

Ajinomoto Global SALTS (Sodium Alternatives and Long-Term Solutions) Survey

Thailand Report

Eat Well. Live Well.



AJINOMOTO © 2021

TABLE OF CONTENTS

3

Research Objectives & Methodology

5

Executive Summary

7

Detailed Findings

8	Thailand Sodium Perceptions
32	Thailand Sodium Interventions
42	Country Specific Questions (Thailand)

RESEARCH OBJECTIVES

The objectives of this study are to understand consumers' attitudes toward sodium in key global markets and identify the types of interventions companies and governments could use to reduce sodium consumption overall.

Specifically, we will:

- Determine the importance of a low-sodium diet to consumers, especially relative to their other food and health concerns;
- Explore consumers' understanding of where sodium comes from in their diets (e.g., processed foods, seasonings, etc.) and if/where misperceptions exists;
- Understand if and how consumers are currently trying to reduce their sodium intake and how effective they believe these strategies are; and,
- Identify nudges and interventions that could be successfully used to decrease sodium intake in each market.

METHODOLOGY

- 15-minute online survey conducted between August 31 – September 22, 2021

Audience	N-Size	Margin of Error
7-Country Total	N=7,090	+/- 1.2%
Americas (US & BR)	N=2,026	+/- 2.2%
Europe (UK & FR)	N=2,028	+/- 2.2%
Asia (JP, ID, & TH)	N=3,036	+/- 1.8%
United States	N=1,000	+/- 3.1%
United Kingdom	N=1,022	
France	N=1,006	
Japan	N=1,000	
Indonesia	N=1,015	
Thailand	N=1,021	
Brazil	N=1,026	

- Conducted in English, French, Brazilian Portuguese, Japanese and Thai. English was localized for UK and Indonesia.
- Includes behavioral science component, using natural language processing to analyze open-ended responses and incorporating Nudge Theory to understand how effective different interventions might be in encouraging sodium behavior change in each market.

EXECUTIVE SUMMARY

Eat Well. Live Well.



AJINOMOTO © 2021

KEY FINDINGS

1

Taste and health/nutritional value are top factors in deciding what to eat for Thai consumers, followed by shelf life and cost. There is also a strong desire for more affordable healthy food options. Compared to the 7-country total, Thai consumers are especially positive toward low-sodium food with the majority saying it's tasty, flavorful, exciting and cheap. However, 1 in 2 consider low-sodium food hard to find – suggesting this is a perception to overcome that may need to be addressed through a multi-pronged approach including increased access and consumer education.

2

Most believe eating too much sodium is bad for their health, and compared to the 7-country total, Thai consumers have greater control over sodium intake, and more are seeking low-sodium foods. Nearly half of consumers correctly identify the recommended amount of sodium, which is greater than other markets. However, close to 1 in 2 remain unaware or incorrectly identify the recommended amount and many assume that their own consumption aligns with recommendations.

3

Thai consumers are more likely than the 7-country total to be taking steps to reduce sodium intake and more than half say it's important to reduce intake, which suggests less consumer education may be needed in this market compared to others. Still, there is a desire for more information in this market – 6 in 10 say they wish they had more information on how to easily reduce sodium intake regardless of a personal or family health diagnosis.

4

When it comes to reducing sodium intake, the most impactful interventions globally are also most impactful for Thai consumers - governments reducing intake recommendations and preferred grocery stores no longer carrying high-sodium options. However, consumers are more motivated to reduce sodium consumption based on medical advice compared to other markets and 1 in 3 say they only receive information from their doctor, implying that medical professionals could be relied on more to share information on reducing sodium intake in Thailand.



DETAILED FINDINGS

THAILAND SODIUM PERCEPTIONS



Eat Well. Live Well.



AJINOMOTO © 2021

KEY TAKEAWAY

Taste and health/nutritional value are top factors in deciding what to eat for Thai consumers, followed by shelf life and cost. There is also a strong desire for more affordable healthy food options. Compared to the 7-country total, Thai consumers are especially positive toward low-sodium food with the majority saying its tasty, flavorful, exciting and cheap. However, 1 in 2 consider low-sodium food hard to find – suggesting this is a perception to overcome that may need to be addressed through a multi-pronged approach including increased access and consumer education.



Nearly 8 in 10 Thai consumers rank taste and health/nutritional value as top factors when it comes to deciding what to eat, followed by shelf life.

Cost is also an important factor in this market, which is on par with the 7-country total.

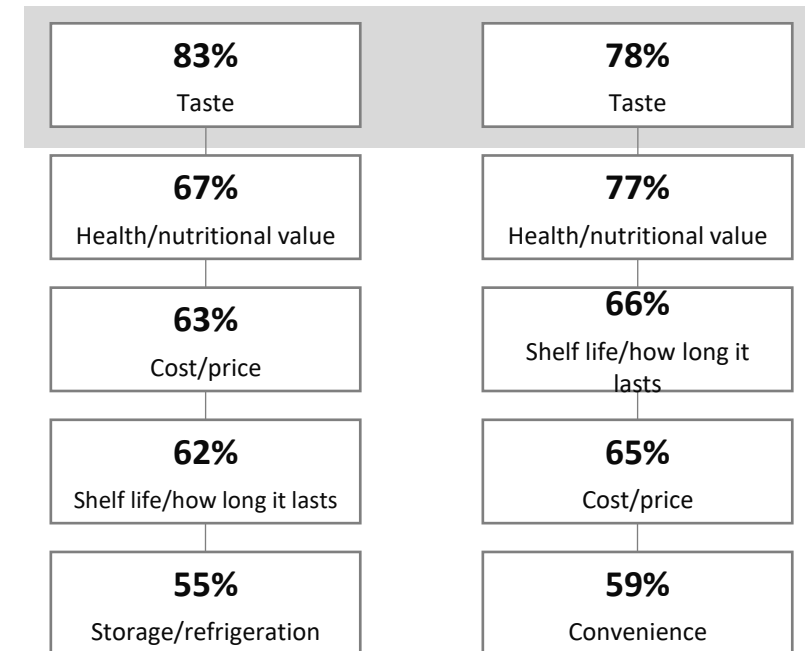
Top Factors in Deciding What to Eat
(Top 2 Box Important, Top 5 Responses Ranked)



7-Country Total



Thailand

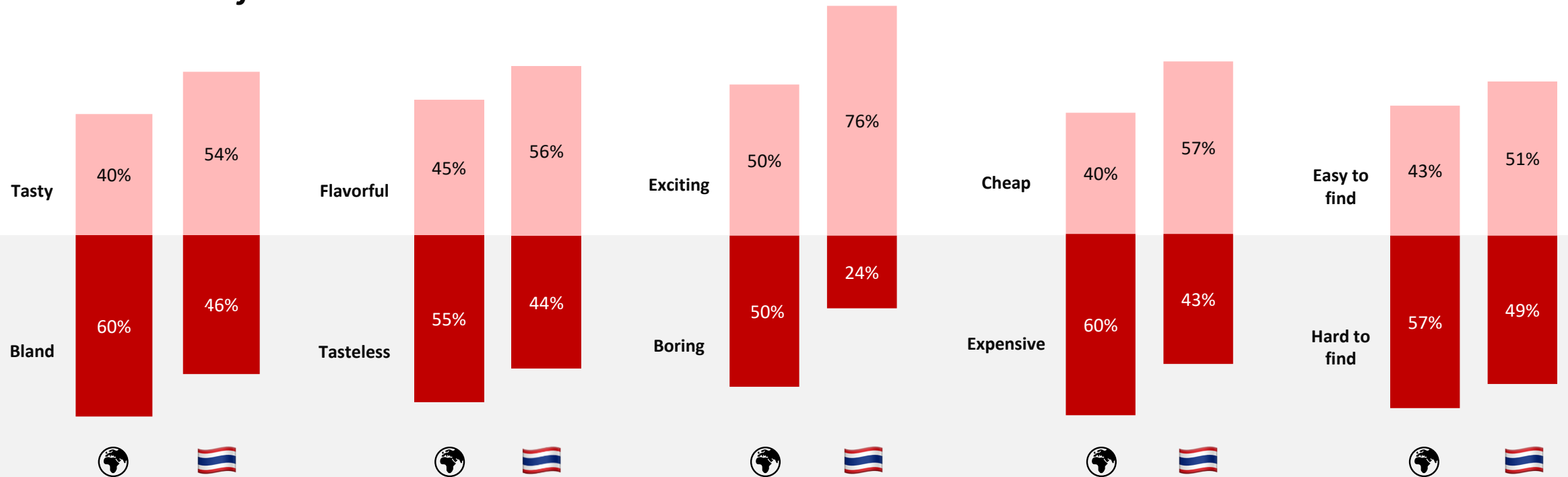


Compared to the 7-country total, Thai consumers are especially positive toward low-sodium food with the majority saying it's tasty, flavorful, exciting and cheap.

However, 1 in 2 consider low-sodium food hard to find – indicating this is a perception that will need to be overcome.

Low-sodium food is...

Perceptions of Low-Sodium Foods
(% Selected Response, Respondents Asked to Select One Response Per Pairing)



Similar to the 7-country total, there is a desire for more affordable healthy food options in Thailand.

Thai consumers are more likely than those in other markets to seek out the freshest products and select food that will improve their health – this could be the result of a high prevalence of hypertension and chronic kidney disease in the market.



Of Thai Millennials say that they wish healthier food options were more affordable

Eat Well. Live Well.



