Salt Reduction in Cereal Foods

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Does a high-salt diet increase the risk of cardiovascular disease? Is everyone equally sensitive to changes in their level of salt intake? What are the advantages and disadvantages of consuming different amounts of salt? What about salt and blood pressure? Should salt producers be held responsible for the intake of “too much” salt? These are a selection of the issues regularly confronted by EuSalt, the representative body of the European salt producers. The organization has as its objective the provision of clear answers to these questions based on relevant recent scientific research.

Throughout history salt has been used in numerous ways: to preserve and flavor foods, as a payment tool, and even as a way to distinguish oneself from the poor. Usually foods are low in salt, but salt may have been added for preservation or flavoring during processing or cooking. Over the years, there have been many discussions on the maximum amount of salt one may or should eat on a daily basis. Researchers agree that dietary sodium is a vital and essential nutrient in many metabolic processes in the body and that levels depend on several individual factors. Establishing a maximum level for the global population is therefore difficult, and reference guidelines vary largely depending on the country.

EuSalt is aware of the different strategies that have been put in place with regard to salt reduction and salt reformulation in foods. The issue is that most reformulation and reduction actions focus on the commonly accepted theory that the level of salt intake correlates with high blood pressure and other cardiovascular diseases, whilst ignoring the essential technical and functional roles of salt in food products.

In addition to the sensory and technological functions of salt in food products, salt plays a crucial role in a number of life-sustaining processes, such as nutrient transport and absorption, maintenance of blood volume and blood pressure, and maintenance of the membrane potential.

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Salt in Cereal Products

Salting is one of the oldest methods of preserving foods. Today, salt serves numerous functions in manufactured foods: it brings taste—not only its own, but more generally overall flavor contributions from other components; it has specific properties that are important for the handling and processing of food products; and it acts as a preservative against microbial growth. In bread manufacturing, for example, salt has an important effect on the quality of the final product due to its influence on yeast fermentation.

Overall, in baked products, salt has three main technological functions: promoting the development of gluten structures in the mixing of bread and other fermented products, inhibition of baker’s yeast in the fermentation of bread doughs, and control of water activity in the baked product. Moreover, besides chloride, many other forms of sodium are found and used in baked products, serving as microbial spoilage inhibitors or as components of baking powders. Their level, however, is strictly regulated such that they make a relatively small impact on sodium levels in the overall diet. Sodium chloride evidently plays a major role in the production and flavor of bread; any reduction in salt would have a negative effect on the consumer’s perception of the taste of bread. This would be unfortunate since bread products have many positive benefits for a healthy diet, such as fiber, calcium, iron, and vitamins. There is therefore no value in lowering salt levels in products that consumers will turn away from. For non-bread products, sodium restriction is also limited since sodium salts provide an im-

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portant contribution to structure formation (i.e., breakfast cereals), which other sources cannot easily match.

An Essential Element in a Healthy, Balanced Diet

In addition to the sensory and technological functions of salt in food products, salt plays a crucial role in a number of life-sustaining processes, such as nutrient transport and absorption, maintenance of blood volume and blood pressure, and maintenance of the membrane potential. Moreover, considering the findings described above, for healthy people, there is no clear evidence that reduction of salt intake contributes to a reduced mortality rate, since scientific studies have not been able to provide convincing evidence that the mortality rate in overall populations can be reduced by salt reduction programs. Research also hasn’t been able to show a convincing major contribution to a reduction of blood pressure in the overall population either. Nevertheless, these studies perpetuate the myth that everyone’s health would benefit from salt reduction at any time.

Not the Biggest Health Problem in Society

Scientific papers, television programs, and lifestyle articles have all made it clear that today’s obesity problem is getting worse. Research has shown that the role of salt in the obesity problem is not of any significance and that people suffering from obesity should change their overall lifestyle and not just one element within their diet. Regular physical exercise, a combination of healthy food products, and limiting alcohol are only some of the suggested recommendations. Salt restriction, however, is not one of them.

