

nutripro[®]

NESTLÉ PROFESSIONAL NUTRITION MAGAZINE

Balancing
taste & health

Sodium
goes global

Know
your salts

Sodium

It's time to shake things up



A matter of Taste &

A dash of salt is something few chefs could live without.

The melt-in-your-mouth crystal we know as table salt is actually sodium chloride, and the sodium in this and many other foods and drinks is a source of many health concerns.

As health organizations around the world find more links between excessive sodium intake and our risk of high blood pressure, heart disease, or stroke, they're advising consumers to watch how much of it they ingest.

Some organizations are even recommending that people eat out less often, but for many, that is not a realistic solution. Instead, we should find a way to give consumers what they want: the pleasure of dining out with the reassurance that they can find flavorful, lower sodium options that please both their senses and their health care providers.

Is sea salt healthier than other salts?

There is a popular perception that you can use less sea salt and still provide the same amount of flavor. However, experiments show that this is not the case, and using less sea salt results in a less salty taste, just as it would with any other type of salt.

Health

Striking a balance

As consumers become more aware of sodium, it could change the way they want to eat. A recent report from the National Marketing Institute said approximately 42% of consumers would like less sodium in their food and about 50% check sodium on the label of packaged foods.

That doesn't mean we should eliminate salt altogether. In *Salted: A Manifesto on the World's Most Essential Mineral, With Recipes*, author Mark Bitterman says knowing how to use salt effectively is "probably the single most important skill a chef has." While adding salt is often a quick, easy way to enhance taste, it's even more fun to add flavor to a dish through other ingredients.

In fact, artisanal and specialty salts are becoming more prominent in today's

ingredient-driven kitchens. Many chefs enjoy using kosher or sea salt in cooking, or flaky salt as a finishing touch that's rich in taste and texture. Salt is even being paired with sweetness in desserts like salted caramel ice cream or chocolate covered pretzels.

The takeaway? There's plenty of reason to keep salt in your toolkit. The key is to use it thoughtfully by balancing flavor and texture and considering the overall sodium level of foods.



DID YOU KNOW?

Salt is a biological necessity for both animals and humans, with a long and illustrious history in both cultural and culinary terms.

A HOT TOPIC

Sodium's been on the earth forever, so why is it still a hot topic today?

A matter of excess

While sodium is found in many popular foods around the planet, recent studies show that eating (or drinking) too much has been linked to health problems such as:

- High blood pressure¹
- Diabetes
- Kidney disease
- Osteoporosis
- Gastric cancer

How common is high blood pressure?

High blood pressure is found in:

- Over 35% of people in England²
- Over 33% of Americans³
- Over 65% of people in Poland⁴
- Less than 6% of people in rural India⁴

Lowering the risk

Some studies suggest that reducing intake by just 400 mg/day over 10 years could decrease:⁵

- Coronary heart disease by 20,000–40,000 cases per year
- Stroke by 11,000–23,000 cases per year





It's everywhere

Adding salt while cooking or dining only accounts for some of the sodium people consume. Many prepared foods contain a great deal of sodium, and some is even found naturally in everyday foods and drinks.

	Naturally Occuring Sodium (per 100g)
Chicken breast	63 mg
Low fat milk	52 mg
Perrier water	1 mg
Shellfish	392 mg

Besides being used to flavor food, sodium is also found in many special ingredients used to enhance or preserve food.

Sodium bicarbonate	Leavening agent in batters, crispiness enhancer in breadings
Monosodium glutamate (MSG)	Flavor enhancer
Sodium benzoate	Preservative
Sodium caseinate	Thickener and binder
Sodium citrate	Controls acidity in soft drinks
Sodium nitrate	Curing agent in meat
Sodium phosphate	Emulsifier and stabilizer
Sodium propionate	Mold inhibitor
Sodium saccharin	Artificial sweetener

A WORLDWIDE *issue*

Health issues have made reducing sodium intake a hot topic around the world, and scientific understanding is changing rapidly.

World Health Organization (WHO)

2006: Recommended that countries implement sodium reduction strategies. Also encourages food manufacturers and foodservice to take initiatives to reduce sodium content.⁶

The European Union Framework for Salt Reduction Initiatives

2009: Developed voluntary program to reduce salt levels in certain food categories, including catering and restaurant meals, by a minimum of 16% over four years.⁷

U.S.: Institute of Medicine (IOM)

2010: Published strategies to reduce sodium consumption to less than 2,300 mg sodium per day through a coordinated approach including food manufacturers, restaurants and other food service operators.⁸

U.K.: Food Standards Agency

2006: Proposed target sodium levels for a wide range of food categories and guidelines for meals in institutions aimed to meet the recommended level of 2,400 mg of sodium per day.⁹

China

2006: China is taking several steps to reduce sodium intake, including advocating a higher-potassium diet to lower sodium, providing free salt spoons to help people stay within the 2400 mg of sodium per day recommendations, and increasing messaging to eat more fruits and vegetables.