AJINOMOTO © 2021

Deciding What to Eat: Statement Agreement (Top 2 Box Agree, Top 3 Responses)



7-Country Total

68%

I wish healthier food options were more affordable

65%

I buy products my family loves

64%

I actively seek out the freshest products



Thailand

71%

I wish healthier food options were more affordable

70%

I select food that will improve my health

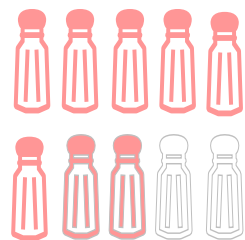
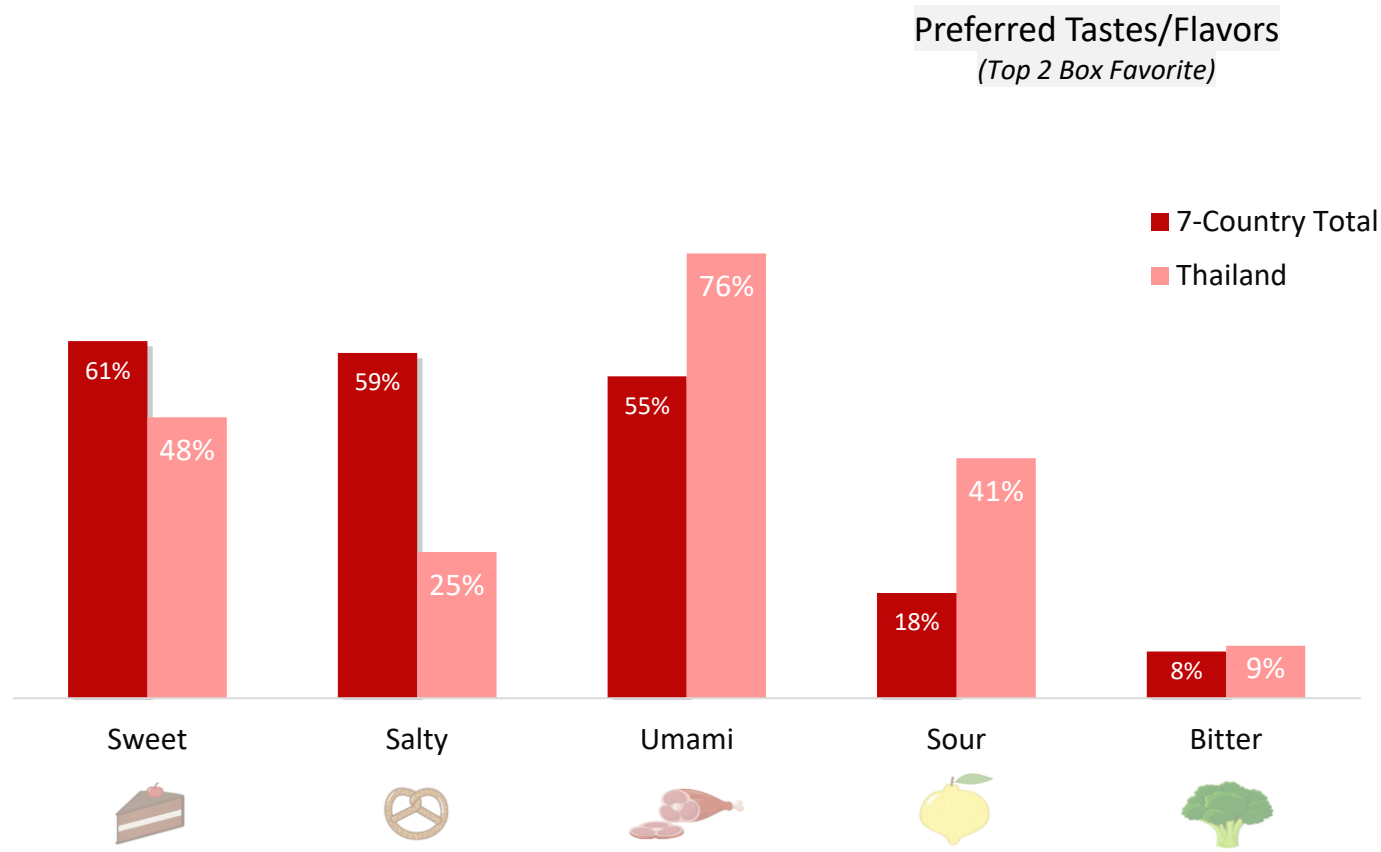
70%

I actively seek out the freshest products

Q3. When picking food for yourself or your family, please rate how much you agree or disagree with the following statements: (7-Country Total n=7,090, Thailand n=1,021)

For nearly 8 in 10 Thai consumers, umami is the top preferred taste followed by sweet and sour.

This holds true across all age groups in the market with umami remaining the top flavor regardless of age.



80%

Of Thai Millennials say that
Umami is their preferred
taste or flavor

Key Generational Nuances (Thailand)

Top Factors for What to Eat

- Taste is the top factor followed by health/nutritional value for Gen Z, Millennials and Boomers. Gen X and the Silent/Greatest generations are more likely to prioritize health/nutritional value over taste.
- Older generations - Boomers, and Silent/Greatest - are more likely to prioritize cost/price over shelf life.
- Millennials are most likely to prioritize storage/refrigeration compared to other age groups.

Perceptions of Low-Sodium Foods

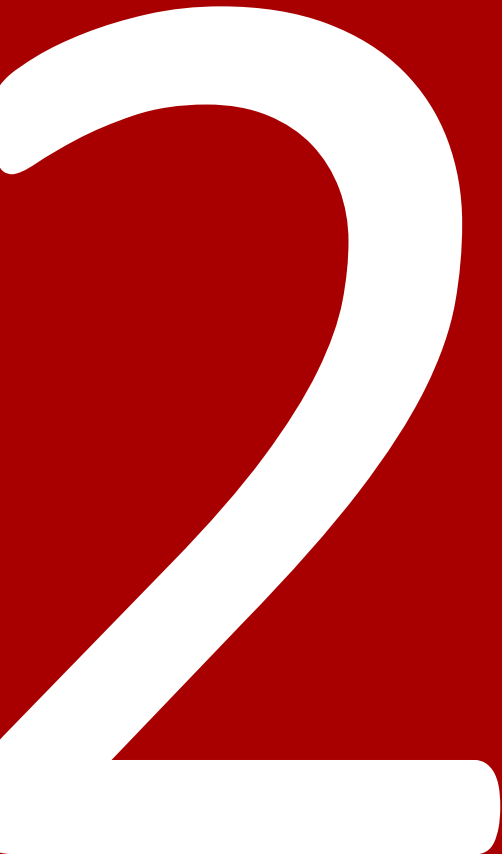
- In each generation, the majority perceive low-sodium foods as “flavorful,” “exciting” and “cheap.”
- Over half of Gen Z, Millennials, and Boomers perceive low-sodium foods as tasty.
- Gen X and Silent/Greatest are the most likely to say low-sodium foods are hard to find compared to other generations.

Desires for Healthy Foods

- Millennials and Gen X are more likely to buy products their family loves.
- Millennials and Gen X are more likely to wish healthier food options were a more affordable price.

Preferred Flavors

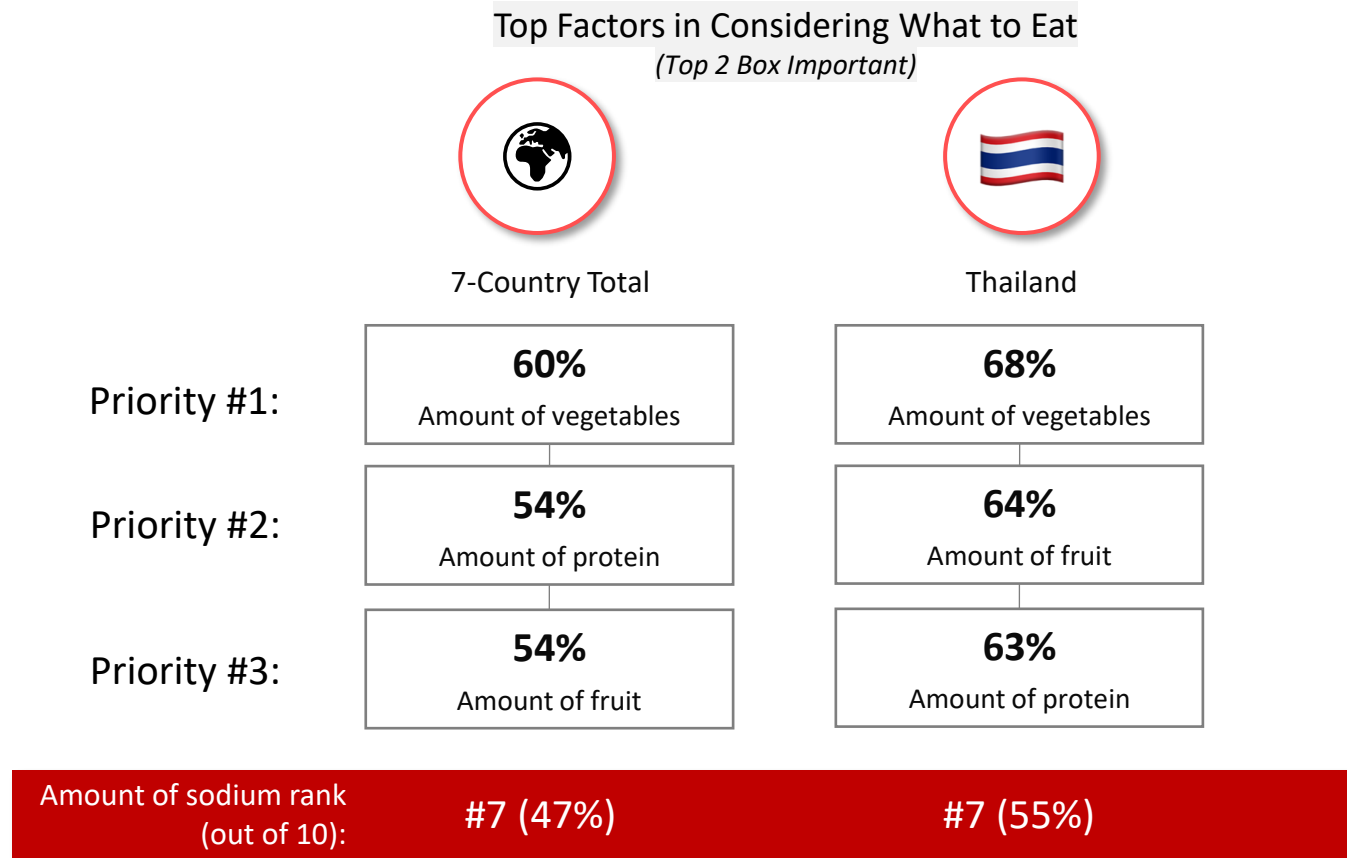
- Younger generations – Gen Z, Millennials, and Gen X – are more likely to prefer umami compared to older generations.
- Half of Gen Z and Millennials have a preference for sweet tastes or flavors.
- Silent/Greatest generation are most likely to favor bitter flavors.



