of 2,000 mg/d



Received: 16 October 2020 Revised: 7 December 2020 Accepted: 10 December 2020

DOI: 10.1111/jch.14147

ORIGINAL PAPER

## Estimated dietary sodium intake in Thailand: A nationwide population survey with 24-hour urine collections

Worawon Chailimpamontree MD,  $MHSc^{1,2}$  | Surasak Kantachuvesiri MD,  $PhD^{2,3}$  | Wichai Aekplakorn MD,  $PhD^4$  | Raweewan Lappichetpaiboon B.Sc,  $M.Sc^{2,5}$  | Nintita Sripaiboonkij Thokanit MPh,  $DrPH^6$  | Prin Vathesatogkit MD,  $PhD^7$  | Ananthaya Kunjang B.P.H,  $M.Sc^2$  | Natthida Boonyagarn B.Sc,  $M.Sc^2$  | Penmat Sukhonthachit M.Sc,  $Dr.P.H^8$  | Narinphop Chuaykarn B.H.E,  $M.Sc.^9$  | Patthrapon Sonkhammee B.P.H,  $M.Sc^{10}$  | Payong Khunsaard B.Sc,  $M.P.H^{11}$  | Phassakon Nuntapanich M.Sc,  $Ph.D^{12}$  | Pattaraporn Charoenbut M.Sc,  $Dr.P.H^{13}$  | Comsun Thongchai B.Sc,  $M.P.H^{13}$  | Apinya Uttarachai B.Sc,  $M.P.H^{14}$  | Wisrut Kwankhoom B.Sc,  $M.Sc^{15}$  | Fuangfah Rattanakanahutanon B.Sc,  $M.P.H^{14}$  | Krich Ruangchai B.Sc,  $M.P.H^{16}$  | Sushera Bunluesin PhD<sup>17</sup> | Renu Garg MD, MPH<sup>17</sup>

J Clin Hypertens. 2021;23:744-754



WILEY



#### High Sodium (>1,000mg/serving) in Street Food

Netrnapit Watanasuchati et al, 2017, Kasetsart University



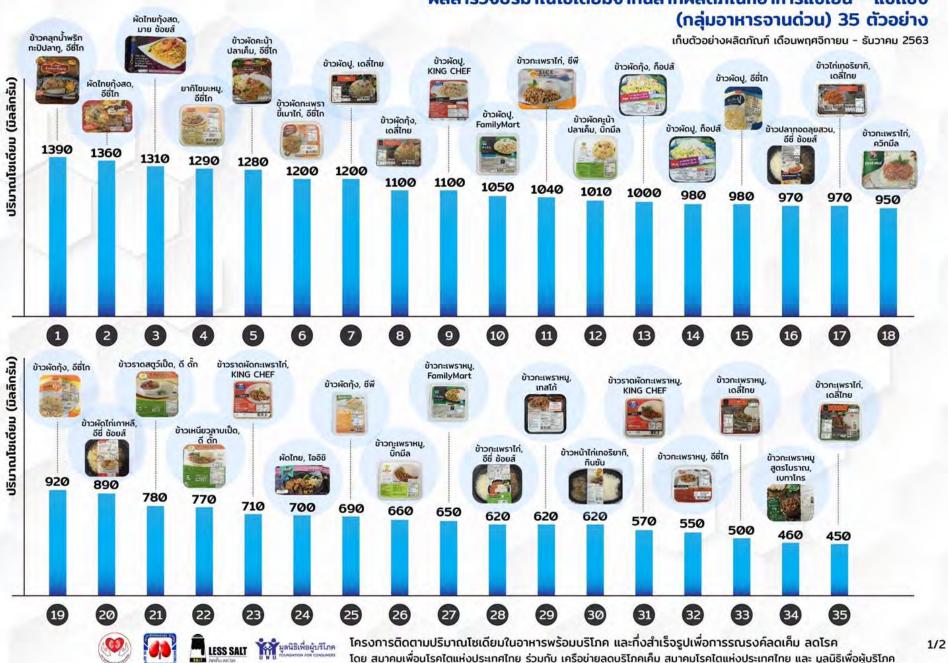


**Delivery Foods** 

#### *Som Tum* Na+ 5000mg/dish

Jindarattanaporn N et al. Int. J. Environ. Res. Public Health 2023, 20(5), 3992





High Sodium in Popular Readyto-Eat Package Meal



ผลสำรวจปริมาณโซเดียมจากฉลากผลิตภัณฑ์อาหารแช่เย็น - แช่แข็ง

#### A = Awareness

#### Event Activities in World Kidney Day

COOKING FREE CKD SCREENING HEALTH EDUCATION CAMPAIGN BY CELEBRITY





TALK ON STAGE

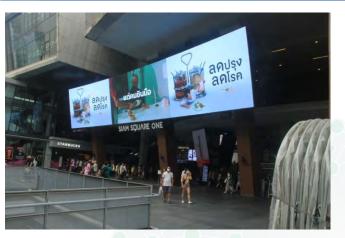
#### TV program : Less salt you can choose