Chile

2009-2010: Chilean Ministry of Health research showed that salt intake of their population reached 9.8 grams of salt (3920mg sodium) per day. As a result, a target of less than 5 grams of salt per day by 2020 has been set.¹⁰

Food that fights back

We know sodium can raise blood pressure, but certain other foods can help lower it. Making meals that are high in potassium, low in fat, and rich in minerals is one way to help protect our health.

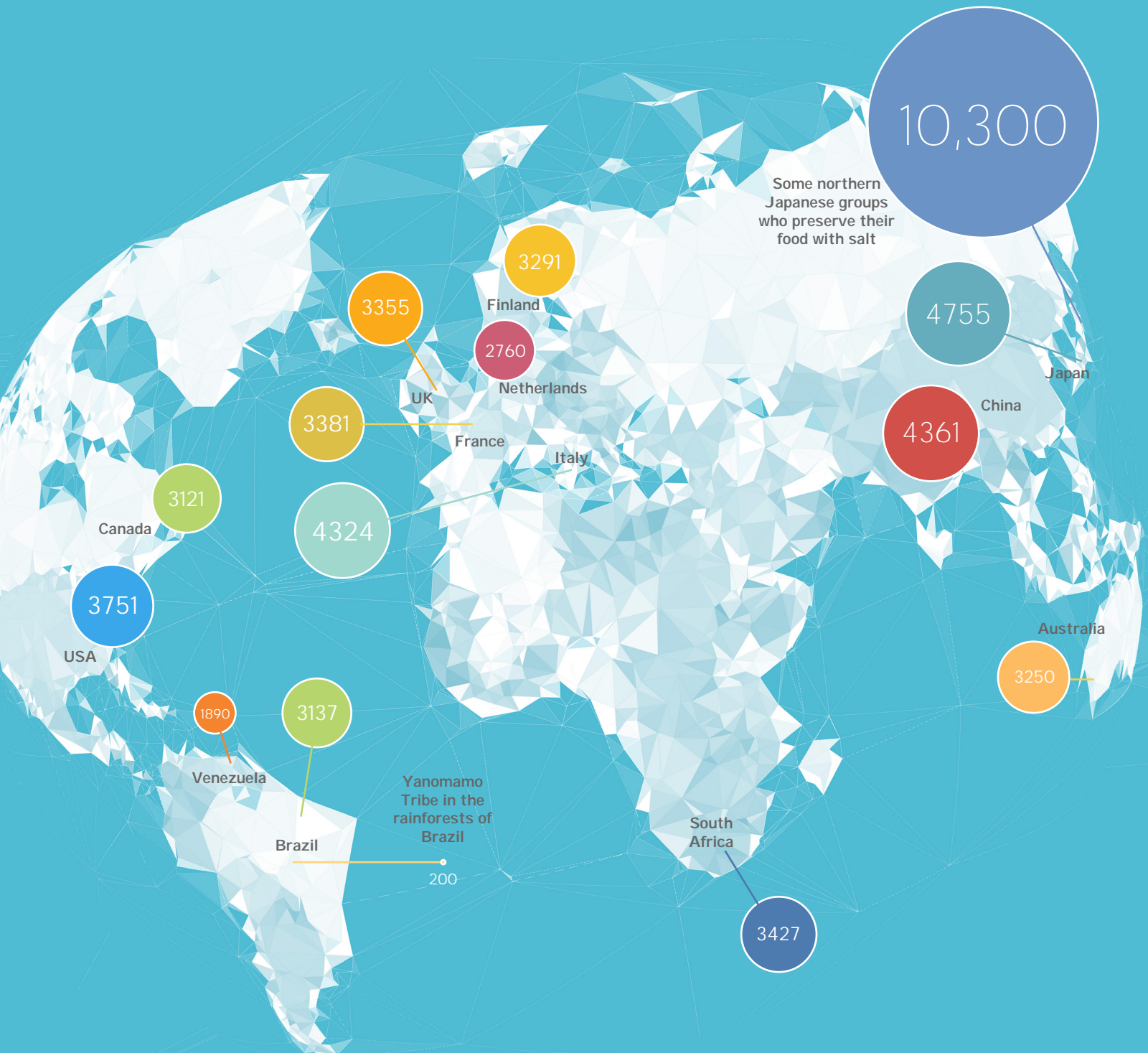
Good Sources of Potassium

Fruits (banana, kiwi, passion fruit, apricot)
Green vegetables (artichoke, broccoli, bamboo shoots, spinach)