KEY TAKEAWAY

Most believe eating too much sodium is bad for their health, and compared to the 7-country total, Thai consumers have greater control over sodium intake, and more are seeking low-sodium foods. Nearly half of consumers correctly identify the recommended amount of sodium, which is greater than other markets. However, close to 1 in 2 remain unaware or incorrectly identify the recommended amount and many assume that their own consumption aligns with recommendations.

Slightly more than half prioritize sodium when considering what to eat – this ranking is on par with the 7-country total. Still, Thai consumers are more likely to prioritize fruits, protein and vegetables – which are a regular part of diets in the market.



Thai consumers with a personal diagnosis rank the amount of sodium in their food as a higher priority (#6) compared to those without a personal or family diagnosis (#7).

Note: 'Personal Diagnosis' reflects respondents that have been diagnosed by a medical professional with any of the following conditions: hypertension, heart disease, stroke, kidney disease/kidney stones, stomach cancer, or something else. 'Family Member Diagnosis' reflects respondents that currently live with a family member who has been diagnosed by a medical professional with any of the same conditions listed above.

Q4. When considering what to eat, how important is each of the following? (7-Country Total n=7,090, Thailand n=1,021)

Nearly half of Thai consumers correctly identify the recommended amount of sodium, which is greater than other markets.

Recommended Amount (Guesses)
of **Sodium** Based on WHO and National Guidelines
(% Selected Response)

	WHO Guidelines	National Guidelines
	mg/day	mg/day
Recommended		
Less than 1,000	20%	21%
1,000-1,999	26%	26%
Above Recommended Amount* (2,000 or more)	29%	29%
Don't know / not sure	25%	25%

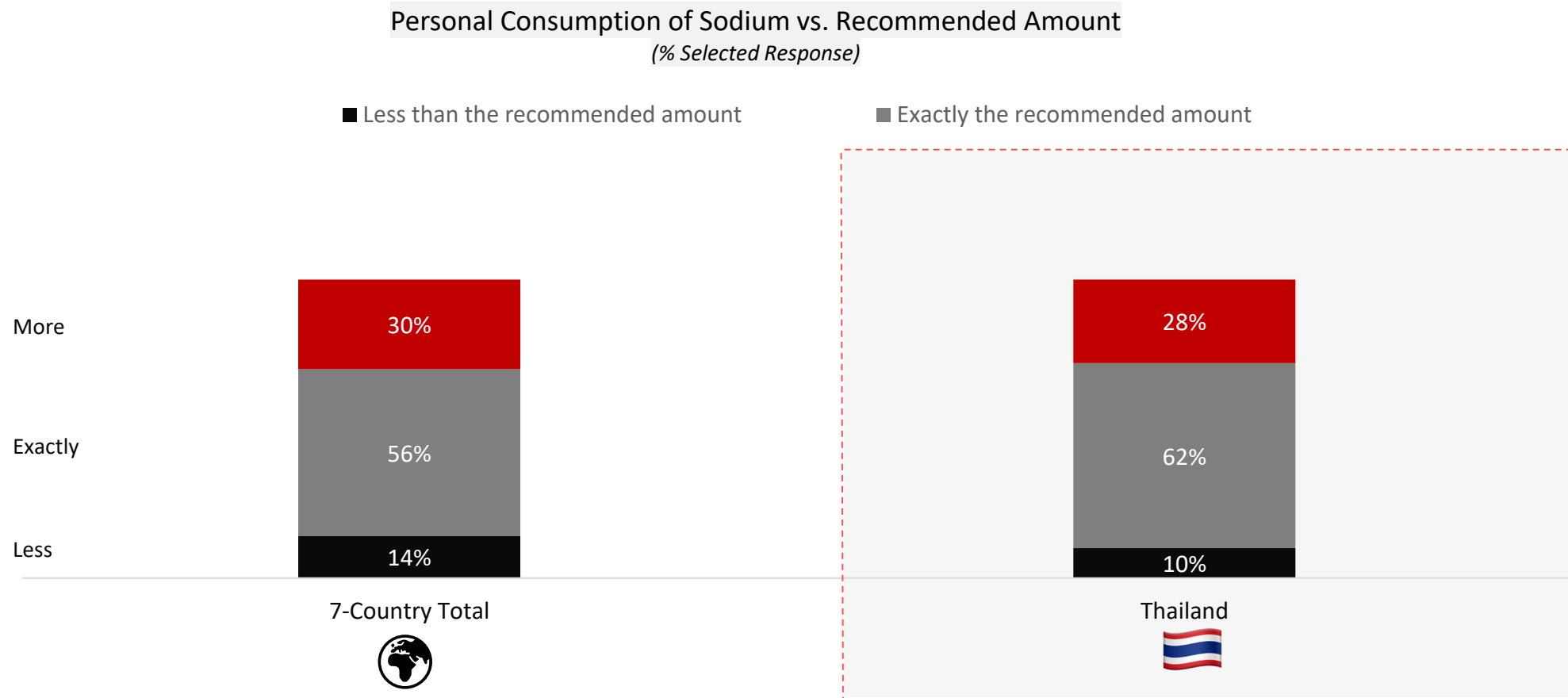
WHO guidelines suggest consuming a maximum of 2,000 mg of sodium per day.

*Note: Above Recommended Amount is a net of the following response options: 2,000-5,999; 6,000-8,999; 9,000-10,999; 11,000-12,999; 13,000-14,999; 15,000 or more

Q14A/Q14B According to nutritional guidelines, what is the recommended amount of [IF US, IND, TH, BR: sodium] [IF UK, FR, JP: salt] an adult should consume in an average day? (Thailand n=1,021)

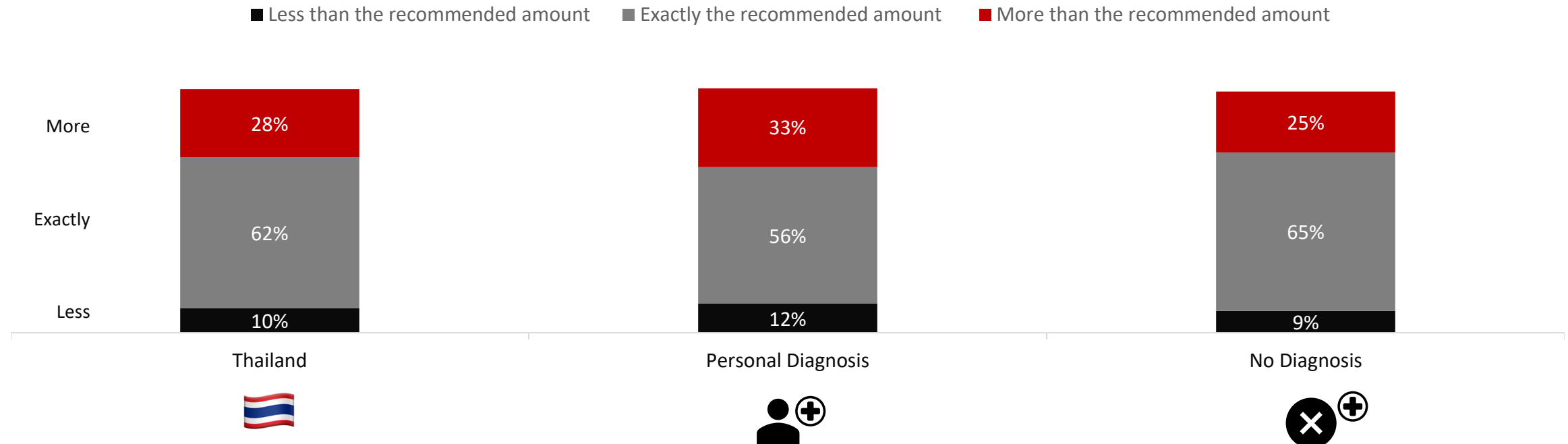
Most believe their consumption aligns with expert recommendations.

Less than a third of Thai consumers are likely to believe they consume more than the recommended amount of sodium – slightly less than the 7-country total. This suggests only those who believe their sodium intake is too high would recognize the need for a change.



Those with a diagnosed health issue are more likely to believe their consumption exceeds the recommended amount, while the majority of those without a diagnosis believe they consume exactly the recommended amount of sodium.

Personal Consumption of Sodium vs. Recommended Amount (% Selected Response)



Note: 'Personal Diagnosis' reflects respondents that have been diagnosed by a medical professional with any of the following conditions: hypertension, heart disease, stroke, kidney disease/kidney stones, stomach cancer, or something else. 'Family Member Diagnosis' reflects respondents that currently live with a family member who has been diagnosed by a medical professional with any of the same conditions listed above.

Q12. In an average day, do you believe you consume more than, less than or the recommended amount of sodium? Your best guess is fine. (Thailand n=1,021, Personal Diagnosis n=349, No Diagnosis n=672)

6 in 10 Thai consumers believe eating too much sodium is bad for health and is important to monitor at any age. In the market, there is greater control over sodium intake, and more are seeking low-sodium foods than the 7-country total.

Personal Sodium Attitudes and Behaviors
(Top 2 Box True of me)



	7-Country Total	Thailand
Eating too much sodium is bad for your health	64%	61%
Sodium is important to monitor at any age	63%	64%
	vs.	vs.
I control how much sodium I consume	37%	44%
I look for food marked “low in salt” or “low sodium”	34%	42%

While all age groups agree eating too much sodium is bad for health, Gen Z is least likely to hold this belief compared to older generations.

Key Generational Nuances (Thailand)

Top Factors in Considering What to Eat

- Amount of vegetables is the most important factor across generations.
- Boomers and Silent/Greatest generation are most likely to consider sodium compared to other generations.

Recommended Amount of Sodium

- Boomers are least likely to correctly identify WHO or national sodium guidelines.

Personal Sodium Consumption

- Younger generations – Gen Z, Millennials and Gen X – are more likely to believe they consume more than the recommended amount of sodium.
- Boomers are most likely to believe they consume exactly the recommended amount.

Sodium Attitudes/Behaviors

- Millennials and Gen X are more likely than other generations to look for food marked “low in salt” or “low sodium.”
- Older generations are more likely to believe eating too much sodium is bad for health.
- Older generations are more likely to believe they control how much sodium they consume.