#### AnUşv Anlisn Vision Vision Vincenter Vision Vision Vincenter Vision Vincenter Vision Vision



<image>

## **Advertising Media**

#### **LED and short Clip**









#### **SHORT FLIMS ON YOUTUBE**

โปรเจ็คต์หนังสั้นรณรงค์การลดบริโภคเค็ม





1 : THE INGREDIENTS มื้อพิ(ษ)เศษ คุณสินจัย เปล่งพาณิชย์ คุณปีเตอร์ นพชัย ชัยนาม





2: คำรักลิขิตบาป

คำรักลิขิตบาป คุณศรราม เทพพิทักษ์

คุณสโรชา วาทิตตพันธ์

#### WEBSITE I FACEBOOK FAN PAGE





#### WEBSITE www.lowsaltthai.com



#### Campaign Material











## Less salt spoon & Less sauce spoon



ปัจจุบันคนไทยบริโภคโซเดียมเกินมาตรฐานถึง 2 เท่า จากการปรุงอาหารรสเค็ม ส่งผลให้คนไทยเป็นโรคไต โรคหัวใจ และความดันโลหิตสูง เฉลี่ย 22 ล้านคนต่อปี เสียค่าใช้จ่ายในการรักษากว่า 98,000 ล้านบาท ตามคำแนะนำขององค์การอนามัยโลกให้คนกินโซเดียมไม่เกิน 2,000 มิลลิกรัมต่อวัน คิดง่ายๆ คือเราควรปรุงรสด้วยเกลือไม่เกิน 1/3 ช้อนชาต่อมื้อ หากเป็นน้ำปลา เราควรปรุงไม่เกิน 2/3 ช้อนชาต่อมื้อ สสส. งอแนะนำ ช้อน ปรุง ลด ช้อนที่ออกแบบมาให้คนไทย ได้เห็นภาพปริมาณเครื่องปรุงที่เหมาะสมในการประกอบอาหาร และเป็นตัวอย่างในการตักเครื่องปรุงแต่ละครั้ง เพื่อการรับรู้ถึง ปริมาณโซเดียมที่เหมาะสมในแต่ละมื้อ และต้องการให้คนไทยลดการทินเค็ม ลดการบริโภคโซเดียม โดยหวังว่าภาพจำจากการตักเครื่องปรุงด้วยช้อนปรุงลด จะทำให้คุณเปลี่ยนพฤติกรรมการปรุงด้วยช้อนชาปกติที่ใช้อยู่

\*ช้อนปรุงลดไม่มีวัตถุประสงค์ในการผลิตเพื่อเชิงพาณิชย์



# Low Sodium Cookbook











Training to develop lowsodium menu for entrepreneurs, street vendors



# Signed MOU with Chef and Restaurateur Association To develop a low salt menu











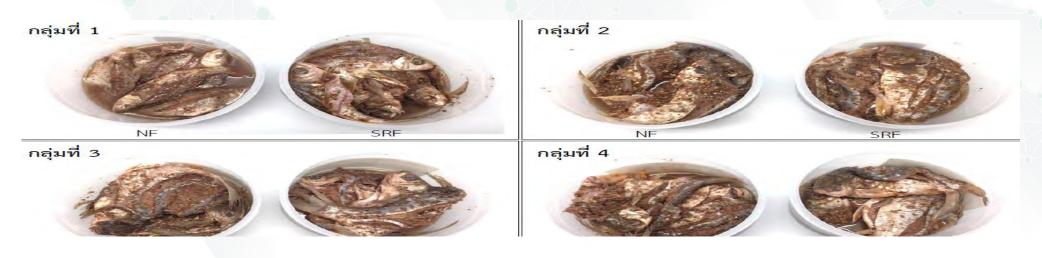




## **Less Salt Pickled Fish**



ภาพที่ 3 การอบรมการผลิตปลาร้าที่มีโซเดียมลดลง



Institute of Nutrition, Mahidol University



#### **Environmental change : 83 Low Salt Healthy Hospitals**





#### Low Salt Setting Based INTERVENTION

1 Education

Risk of high sodium intake, type of sodium

2 Reformulation

3 Environmental change

4 Salt meter

Dietary recommendation

Encourage low sodium menu in street food, in communities

Salt meter monitoring



#### Thai Salt Meter for monitoring salt content





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Received: 21 March 2021	Revised: 16 May 2021	Accepted: 31 May 2021
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DOI: 10.1111/jch.14344

