

# A TASTE OF SALT

Its **History** and **Hazards**

by Art Young



What is it about salt that brings out so many powerful flavours and strong feelings? Simple sodium chloride, or salt, as it is known to everyone but chemistry teachers, has been applied to food as a seasoning since the beginning of civilisation. Unfortunately, the sodium in salt has proven dangerous both to people with diabetes and to healthy people who have a propensity toward heart disease.

As a January 2010 research report in the *New England Journal of Medicine* noted, too much salt in the diet can lead to hypertension. This is a very dangerous situation for anyone with diabetes because hypertension, or high blood pressure, is very common among this group. In fact, some endocrinologists suggest that 20 to 60 percent of diabetics suffer from hypertension.

Most people get a large amount of their daily intake salt from processed foods, a fact that is not lost on some companies that manufacture these products. Last year, it was announced that PepsiCo, one of the world's largest food and beverage companies, was embarking on a multi-million dollar investment to develop "designer salt" as a way to reduce the sodium content in its extremely popular "Lays Classic" potato chips.

## A Brief History of Salt

Since ancient times, salt has been a valuable commodity due to its capacity to preserve food. Most cultural anthropologists feel that salt was one of the foundations of civilisation. Wikipedia notes that salt "eliminated the dependency on the seasonal availability of foods and it allowed travel of long distances."

In addition to its preservative function, salt was a very popular food seasoning that was difficult to obtain, which only added to its value. The so-called "salt roads," which ran to and from salt deposits, had a dramatic economic impact on the areas that they traversed.

During the Middle Ages, salt's scarcity and perceived value transformed it into a "monetary" instrument. It has been suggested that Roman soldiers were partially paid with salt, which led to the expression that a lazy or incompetent soldier was "not worth his salt."

Even Jesus recognised the value of salt. In Matthew (5:13) during the Sermon on the Mount, Jesus said,

“ You are the salt of the earth; but if the salt loses its flavour, how shall it be seasoned? ”

While theologians and ministers scrambling for a Sunday sermon have no doubt analysed this phrase in great detail, most agree that Jesus was using the phrase "salt of the earth" as an example of something that has an essential nature in itself and doesn't come from the outside. This is why someone who is called "the salt of the earth" is seen as decent, dependable, and unpretentious.

## Why the Taste of Salt Is Addictive

In the case of "Lays" or any other salty snack, what is it about the seasoning that makes it impossible to "eat just one"? What makes salt so tasty?

Food expert Karen McMahon of the Biological Science Department at the University of Tulsa contends that “salt intensifies the desirable flavors and it masks the undesirable flavors of food.” Others have noted that salt increases the salivary activity in the mouth during eating and thereby increases the flavor of food. Some food experts say that it opens up the taste buds and suppresses bitterness in some foods.

## New Research About Salt and Health

Even with its glorious history, salt is getting a bad reputation among diabetics and other health-conscious people. In January 2010, *The New England Journal of Medicine* strongly suggested that the consumption of salt is causing countless deaths from heart attacks and strokes. In the context of the debate about the costs for “healthcare reform” in the United States, this report is a ringing rebuke of the over-consumption of salt.



Among other findings, the study noted that as much as \$24 billion could be saved on medical care from heart attacks and strokes in the U.S. if salt consumption were reduced by three grams per day. The study, which was in the form of a computer simulation, noted that the impact of this reduction in salt intake would be equivalent to quitting smoking, lowering cholesterol, and modest weight loss.

The study was led by Dr. Kirsten Bibbins-Domingo, an associate professor of medicine and epidemiology at the University of California, San Francisco. She was joined by researchers from Stanford University Medical Center and Columbia University Medical Center.

In the computer simulation, data were taken from the U.S. Census, the Centers for Disease Control and Prevention, and other studies. The researchers assumed that a three-gram reduction of salt would lower systolic blood pressure by 3.6 to 5.6 millimetres of mercury and that a one-gram reduction would reduce the level by 1.2 to 1.9 millimetres.

The Bibbins-Domingo study found that by lowering salt intake by three grams a day (about half a teaspoon), new cases of heart disease would decrease annually by a third. This translates to an estimated 60,000 to 120,000 cases per year. The researchers estimated that this would reduce heart attacks by 54,000 to 99,000 cases and strokes by 32,000 to 66,000 cases. The study determined the financial savings of between \$10 billion and \$24 billion by calculating a dollar per person charge for salt-reduction strategies. This was projected by the World Health Organization (WHO).

Unfortunately, most Americans have little control over their salt intake because 75 percent of dietary salt comes from processed foods. To solve this problem would require reductions in salt by food manufacturers, which are better known for their glitzy packaging than their altruism and health consciousness. However, when companies such as PepsiCo invest in creating “designer” salt, which they believe will reduce the amount of sodium in their chips by 25 percent without decreasing the salty flavour, there are clearly market considerations driving healthy outcomes. Public health authorities at the federal, state, and local levels have begun to consider policies that would force food companies to reduce the salt in processed food. Two weeks before the *New England Journal of Medicine* study was released, the New York City Health Department announced that it would “encourage” packaged food makers and restaurants to cut salt by 25 percent over the next five years.

## Hypertension and Diabetes

Some groups, including people with diabetes, tend to be “salt sensitive.” Writing for the diabetes-focused website “dLife,” registered dietitian Lara Rondinelli noted that in those who are salt sensitive, blood pressure “rises in response to high salt intake more than in others.” She adds that “studies have shown that African Americans, people with hypertension, and diabetics are generally more salt sensitive than other populations.”

Carefully monitoring salt intake is important even to healthy people. For a person who suffers from diabetes, however, reducing or eliminating sodium from the diet can be a critical consideration.

Source: [www.diabeteshealth.com](http://www.diabeteshealth.com)