Legumes (all kinds of peas, beans, and lentils)
Potatoes
Sweet potatoes
Mushrooms

CULTURAL VARIATIONS

Compare milligrams of sodium consumed daily in typical diets around the world.
(circle size indicates sodium intake)



World Health Organization guideline



2000 mg

The amount of sodium consumed and the sources responsible for it vary widely around the planet. However, in most countries, populations and cultures, sodium intakes are much higher than recommendations.

DID YOU
KNOW?

Half the world's salt comes from the sea, and the other half comes from salt mines.

Salt? *Sodium?*



What's the difference?

Are salt and sodium the same thing? Not quite. What you find in your salt shaker is sodium chloride, a chemical compound made up of 40% sodium and 60% chloride. Salt is often fortified with iodine, a necessary nutrient for metabolism.

Who needs it?

Sodium is an essential nutrient, which means we all need a little to keep our bodies running smoothly. Sodium helps with important tasks like:

- Regulating fluids
- Balancing electrolytes
- Keeping nerves and muscles functioning
- Transporting glucose and amino acids across cell membranes

Know your salts

Different salts have different flavors influenced by the minerals and other factors where they are found. The texture of some salts, such as the flaky crystals of fleur de sel, can also add a different sensory experience. Salts can even be smoked or roasted, like traditional Korean bamboo salt, to enhance flavors. It's a delight to explore and experiment with a variety of different salts.

Flavored & colored salt

Salt can be used as a carrier for other flavors. A few tasty options include celery salt, garlic salt, onion salt, or even herbally flavored salts such as basil or rosemary salt.



Flake salt

Produced by surface evaporation, this super-light salt is easy to measure by hand, which helps the chef control how much is used. It adds a crunchy texture to foods.



Kosher salt

Often used in cooking for its non-iodized flavor, its large crystals make it easy to add by hand. It is also used for the koshering meat process of Jewish dietary laws.



Fleur de sel

Known as "flower of the salt," this has the finest, most delicate flakes. Its specific harvesting conditions make it more costly to produce. It is typically used as a condiment, not a cooking salt.



Unrefined sea salt

This salt is created through the natural process of evaporating seawater. If not processed to remove impurities, it will contribute a lot of flavor and color.



Himalayan salt

This rose-colored salt comes from salt lakes which evaporated over 250 million years ago inside caves in Pakistan. Protected from modern pollution, it is extremely pure and clean.



Changing taste

As a chef, you can help your patrons discover the many exciting ways to flavor dishes without a lot of salt. Here are a few to try:

Pizza

More: Vegetables (peppers, spinach, dried tomatoes, avocado), fruits (pineapple, pears, apples), unsalted nuts, chicken

Less: Pepperoni, bacon, ham, extra cheese

Pasta

More: Tomato-based sauces, in-season vegetables steamed or lightly sautéed, chicken

Less: Cheese, bacon, sausage

Burgers

More: Fresh vegetables (lettuce, tomatoes, cucumbers), avocados, jalapeños, sautéed onions and mushrooms

Less: Bacon, cheese, BBQ sauce

Sandwiches

More: Fresh vegetables (lettuce, tomatoes, cucumbers), fresh herbs (basil), roasted peppers, avocados, sautéed onions and mushrooms, chicken, egg, mozzarella cheese, reduced-fat mayo

Less: Ham, cheddar cheese, pickles, mustard

Salads

More: Fresh greens, vegetables and fruits, dried fruits (raisins and cherries), unsalted nuts, dressings on the side

Less: Salty nuts or seeds, dressings on the salad

The Balance

Because potassium can help reduce sodium in the body, you can balance higher sodium ingredients with higher potassium foods such as tomatoes, potatoes, mushrooms, spinach or sweet potatoes, to name a few.

Adjusting the palate

Humans (even babies) have a preference for sweet and salty flavors. However, these tastes can be changed, and people can adapt to either lower or higher levels of saltiness. When changes are made gradually, they may go by almost unnoticed.¹¹

How low can you go?