#### ORIGINAL ARTICLE

#### WILEY

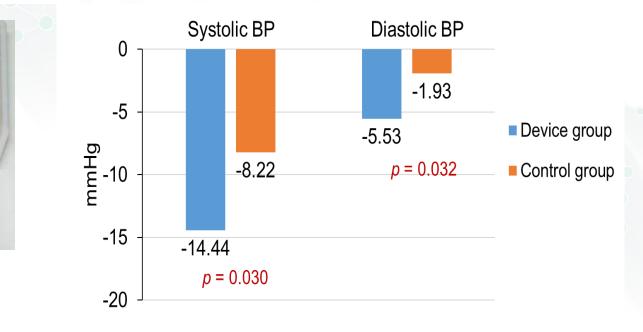
Impact of self-monitoring of salt intake by salt meter in hypertensive patients: A randomized controlled trial (SMAL-SALT)

Sirichai Wiriyatanakorn MD<sup>1</sup> Surasak Kantachuvesiri MD<sup>2</sup>

Anucha Mukdadilok MD<sup>2</sup> Chusana Mekhora MSc<sup>3</sup>

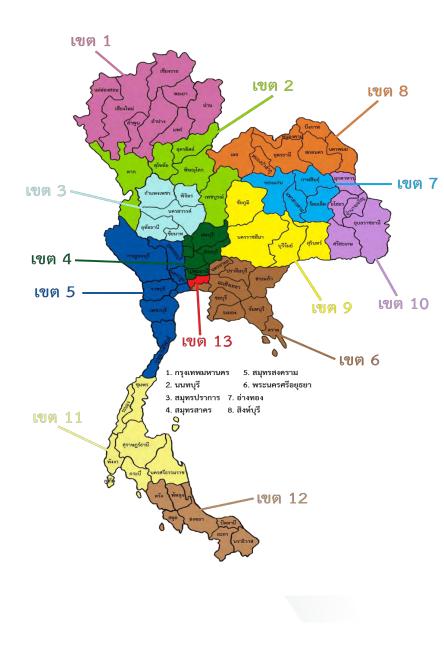
Teerapat Yingchoncharoen MD<sup>1</sup>

The use of a salt meter helps to reduce sodium intake and BP



J Clin Hypertens. 2021;1–10.





#### Less salt communities

Area: 50 pilot areas in Northern and Northeastern Thailand in 2021 Next: Every province in 2025



ົາຈຸກรรมกลุ่ม





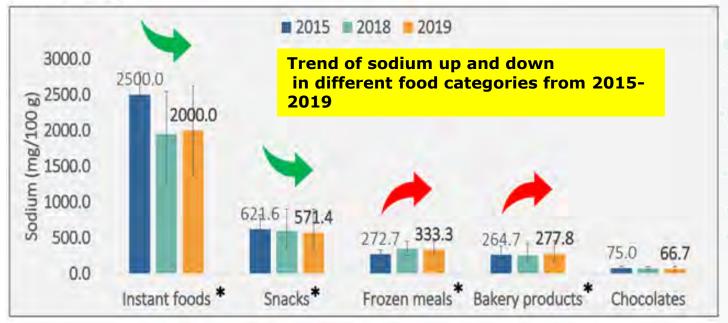
## **Reformulation in Package food**



Low salt network, FDA and WHO asked industry to voluntarily

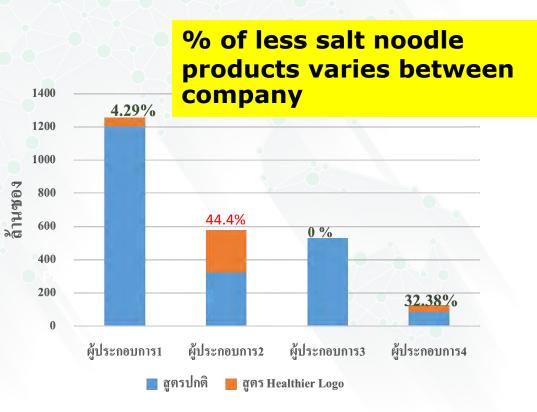
reformulate and gave healthier logo in 2017