3

KEY TAKEAWAY

Thai consumers are more likely than the 7-country total to be taking steps to reduce sodium intake and more than half say it's important to reduce intake, which suggests less consumer education may be needed in this market compared to others. Still, there is a desire for more information in this market – 6 in 10 say they wish they had more information on how to easily reduce sodium intake regardless of a personal or family health diagnosis.



A NOTE ABOUT NATURAL LANGUAGE PROCESSING (NLP)

The following slides analyze the open-ended responses from consumers on:

- 1) Why they personally should monitor their sodium intake;
- 2) The perceived impacts (positive and negative) of reducing their sodium intake; and,
- 3) The people from their social circle who would want them to reduce their sodium intake, and why.

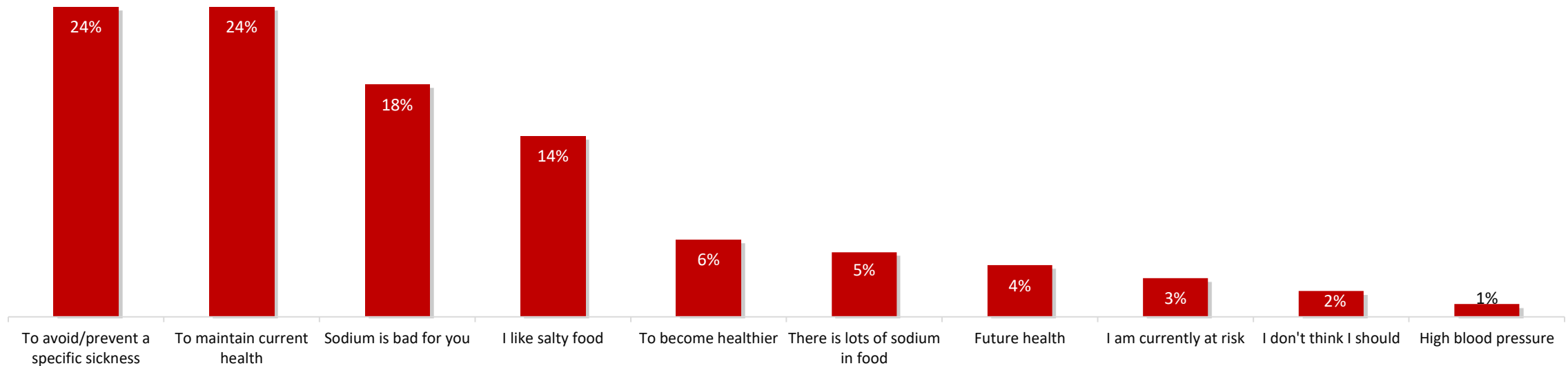
For this analysis, leveraging NLP and machine learning, we carried out topic clustering.

This means we organized every open-end survey response to the given question into different topic groups based on semantic similarity imprinted in how people express themselves.

From these networks, we have organized the clusters into overarching themes which are presented in the form of bar graphs.

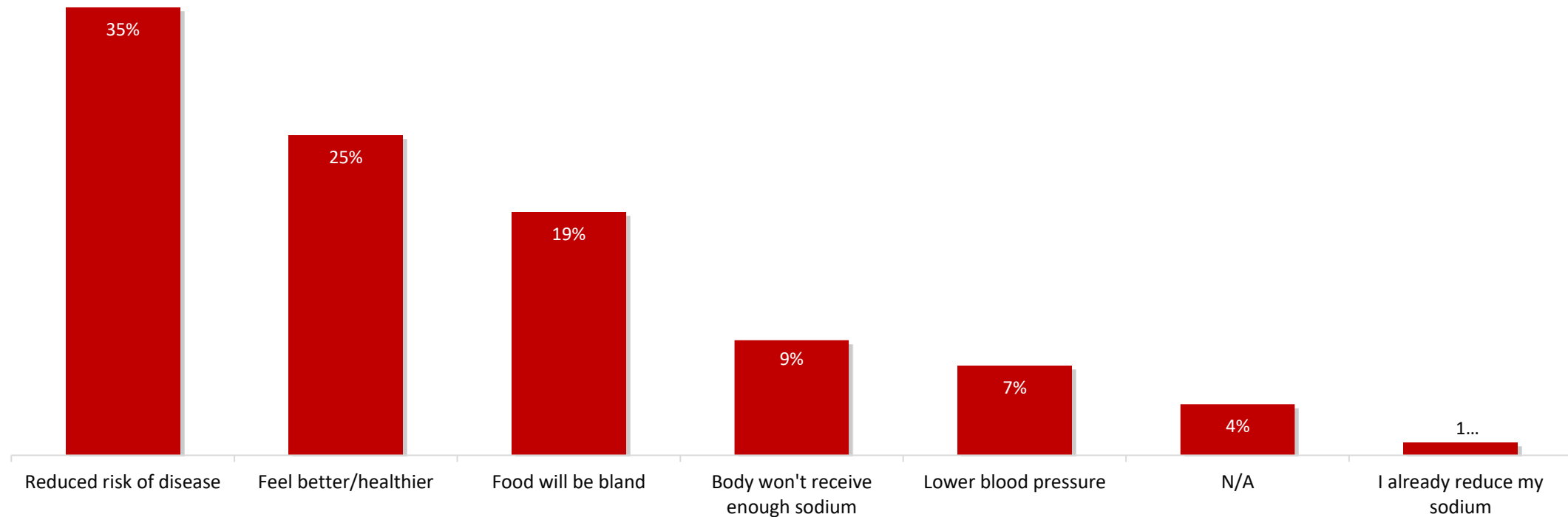
Thai consumers believe they should monitor sodium intake to prevent sickness and maintain their current health.

Top Overall Themes
Why do you (personally) think you should monitor sodium intake?



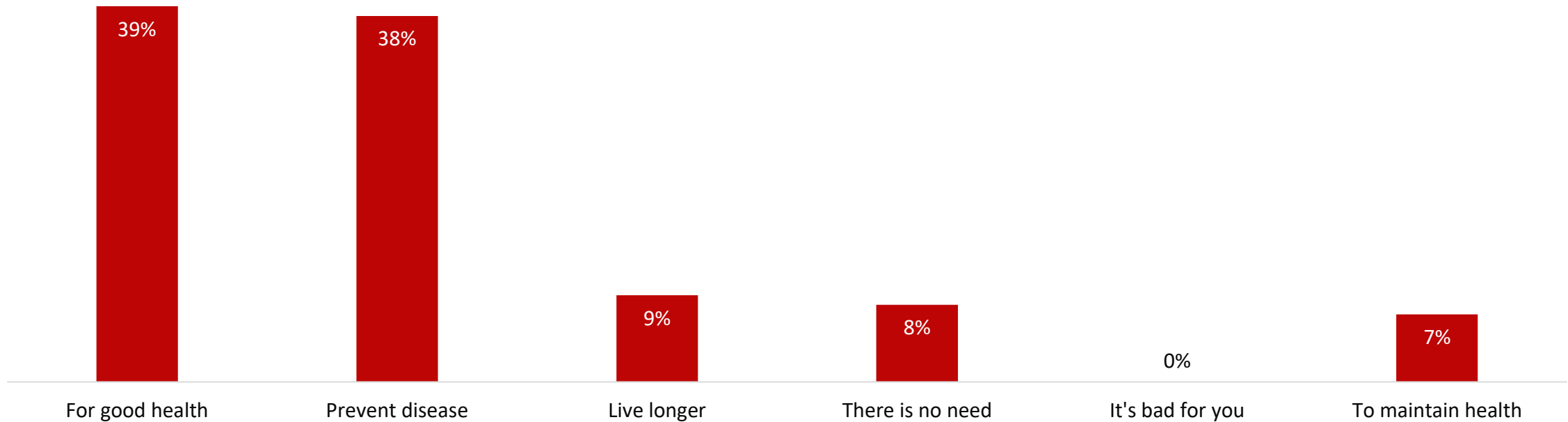
Thai consumers personally believe reducing intake will help reduce risk of disease and help their overall health, but there is still a concern that food may be bland with less sodium.

Top Overall Themes
If you (personally) reduce your sodium intake, what positive things would happen? Negative?



The same is true for why their social circle would want consumers to reduce sodium intake – it is crucial for good health and to prevent disease.

Who from your social circle (e.g., friends, family) would want you to reduce your sodium intake and why?

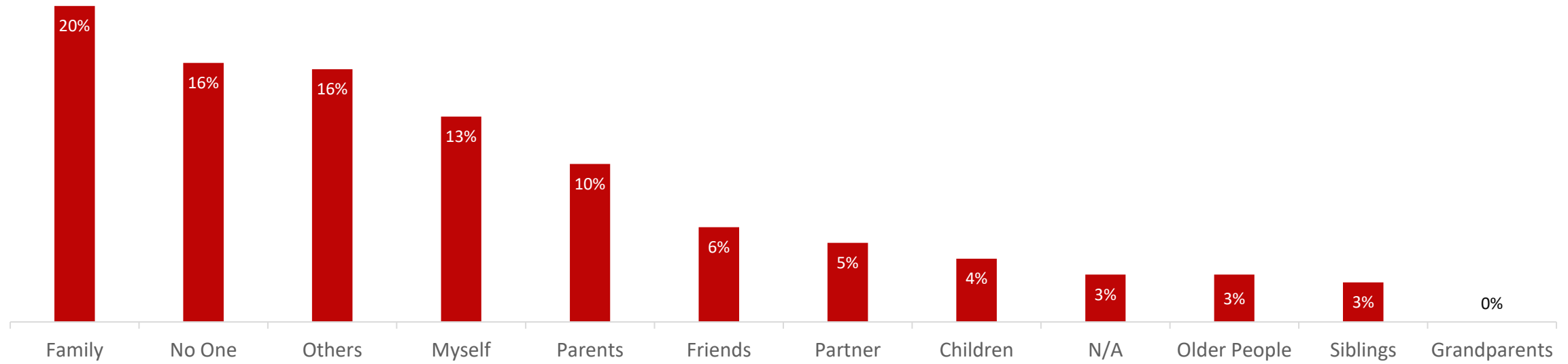


Note: All clusters from the 7-country analysis are displayed for consistency across country reports but may be 0% for some countries.
Q18. Who from your social circle (e.g., friends, family) would want you to reduce your sodium intake and why? (Thailand n=1,021)

The largest portion of Thai consumers say their family would want them to reduce their sodium intake, however nearly the same amount believe no one would want them to reduce sodium intake.

