

# W.A.S.H. away the world's dietary salt

Elizabeth Snouffer

The world's current dietary salt consumption, more than twice the daily amount recommended, is rubbing the wound of declining public health. Increasing evidence suggests that a high salt intake may directly increase the risk of heart disease, stroke, obesity through soft drink consumption, and many other preventable diseases, including cancers. Restricting dietary salt is even more critical for high-risk populations, such as diabetes. In this report we review the serious health consequences associated with high dietary salt intake and speak to Professor Graham MacGregor, Chairman of the World Action on Health and Salt, which has successfully pursued the food industry and campaigned for better consumer awareness. It's time to expose the facts and refuse that pinch of salt.

Today, the link between sugar, obesity and disease is largely accepted, but one other common food additive is successfully getting away with murder. It is prominent in popcorn and pizza and people all over the world use the kitchen cupboard version to season gravy or sauce, unaware of the potential consequences. Salt, sodium chloride or table salt is the offending agent, and over-consumption is estimated to cause nearly 2.3 million heart-related deaths worldwide in a single year.<sup>1</sup>

***In 2010, 75% of the world's population consumed nearly twice the daily recommended amount of salt.***

A high dietary intake of salt is linked to elevated blood pressure (hypertension), severely increasing the risk of cardiovascular disease, the number

one cause of premature death in the world. Hypertension is also connected to kidney disease. A high salt intake has been linked to osteoporosis and stomach cancer in adults and it has been suggested as an indirect cause of obesity, particularly in children, given that salty foods create a thirst which is often quenched with high calorie soft drinks. In the US, where salt consumption is high, 97% of children and adolescents eat too much salt, increasing their risk for cardiovascular disease later in life.<sup>2</sup> In late March this year, the American Heart Association (AHA) reported that, in 2010, 75% of the world's population consumed nearly twice (4000 mg/day) the daily recommended amount of salt and suggested that 2.3 million lives were lost as a result in that year. Unsurprisingly, most of these deaths occurred in low- and middle-income countries (LMICs). The AHA also reported that 99% of the world's population exceeds the

World Health Organization (WHO) recommended limit of 2000 mg/day for healthy adults.<sup>3</sup>

#### The danger of salt

Human beings are genetically engineered to consume less than 250 mg of salt per day,<sup>4</sup> and yet, the worldwide average for daily dietary salt intake is as much as 16 times that amount, often more. Consumers all over the world have become both addicted to and comfortably tolerant of the taste of ready meals and salted snacks, soft drinks, and bread, and it isn't good for us.

**By 2025, there will be an estimated 1.56 billion adults living with high blood pressure.**

According to the World Heart Federation, there are at least 970 million people worldwide who have elevated blood pressure, and 640 million of these individuals live in the developing world. The world's desire for salt has huge implications for public health in every country today, and indisputable evidence points to the high intake of dietary salt as one of the causes of hypertension. Millions of premature deaths worldwide are attributable to hypertension and the problem is growing worse. By 2025, there will be an estimated 1.56 billion adults living with high blood pressure. As mentioned previously, high salt diets put today's children at risk for serious long-term health problems, including risk for high blood pressure later in life, but high salt intake is also likely to be contributing to increased rates of childhood obesity and to the development of type 2 diabetes in younger and younger individuals.

In 2005, a group of global hypertension experts, nutritionists and cardiovascular

health advocates formed an alliance to tackle the worldwide dietary salt problem. World Action on Health and Salt (WASH) was established to encourage populations across the globe to achieve a reduction in dietary salt intake. WASH's primary achievement so far has been to exert pressure on multi-national food companies for a reduction of salt in food products, especially in the United Kingdom. Professor Graham MacGregor, WASH Chairman and Professor of Cardiovascular Medicine at the Wolfson Institute, London, UK, believes: 'It is much easier to pursue the food industry than to depend on public health campaigns directed at individuals for change in individual salt intake'. WASH counts 85 countries as members and recent public health initiatives aimed at salt reduction strategies are taking shape in Australia, Brazil and South Africa.

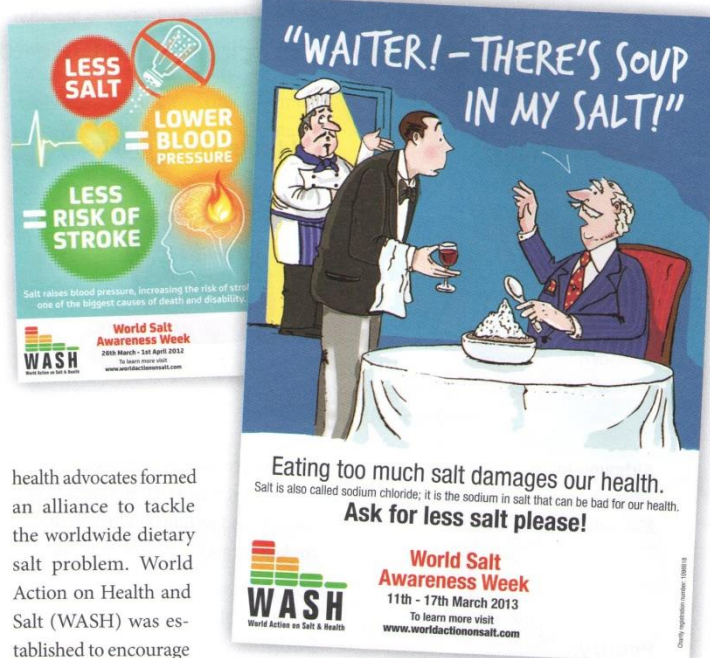
#### A high risk population: those living with diabetes

Currently, WHO recommends that healthy adults limit daily salt consumption to 2000 mg/day, and the US Centers

for Disease Control and Prevention (CDC) recommends that high risk populations limit daily intake to 1500 mg.<sup>5</sup> Included in the high risk population are people over age 40, people already diagnosed with high blood pressure, people of black African descent and people living with diabetes.