 The median (IQR) of sodium per 100 g in packaged foods, 2015-2019 (n=7,141)



\*P-value <0.05, Wilcoxon Rank-sum test



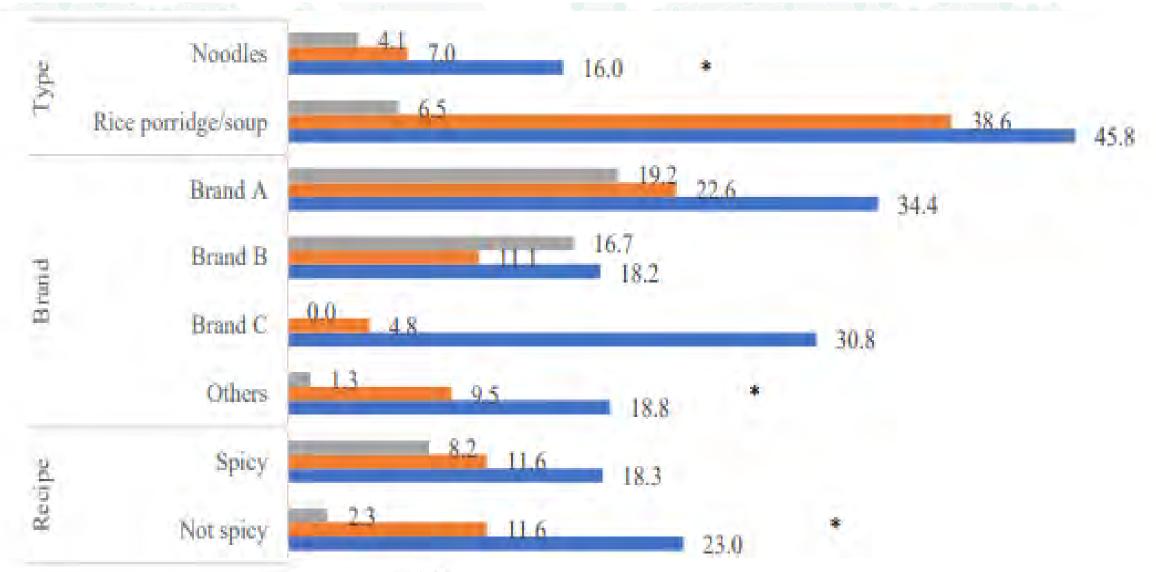


#### Nielsen Retail Index Instant Noodle 2019



NCD, IHPP, FDA

#### Increased percentage of healthier products, from 2018–2021. (\*p-value<0.05)



CHANATIP CHAILEK et al, M.P.S Fac. of Grad. Studies, Mahidol



#### **Less Sodium Condiments Available in Markets**



#### **Policy Recommendation**

- **1. Sodium Taxation Policy**
- 2. Maximum Sodium limit and warning labels





#### **Sodium Tax Policy in Thailand**

 In 2021, the excise department indicated the food products that will be the first target products of the tax are:

- 1) Instant noodles
- 2) Frozen food
- 3) Snacks
- 4) Sauces



- In 2020, the Excise Department nominated the draft of salt tax criteria to the advisory committee on NCDs.
- This draft proposed a ladder tax rate based on the amount of sodium in the product.
- The network proposed salt taxation to the minister of finance in 2021 but was postponed due to COVID, industrial interference and political issue.





# JAN 2024 THE NETWORK HAS PROPOSED SODIUM TAXATION AND LESS SALT COMMUNITIES POLICIES WITH A SALT-METER TO THE SENATE FOR CONSIDERATION.









- Public hearing on sodium tax
- Media advocacy and social media campaign
- Set maximum level and warning labels on high sodium products
- Expand the network of low-salt communities in Bangkok and provinces
- Food Procurement Policy in the organization
- Reformulation in street and industrial food



## Acknowledgement

Funding: Thai Health Promotion, Resolve to save lives, WHO CCS-NCD, Thai Kidney Foundation, National Health Service, Nephrology Society of Thailand

Technical: WHO, Better Health Program, UK. The George Institute, AU IHPP, HITAP of Thailand, Mahidol university, Kasetsart University

Civil Society: Nephrology Society, Kidney Patients Association, Consumer Protection foundation. Dietician Society, etc.