Who from your social circle (e.g., friends, family) would want you to reduce your sodium intake and why?

Bar Chart with 2961 of 3613 Nodes



Thailand is aligned with the 7-country total when it comes to prioritizing fiber and vitamin-rich foods, and both rank sodium reduction at #6. However, more than half of Thai consumers say it's important, suggesting less consumer education may be needed in this market than others.

Food and Nutrition Priorities
(Top 2 Box Important)



7-Country Total

58%

Increasing intake of
foods rich in
vitamins

55%

Increasing intake of
fiber

54%

Reducing intake of
sugar

Reducing intake of
sodium rank (out of 10):

#6 (46%)



Thailand

68%

Increasing intake of
foods rich in
vitamins

65%

Increasing intake of
fiber

63%

Reducing intake of
artificial
preservatives, flavors
or coloring

#6 (56%)





63%

Of Thai Gen X respondents say
that **reducing sodium** is their
primary food and nutrition
priority

Thai consumers are more likely than the 7-country total to be taking steps to reduce sodium intake including adding fresh vegetables and fruit to their diets. Still, more than half are interested in more information on how to reduce intake.

Similarly, 2 in 5 report using spices instead of salt and use reduced sodium seasonings while cooking at home.

Personal Sodium Attitudes and Behaviors: Statement Agreement
(Top 2 Box Agree)

	 7-Country Total	 Thailand
I wish I had information on how to easily reduce my sodium intake	40%	56%
I add more fresh vegetables to my diet to help lower my sodium intake	43%	57%
I add more fresh fruit to my diet to help lower my sodium intake	39%	53%
I use spices instead of salt while cooking at home	34%	37%
I often use reduced sodium seasonings while cooking at home	32%	42%
*Flavor enhancers like umami contain less sodium than table salt	22%	35%
*Flavor enhancers like MSG contain less sodium than table salt	18%	30%

There is an especially high appetite for information in this market – 6 in 10 say they wish they had more information on how to easily reduce sodium intake regardless of a personal or family health diagnosis.

Personal Sodium Attitudes and Behaviors: Statement Agreement
(Top 2 Box Agree)

	7-Country Total	Thailand	Personal Diagnosis	Personal Diagnosis	Family Member Diagnosis	Family Member Diagnosis
I wish I had information on how to easily reduce my sodium intake	40%	56%	42%	57%	48%	61%
I add more fresh vegetables to my diet to help lower my sodium intake	43%	57%	46%	59%	50%	61%
I add more fresh fruit to my diet to help lower my sodium intake	39%	53%	42%	56%	46%	58%
I use spices instead of salt while cooking at home	34%	37%	36%	37%	38%	39%
I often use reduced sodium seasonings while cooking at home	32%	42%	35%	43%	38%	44%
*Flavor enhancers like umami contain less sodium than table salt	22%	35%	23%	35%	27%	37%
*Flavor enhancers like MSG contain less sodium than table salt	18%	30%	20%	29%	23%	32%

Note: 'Personal Diagnosis' reflects respondents that have been diagnosed by a medical professional with any of the following conditions: hypertension, heart disease, stroke, kidney disease/kidney stones, stomach cancer, or something else. 'Family Member Diagnosis' reflects respondents that currently live with a family member who has been diagnosed by a medical professional with any of the same conditions listed above.

Q10. For each of the following statements, please rate how much you agree or disagree with each: (7-Country Total n=7,090, Thailand n=1,021)

* Sample was split between participants seeing MSG and umami (umami seasoning)

Key Generational Nuances (Thailand)

Food and Nutrition Priorities

- Gen Z is least likely to prioritize reducing sodium intake compared to older generations.
- The same is also true for reducing saturated and unsaturated fats, choosing products with no/minimal processing and reducing intake of artificial preservatives – Gen Z is least likely to prioritize these compared to older generations.
- Millennials and Gen X are most interested in increasing foods rich in vitamins along with shifting towards a plant-based diet.

Sodium Reduction Tactics

- The Silent/Greatest generation is most likely to say they use spices instead of salt while cooking at home, while Gen Z is the least likely to do so.
- When it comes to information about reducing sodium intake, Millennials and Gen X are more likely than Gen Z and Boomers to say they wish they had more.
- Millennials and Gen X are also most likely to say reducing sodium is a priority for their and their family's health – suggesting they could be targeted as advocates.

Flavor Enhancers: MSG vs. Umami

- Millennials are more likely than Gen Z, Gen X and Boomers to say MSG has less sodium than table salt.
- However, there are no significant differences when it comes to perceptions of sodium content in umami compared to table salt.

A hand is shown pouring a dark liquid, likely soy sauce, from a small white bowl into a larger white bowl. The background is dark and out of focus, showing a person's arm and a wooden table.

THAILAND SODIUM INTERVENTIONS

4

KEY TAKEAWAY

When it comes to reducing sodium intake, the most impactful interventions globally are also most impactful for Thai consumers - governments reducing intake recommendations and preferred grocery stores no longer carrying high-sodium options. However, consumers are more motivated to reduce sodium consumption based on medical advice compared to other markets and 1 in 3 say they only receive information from their doctor, implying that medical professionals could be relied on more to share information on reducing sodium intake in Thailand.

SODIUM REDUCTION INTERVENTIONS: WHAT WE TESTED

We tested the potential impact of nine different sodium reduction interventions, relative to one another.

This part of the survey was designed based on nudge theory, a common behavioral science concept for influencing behavior change.

Respondents ranked the impact of the nine tested interventions for motivating them to reduce their personal sodium intake.

Nine Interventions Tested:

- Government lowering the recommended amount of sodium in its dietary guidelines
- Government policy specifying the amount of sodium contained in a serving size
- Government requiring the labeling of naturally occurring vs. added sodium
- Food and beverage companies clearly labeling sodium content on packaging
- Food and beverage companies actively reducing sodium levels in their own food
- Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
- Preferred grocery store not carrying foods that contain high amounts of sodium
- A medical professional recommending I reduce the amount of sodium I consume
- Factual media news or articles about sodium intake related to health and nutrition

Sodium Reduction Interventions: The Role of Grocery Retailers

Motivation to Decrease Sodium Intake
(Ranked 1-9; 1=Most Impactful and 9=Least Impactful)



7-Country Total	Thailand	
1 st	1 st	Preferred grocery store not carrying foods that contain high amounts of sodium
2 nd	2 nd	Government lowering the recommended amount of sodium in its dietary guidelines
4 th	3 rd	Government policy specifying the maximum amount of sodium contained in a serving size
5 th	4 th	Government requiring the labeling of naturally occurring vs. added sodium
6 th	5 th	Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
8 th	6 th	A medical professional recommending I reduce the amount of sodium I consume
3 rd	7 th	Factual media news or articles about sodium intake related to health and nutrition
7 th	8 th	Food and beverage companies clearly labeling sodium content on packaging
9 th	9 th	Food and beverage companies actively reducing sodium levels in their own food

- Consumers indicate that if their preferred grocery store did not sell high-sodium foods, they would be motivated to change their sodium intake. In theory, this makes sense. If something is not available, then they are not able to select it and therefore their behavior would change.
- We know that, in reality, consumers prioritize taste above all else when deciding what to eat - and Thai consumers currently believe low-sodium foods are tasty and flavorful. It's likely that consumers would be satisfied with grocery store options if high-sodium foods were removed as they believe the lower-sodium options taste good.

Sodium Reduction Interventions: The Role of National Governments

Motivation to Decrease Sodium Intake
(Ranked 1-9; 1=Most Impactful and 9=Least Impactful)



7-Country Total	Thailand	
1 st	1 st	Preferred grocery store not carrying foods that contain high amounts of sodium
2 nd	2 nd	Government lowering the recommended amount of sodium in its dietary guidelines
4 th	3 rd	Government policy specifying the maximum amount of sodium contained in a serving size
5 th	4 th	Government requiring the labeling of naturally occurring vs. added sodium
6 th	5 th	Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
8 th	6 th	A medical professional recommending I reduce the amount of sodium I consume
3 rd	7 th	Factual media news or articles about sodium intake related to health and nutrition
7 th	8 th	Food and beverage companies clearly labeling sodium content on packaging
9 th	9 th	Food and beverage companies actively reducing sodium levels in their own food

- Consumers believe that government interventions, like lowering recommended sodium guidelines, would be relatively impactful – in part because most assume they are following these national dietary guidelines today.
- We know that while nearly half of consumers are informed about these national guidelines, half are misinformed indicating that government interventions should be supplemented with dedicated consumer education efforts.

Sodium Reduction Interventions: The Role of the Media

Motivation to Decrease Sodium Intake
(Ranked 1-9; 1=Most Impactful and 9=Least Impactful)



7-Country Total	Thailand	
1 st	1 st	Preferred grocery store not carrying foods that contain high amounts of sodium
2 nd	2 nd	Government lowering the recommended amount of sodium in its dietary guidelines
4 th	3 rd	Government policy specifying the maximum amount of sodium contained in a serving size
5 th	4 th	Government requiring the labeling of naturally occurring vs. added sodium
6 th	5 th	Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
8 th	6 th	A medical professional recommending I reduce the amount of sodium I consume
3 rd	7 th	Factual media news or articles about sodium intake related to health and nutrition
7 th	8 th	Food and beverage companies clearly labeling sodium content on packaging
9 th	9 th	Food and beverage companies actively reducing sodium levels in their own food

- Consumers recognize the importance of factual media reporting on sodium and nutrition, and there is acknowledgement in the market that reducing sodium intake could be beneficial for preventing disease and increasing health overall.
- Additionally, sodium intake is thought to be important to monitor at any age, but consumers are looking for more information on how to easily reduce their own intake.
- This indicates that media stories should focus on actionable steps consumers can be taking now, and further information can be framed through the lens of preventing disease and promoting future health.