Nestlé Professional's experiments suggest that 10% of the sodium can be removed from a recipe before people notice a difference. If you're planning to reduce sodium on your menu, try small reductions over a period of time to evolve diners' tastes. It's stealthy, but it works.

DID YOU KNOW?

The word salary comes from the Latin *salarium*, which referred to the money paid to Roman soldiers for the purchase of salt—and thus the expression “worth his salt.”



In the kitchen

Spice it up

Creative tips for cooking with (or without) salt

Lowering sodium gives you a perfect opportunity to experiment with new flavor combinations that are big on taste, but low in sodium. Adding lower sodium items to your menu will be appreciated by health-conscious patrons, and adding flavor will be enjoyed by all.

Instead of salt, try these intriguing matches:¹²

With beef: bay leaf, marjoram, nutmeg, onion, pepper, sage, thyme

With pork: garlic, onion, sage, pepper, oregano

With chicken: ginger, marjoram, oregano, paprika, rosemary, sage, tarragon, thyme

With fish: curry powder, dill, dry mustard, lemon juice, marjoram, paprika, pepper

With carrots: cinnamon, cloves, marjoram, nutmeg, rosemary, sage

With tomatoes: basil, bay leaf, dill, marjoram, onion, oregano, parsley, pepper

With potatoes: dill, garlic, onion, paprika, parsley, sage

With greens: onion, pepper, lemon juice

Change your techniques

- Increase the acidity in a dish to replace some or all of the salt. A small amount of lemon juice, vinegar, tomato juice or reduced wine will balance and enliven all the other flavors, without registering as sour or acidic on the tongue.
- Brown or caramelize foods to boost flavor without the addition of salt.
- Try oven-roasting vegetables with olive oil or fruit salsas to serve over meat or fish.
- Add salt crystals as a finishing touch to provide higher salt perception when the crystals hit the tongue. This technique gives you more taste with less sodium.

Enlist the help of your ingredients

- Take advantage of seasonal offerings and make them abundant on the plate. Peak-season fruit and vegetables are the most flavorful.
- If you use frozen, canned or other prepared foods, investigate lower sodium, reduced sodium, or no-salt-added versions.
- Rinse canned foods, such as tuna, to remove some sodium before serving.

DID YOU KNOW?

People who smoke are less sensitive to salt than those who don't smoke. If you or members of your kitchen staff are smokers, caution them against using a heavy hand with the salt shaker.



Favorite methods from the chefs at Nestlé Professional

1. Instead of steaming fish, try pan-frying it with a small amount of oil. That all-important Maillard reaction between sugars and proteins always works to build flavor.
2. Other cooking techniques that add lots of flavor include braising, grilling and roasting.
3. Most people are familiar with the technique of marinating proteins to add flavor, but vegetables can also be marinated. This really helps layer on the flavor.
4. Lock in flavor with sous vide, the technique of cooking ingredients in a vacuum-sealed pouch, usually for a long time at a low temperature.
5. Use precious specialty ingredients like truffle oil or fine sea salt to finish a dish. Before serving meat or potatoes, sprinkle on a small amount of smoked salt, or drizzle on some nut oil for a robust addition that will hit the taste buds first.



Move over salt

Experiment with umami

Looking for another taste to please the palate? Try the flavor-boosting power of umami, the so-called fifth flavor (after sweet, salty, sour and bitter). Although many umami ingredients are high in sodium (including anchovy paste, cured meats and aged cheeses, Worcestershire sauce and olives), others are sodium-free.

Umami can also be enhanced through the cooking process. Try caramelizing onions or browning meat through roasting or sautéing. Or use a sparing amount of anchovy paste or Parmesan cheese to provide a lot of flavor with just a touch of sodium.

You'll find umami in:

Tomatoes	Most meats and seafood	Walnuts and almonds	Winter squashes
Mushrooms	Carrots	Peas and other legumes	Beer, sake and wine
Potatoes	Spinach	Red bell peppers	
Sweet potatoes	Green tea		

It's Personal

Sensitivity to salty taste differs from person to person, which can be a challenge when you are serving over 100 meals per day to 100 different people.

These differences are due to several factors including number of taste receptors on the tongue, overall health, and environmental influencers.

Some medicines can also change how a person experiences taste. One solution is to use a minimal amount of salt and let each diner customize the meal.



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Further reading

Salted: A Manifesto on the World's Most Essential Mineral, With Recipes, author Mark Bitterman

McGee on Food and Cooking: An Encyclopedia of Kitchen Science, History and Culture by Harold McGee 2004

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