**The most responsible thing for doctors to do when they treat people with diabetes is to treat them as if they have already had a heart attack, and go from there.**

Tight control of blood pressure in patients with diabetes lowers the already elevated risk of stroke, and heart attack





## Salty Six Foods that can quickly contribute to a sodium overload:

### Breads and rolls:



Although many breads do not taste salty, one piece can have as much as 230 milligrams of sodium.

### Cold cuts, cured meats:



Deli and pre-packaged meats can contain as much as 1,050 milligrams of sodium, and sodium is added to most cooked meats to prevent spoilage.

### Pizza:



One slice of pizza can contain as much as 760 milligrams of sodium; just two slices will reach the recommended daily salt limit.

### Poultry:



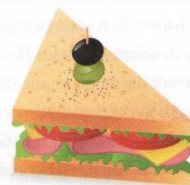
Sodium levels in chicken vary based on how it's prepared. Just three ounces of frozen breaded chicken nuggets can have 600 milligrams of sodium, while grilled and skinless preparations may have much less.

### Soup:



One cup of canned chicken noodle soup can have up to 940 milligrams of sodium.

### Sandwiches:



This food item combines two of the salty six, cold cuts and bread, with sodium-rich condiments, such as ketchup and mustard. Altogether, a single sandwich can easily surpass the recommended daily sodium limit.

Credit for Salty Six: Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report (MMWR), Vital Signs: Food Categories Contributing the Most to Sodium Consumption—United States, 2007–2008, February 10, 2012 / 61(05):92–98.

and slows the progression of diabetic kidney disease. Although there is no consensus in restricting salt intake in diabetic patients, Professor Macgregor believes (as do many) that doctors must be as serious about hypertension as they are about blood glucose control and that dietary salt reduction is an important strategy to assist in blood pressure reduction: 'Since people living with diabetes die of cardiovascular disease more than anything else, the most responsible thing for doctors to do when they treat people with diabetes is to treat them as if they have already had a heart attack, and go from there.'

Because diabetes and high blood pressure increase the risk of heart attack, stroke and kidney disease, it is important that all people with diabetes maintain a healthy lifestyle by, amongst other things, eating a diet rich in vegetables and whole-grains, limiting processed foods and restricting table salt.

#### Change of seasoning

Approximately 80% of all salt consumed is added at the stage of manufacturing, which makes it very difficult for consumers to control.<sup>4</sup> If a reduction in salt intake is to occur worldwide, the food industry must reduce the amount of salt added to food. The problem: industry opposition is a formidable barrier because salt is regarded as an important part of commercial success. Salt makes cheap, unpalatable food market-ready and saleable, and salt increases the amount of water in foods like processed meat, making products heavier by as much as 20%. Some of the largest multi-national food companies in the world market snacks and soft drinks - two of the biggest salt offenders today. The habituation or taste for salty food increases tolerance and desire for more. This scenario is most clearly

reflected in the success of the soft drinks industry where salt is a significant determinant of thirst. One sugary, salty drink easily leads a child to drink one more. Strategies utilized by the food industry have been likened to the techniques used by the tobacco industry, and the problem isn't going away on its own.

**A 15% reduction in the UK population's salt intake has saved a minimum of 9000 stroke and heart attacks every year.**

The United Kingdom has been very successful in pressuring food manufacturers to reduce salt, and serves as a role model for the rest of the world. In 2004, Consensus Action on Salt and Health (CASH) conducted a public health campaign to encourage the UK food industry to reduce the salt added to food. This effort resulted in an initiative to label salt content of all packaged foods with a simple colour coded system making it easy for consumers to understand how much salt is in a product at the point of sale. Professor MacGregor believes the cost-effectiveness of salt-reduction strategies have been very worthwhile, 'A 15% reduction in the UK population's salt intake has saved a minimum of 9000 stroke and heart attacks every year, and these efforts are saving the UK 2 billion US dollars annually.'

Unfortunately, the global burden of hypertension-related disease finds its home primarily in LMICs. Tragically, there is little incentive for these governments to develop dietary guidelines or educate their populations about the risk of high dietary salt intake. Although eating too much salt has traditionally been blamed on the use of table salt in

cooking and in preserving foods, this landscape is changing as the food industry targets populations in LMICs with inexpensive high fat, high salt and high sugar foods.

Dietary salt reduction needs to be taken seriously for the world's health future, along with other lifestyle changes, such as increasing physical activity, eating a diet rich in whole grains and vegetables, reducing fat and sugar intake and stopping smoking. National health measures and global public campaigns will save millions of lives.

#### Elizabeth Snouffer

Elizabeth Snouffer is Editor of *Diabetes Voice*.

#### References

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