Sodium Reduction Interventions: The Role of Food and Beverage Companies

Motivation to Decrease Sodium Intake
(Ranked 1-9; 1=Most Impactful and 9=Least Impactful)



7-Country Total	Thailand	
1 st	1 st	Preferred grocery store not carrying foods that contain high amounts of sodium
2 nd	2 nd	Government lowering the recommended amount of sodium in its dietary guidelines
4 th	3 rd	Government policy specifying the maximum amount of sodium contained in a serving size
5 th	4 th	Government requiring the labeling of naturally occurring vs. added sodium
6 th	5 th	Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
8 th	6 th	A medical professional recommending I reduce the amount of sodium I consume
3 rd	7 th	Factual media news or articles about sodium intake related to health and nutrition
7 th	8 th	Food and beverage companies clearly labeling sodium content on packaging
9 th	9 th	Food and beverage companies actively reducing sodium levels in their own food

- Food and beverage companies can play a critical role by offering products that help consumers reduce their sodium intake while still prioritizing taste. As consumers in this market already consider low-sodium foods to be “exciting,” there is good potential for more receptivity.
- Consumers may say that other interventions are more motivating to reduce sodium consumption, but that does not mean there is no role for food and beverage companies. In fact, their role is very important because company actions to change products, create new products and educate about delicious salt reduction are the only thing that can both provide lower-sodium (public health need) and taste (consumer desire).

Sodium Reduction Interventions: The Role of Medical Professionals

Motivation to Decrease Sodium Intake
(Ranked 1-9; 1=Most Impactful and 9=Least Impactful)



7-Country Total	Thailand	
1 st	1 st	Preferred grocery store not carrying foods that contain high amounts of sodium
2 nd	2 nd	Government lowering the recommended amount of sodium in its dietary guidelines
4 th	3 rd	Government policy specifying the maximum amount of sodium contained in a serving size
5 th	4 th	Government requiring the labeling of naturally occurring vs. added sodium
6 th	5 th	Food and beverage companies offering alternatives that reduce sodium while maintaining flavor
8 th	6 th	A medical professional recommending I reduce the amount of sodium I consume
3 rd	7 th	Factual media news or articles about sodium intake related to health and nutrition
7 th	8 th	Food and beverage companies clearly labeling sodium content on packaging
9 th	9 th	Food and beverage companies actively reducing sodium levels in their own food

- Relative to other interventions, consumers feel less motivated to reduce sodium consumption solely because of a recommendation from a medical professional. Even among consumers who have personally been diagnosed with a health condition linked to high sodium, just 42% actively limit their sodium intake*.
- However, we know Thai consumers place greater weight on the advice of medical professionals, suggesting that interventions leveraging the POV of medical professionals could be impactful in Thailand, especially when paired with government interventions.

Sodium Reduction Interventions: Overall Takeaways

Successfully driving global sodium reduction will require a mix of interventions that alter the environment of shopping for, preparing and eating food, so that consumers are more inclined to – consciously or subconsciously – make choices that ultimately reduce their sodium intake.

Taking into consideration both what consumers say and what we know about consumer sentiment and behavior, we recommend a combination of interventions from national governments and food and beverage companies, supplemented by a consumer education campaign and dedicated media strategy.



Government Interventions like those tested as well as increasing public education efforts around the importance of sodium reduction and sodium intake guidelines



F&B Company Interventions like offering new alternatives that reduce sodium while maintaining flavor and actively reducing sodium levels in their existing products



Consumer Education Campaign to combat misconceptions of sodium and get people to start seeing sodium reduction as important to their own health



Media Strategy to provide consumers with factual information about sodium and initially meeting them where they are by framing stories around their loved ones

Sodium Reduction Interventions: Audience Nuances (Thailand)

Generation	Decision-Making	Sodium Control
<ul style="list-style-type: none">Preferred grocery stores not carrying high-sodium foods, followed by government intervention (either lowering the recommended amount of specifying serving size amounts) are most impactful for Millennials, Gen X and Boomers.Of note, Gen Z is most impacted by a medical professional recommending lower sodium consumption, followed by preferred grocery not carrying high-sodium foods.Like other older generations, the Silent/Greatest generation is most impacted by preferred grocery stores not carrying high-sodium foods, but this is followed by F&B companies offering alternatives that reduce sodium while maintaining flavor.	<ul style="list-style-type: none">The most impactful intervention regardless of decision-making status is preferred grocery stores not carrying high-sodium foods.Those with full or shared decision-making status are also highly impacted by government lowering the recommended amount of sodium in guidelines.However, the second most impactful intervention for non-decision makers is F&B companies offering alternatives that reduce sodium while maintaining flavor.	<ul style="list-style-type: none">For those with control over sodium intake, preferred grocery stores not carrying high-sodium foods and government lowering the recommended amount are the top two most impactful interventions.However, for those with less control the two most impactful interventions are government-related – lowering the recommended amount in dietary guidelines and requiring the labeling of naturally occurring vs. added sodium.Of note, those with little control are least impacted by a medical professional recommending reduced intake, while those in control are least impacted by F&B companies labeling sodium content on the packaging.

The background of the slide features six wooden spoons arranged horizontally, each containing a different type of spice or herb. From left to right, the spoons contain: a reddish-brown powder, a green dried herb, a dark seed, a white crystalline substance, a dark brown granule, and a green leafy herb. A thin red horizontal line is positioned above the text.

COUNTRY SPECIFIC QUESTIONS (THAILAND)

TAKEAWAYS FROM COUNTRY SPECIFIC QUESTIONS

1

In general, whole foods are thought to be lower in sodium than more processed alternatives. Spices and grains like rice and quinoa are perceived to have lower sodium content than sauces, condiments, bread and pasta. Similarly, fruits and veggies are thought to have the lowest sodium content per serving, followed by protein and plant-based alternatives compared to processed foods like deli and canned meats or instant noodles. The same holds true for beverages with processed drinks like soda thought to have the highest content compared to coffee, tea, milk and water.

2

More than half of consumers in the market buy their food at wet markets, convenience stores and both local and chain grocery stores. Regardless of where most food shopping is done, Thai consumers turn to YouTube, Facebook and cooking shows to learn more about food and health nutrition. However, YouTube and the World Health Organization are among the most trusted sources for all.

3

When it comes to the use of seasonings and condiments, oyster sauce, soy sauce, umami and MSG are used most frequently among Thai consumers. 4 in 10 consumers report using umami and MSG often/always – more than any other market.

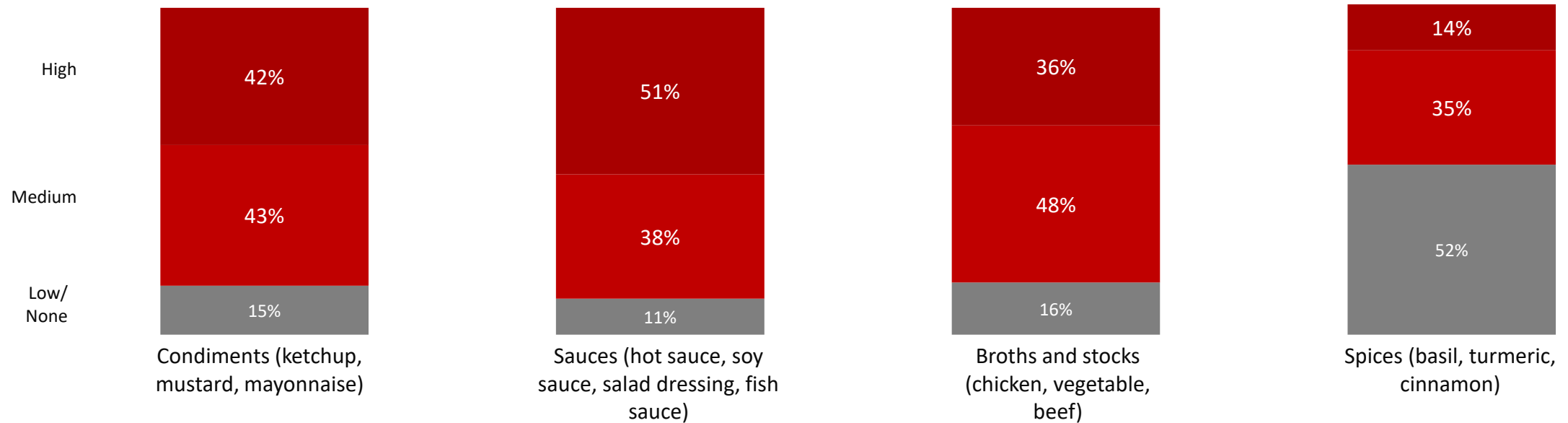
4

In addition to adding umami and MSG when preparing food, consumers also report adding salt while cooking, regardless of the type of food. There is also the belief that high sodium intake is an issue for the market. However, 2 in 5 say they receive information from news media on sodium reduction and health officials adequately inform consumers about the right amount to consume – this suggests any sodium reduction tactics should be targeted to reach consumers in need of education through specific channels.

The majority of Thai consumers believe condiments carry the highest amount of sodium while over half agree spices carry the least amount.

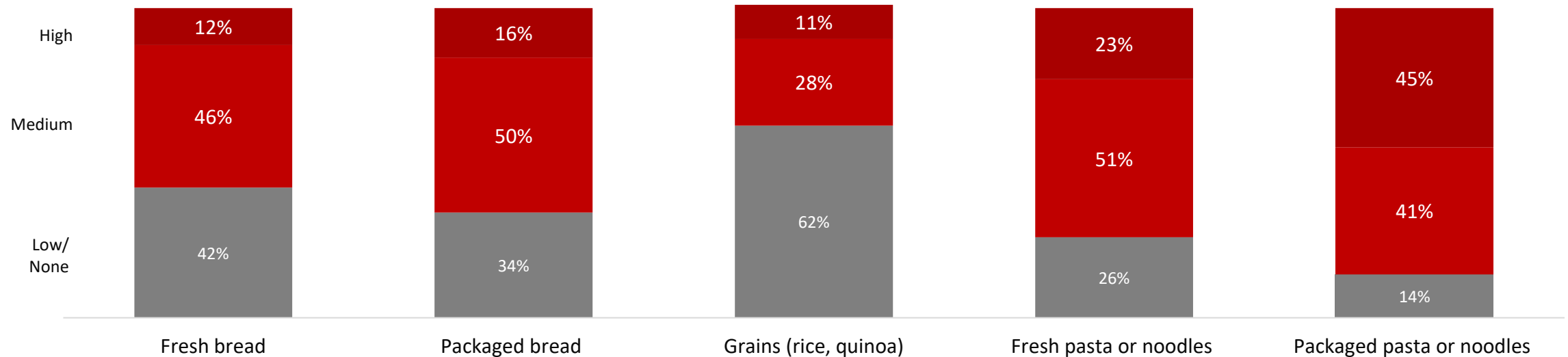
Spices are some of the most used ingredients in Thai cuisine, which could contribute to the belief that they have less sodium compared to other ingredients.

Estimated Sodium Content in a Typical Serving
(Top 2 Box Medium/High, Bottom 2 Box Low/None)



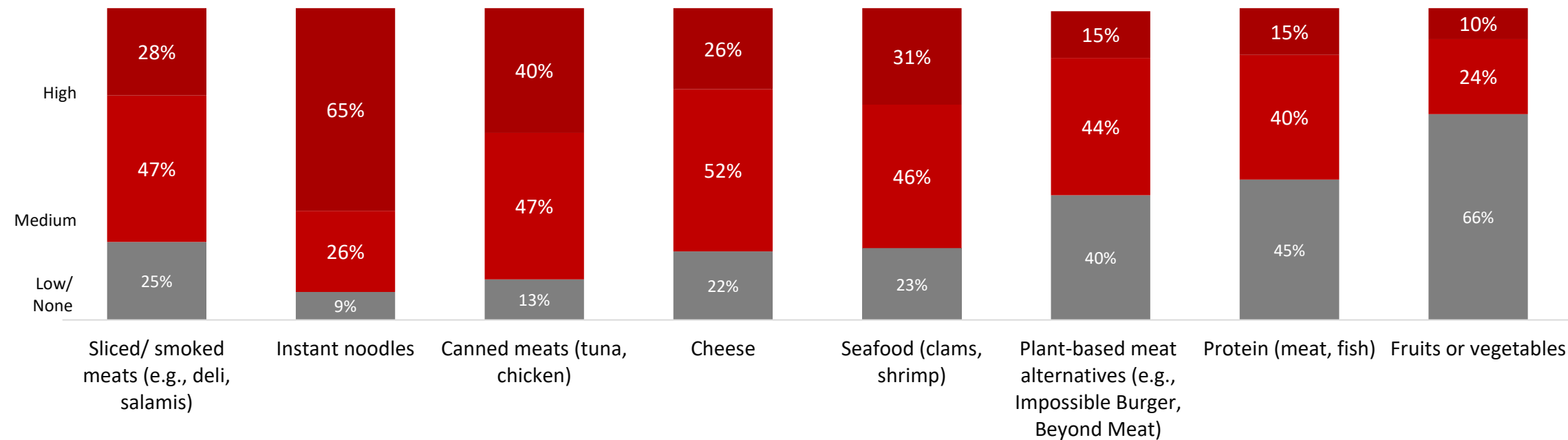
Consumers in Thailand believe packaged pasta or noodles hold the highest amounts of sodium while 3 in 5 consumers believe grains like rice contain the least.

Estimated Sodium Content in a Typical Serving
(Top 2 Box Medium/High, Bottom 2 Box Low/None)



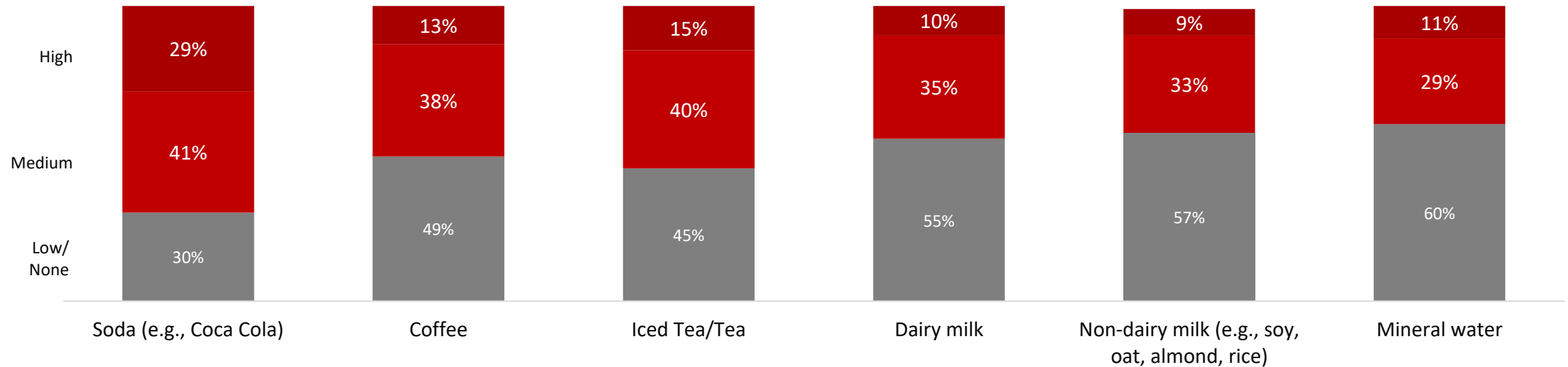
Consumers in Thailand believe fruits and vegetables contain the least amount of sodium followed by protein and plant-based meat alternatives.

Estimated Sodium Content in a Typical Serving
(Top 2 Box Medium/High, Bottom 2 Box Low/None)



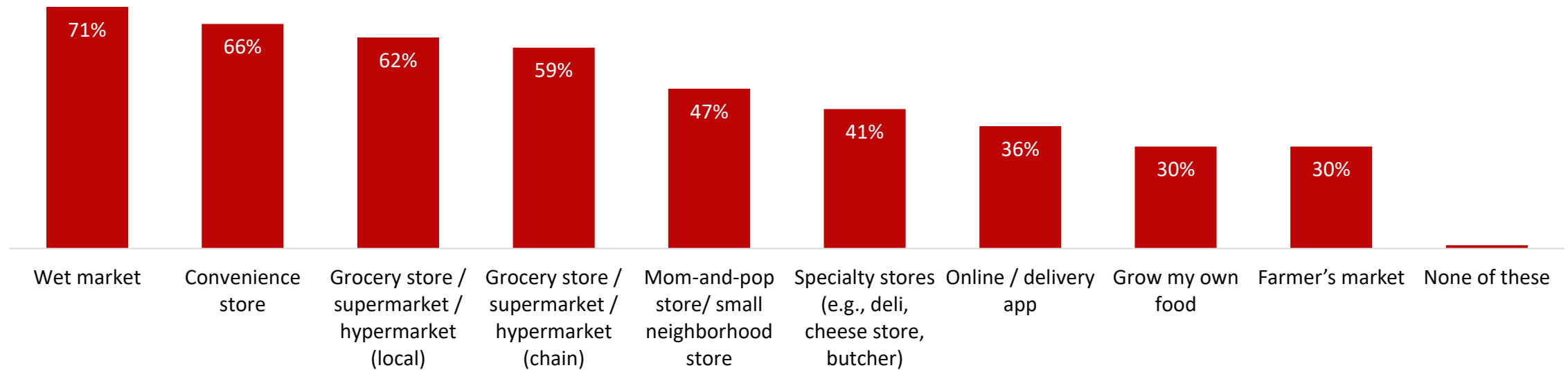
Soda is believed to contain the highest amount of sodium per serving while other beverages are generally perceived as having less sodium.

Estimated Sodium Content in a Typical Serving
(Top 2 Box Medium/High, Bottom 2 Box Low/None)



Consumers in Thailand are most likely to shop for foods at wet markets followed by convenience stores and both local and chain grocery stores.

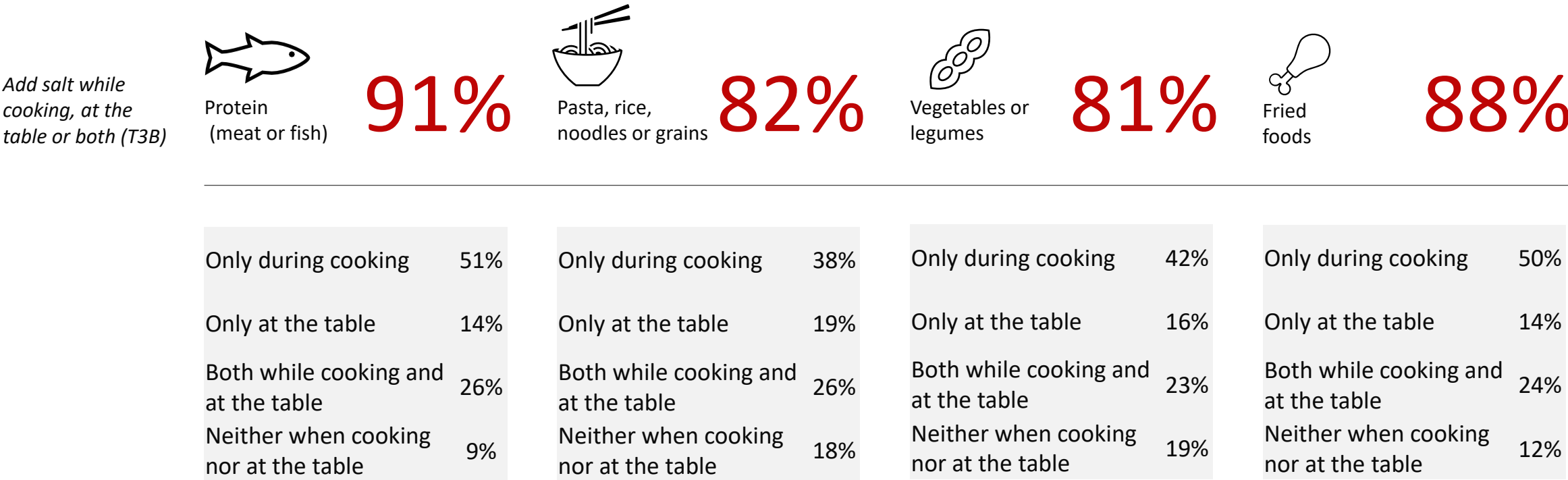
Where Consumers are Purchasing Food: Thailand
(% Selected Response)



In Thailand, the majority of consumers add salt while cooking, at the table or both, regardless of the type of food.

Consumers are less likely to add salt when cooking and/or eating pasta, rice noodles or grains and vegetables or legumes.

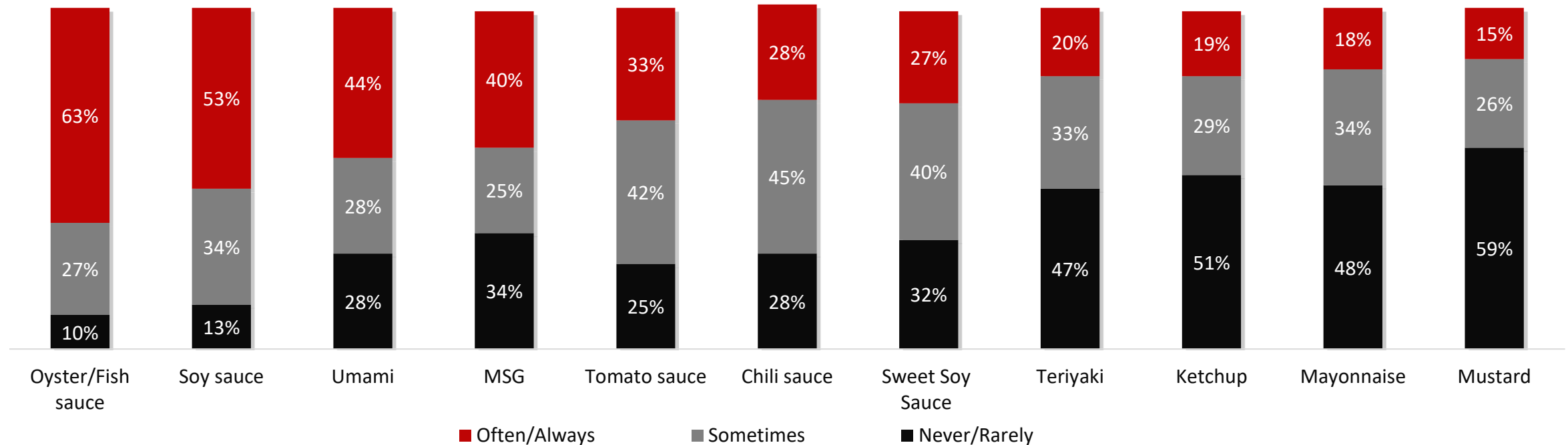
Where Salt is Added During the Cooking and Eating Process
(Top 3 Box Add, % Selected Response)



Oyster sauce and soy sauce are the top choice condiments while mustard, mayonnaise and ketchup are used least often.

Consumers in Thailand are most likely to use Umami and MSG when cooking and/or eating compared to all other markets.

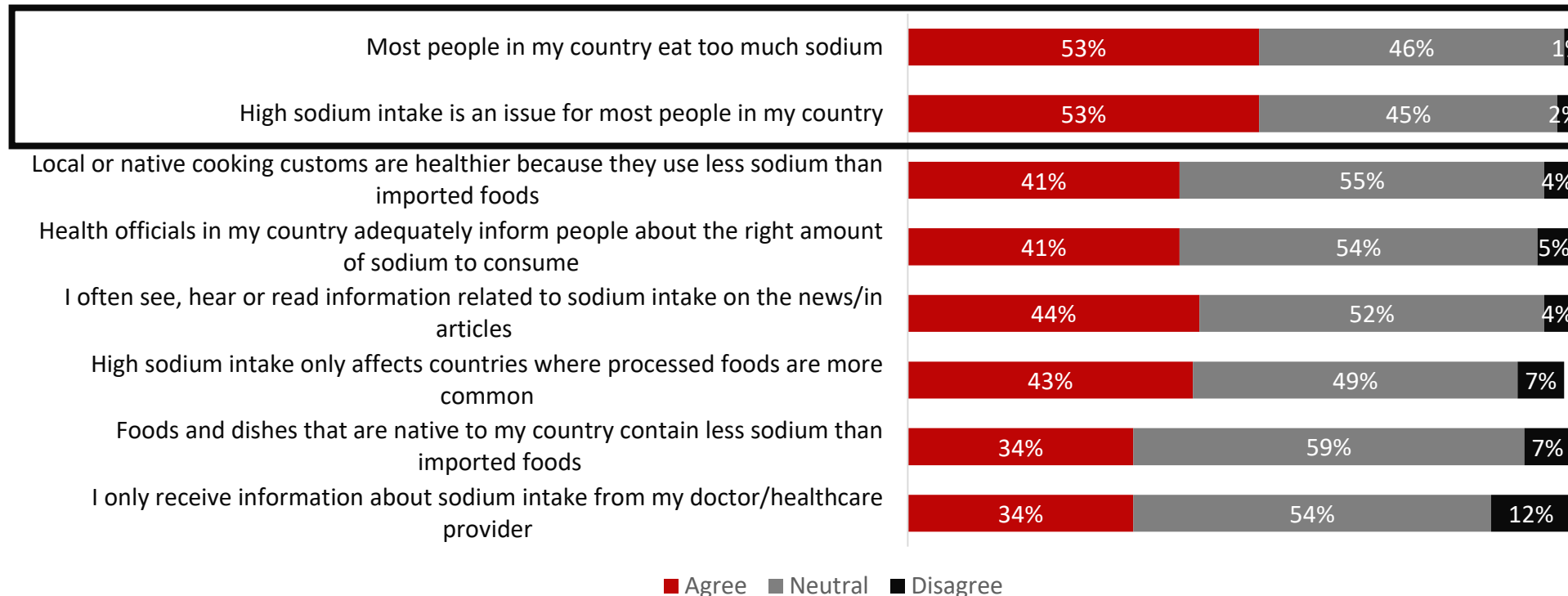
Usage of Condiments and Seasonings: Thailand
(Top 2 Box Often/Always, Sometimes, Bottom 2 Box Never/Rarely)



1 in 2 Thai consumers, greater than the 7-country total, believe that high sodium intake is an issue in Thailand and most people are eating too much sodium.

Of note, there are various campaigns in the market pushing a healthier lifestyle and consumers' awareness of sodium intake may suggest some effectiveness. However, while consumers are more likely than those in other markets to agree with each of these statements, nearly half are neutral.

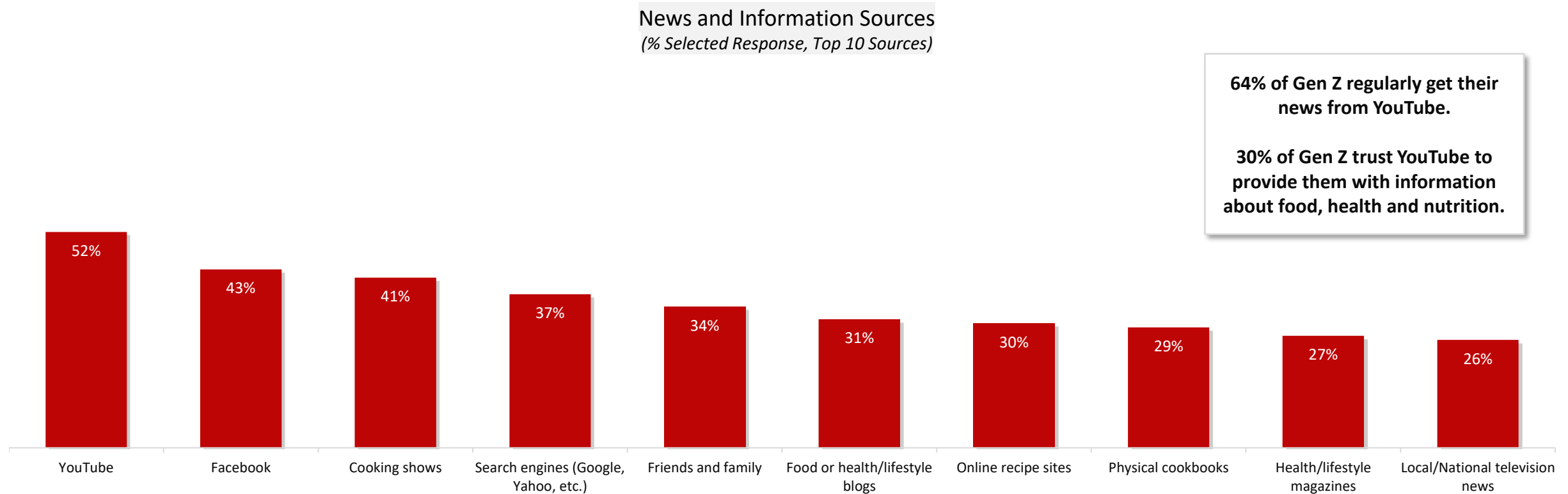
Country-Specific Sodium Attitudes and Behaviors: Thailand
(Top 2 Box Agree, Neutral, Bottom 2 Box Disagree)



A third say they only receive information from their doctor, indicating that some Thai consumers may need to be reached through medical professionals as spokespersons for reducing sodium intake.

Thailand consumers first turn to YouTube for food, health and nutrition information, followed by Facebook and cooking shows.

Of note, national government dietary guidelines are a top source for Boomers – nearly 1 in 4 (24%) typically turn to them for information and 14% trust them most.



Consumers who shop online are more likely to turn to multiple sources compared to those who shop in-person; however, YouTube and the World Health Organization are a trusted source for all.

News and Information Sources
(% Selected Response, Top 10 Sources ranked by market overall)

	Online / Delivery App Users	In-Person Shoppers	Local Purchasers/Growers
YouTube	60%	52%	55%
Facebook	50%	44%	45%
Cooking shows	46%	42%	45%
Search engines (Google, Yahoo, etc.)	50%	38%	39%
Friends and family	39%	35%	37%
Food or health/lifestyle blogs	45%	32%	33%
Online recipe sites	39%	31%	32%
Physical cookbooks	39%	30%	32%
Health/lifestyle magazines	37%	28%	30%
Local/National television news	33%	26%	28%

Red shading indicates statistical significance relative to In-Person Shoppers

Top Trusted Sources

Online / Delivery App Users:

- World Health Organization (WHO) (24%)
- YouTube (21%)
- Search engines (17%)

In-Person Shoppers:

- YouTube (21%)
- World Health Organization (WHO) (18%)
- Food or health/lifestyle blogs (15%)

Local Purchasers/Growers:

- YouTube (22%)
- World Health Organization (WHO) (19%)
- Food or health/lifestyle blogs (15%)

Note: In-Person Shoppers include those purchasing food at grocery stores/supermarkets/hypermarkets (chain or local), convenience stores, mass merchandiser/club stores, or mom-and-pop stores; Local Purchaser or Grower indicates those who shop at farmer's markets or grow their own food

THANK YOU