Salt Reconsidered

All these reasons have caused the U.S. Food and Drug Administration (FDA) to finally consider revising its regulations on salt and to examine the possible implications of tighter limits, such as its consequences on the quality and the safety of products. Because of salt’s vital role in both the human body and in the safety of products, the food industry is also keen to demonstrate the limitations of this overall salt reduction myth.

European Regulatory Issues

Over the years, the European Union (EU) has established laws on the safety of food and other products, consumers’ rights, and the protection of people’s health. The Health and Consumer Protection Directorate General of the European Commission (DG SANCO) has responsibility for the creation of food law. Throughout the past two years in particular, a number of regulations have come into force, significantly impacting innovation and development in the food industry.

In December 2006, a regulation on the use of nutrition and health claims for foods was adopted by the Council and Parliament. This regulation lays down harmonized rules for the use of health or nutritional claims (i.e., low fat, high fiber, and helps cholesterol) on foodstuffs based on nutrient profiles. The aims of the health claims regulation are to ensure that any claim made on a food label in the EU is clear, accurate, and substantiated; to harmonize the interpretation on the legality of health communication on food products; and to ensure fair competition and promote and protect innovation in the area of food. However, due to the introduction of the “nutritional profiles” concept and the uncertain outcome of the established list of generic claims, it is doubtful that the aim to help innovation and to harmonize the legal situation on health communication will be achieved in the near future. It is predicted that this uncertainty will hamper investments in innovative products.

The regulation harmonizing the addition of vitamins and minerals and of certain other substances to foods was adopted in parallel. The regulation defines the purposes for which additions are allowed, lists the permitted vitamins and minerals, provides for certain restrictions regarding foods that can be supplemented, and sets the criteria for establishing maximum and minimum levels. For the salt producers, this regulation is essential to help establish free trade on products with iodized salt and of iodized salt itself within Europe. Universal iodization of salt is an important health policy that has been supported by WHO and UNICEF in order to fight iodine deficiency disorders. Due to nonharmonized rules regulating iodized salt and salt with added fluoride, the implementation of the Universal Salt Iodization Policy has not always been possible throughout Europe.

In May 2007, the European Commission adopted a white paper titled Strategy for Europe on Nutrition, Overweight and Obesity. The aim of this white paper is to implement an integrated EU approach to reduce health issues related to poor nutrition in EU countries. The white paper stresses the importance of enabling consumers to make informed choices, ensuring that healthy options are available, and calls upon the food industry to work on reformulating recipes in order to reduce levels of salt and fats. Strangely enough, the reduction of salt has become a major policy in this fight on obesity and overweight. The salt industry accepts the need for discussion on the subject of salt and health and calls on scientifically proven facts to form the basis of these discussions. The concept that a reduction in salt for all products and consumers will result in a decrease in mortality has to date not been scientifically proven. Moreover, conclusions reached on the need to decrease salt intake in order to reduce obesity risks need to be put in context. The salt industry, as a responsible stakeholder in the discussion, is promoting the responsible use of salt and the discussion on sound science.

Rules are also being established with a view of reviewing the multitude of legislation that exists on the labeling of foodstuffs. In this respect, DG SANCO has established a new draft on consumer information, which would regroup all these separate labeling legislations into one text. The text is still in inter-service consultation at the Commission, but first discussions on the text have already been described as “heated.” One of the essential requirements of this legislation would be the establishment of a Guideline Daily Amount on Front of Pack for certain nutrients, to enable European consumers to obtain comprehensive information on the nutritional content and composition of food products. Salt would be one of the required indications.

More information on salt, its essential role in life, and current reformulation strategies can be found at www.eusalt.com.

EuSalt, the European Salt Producers’ Association, is a nonprofit organization that represents the interests of 20 salt producers throughout Europe. As the voice of the salt industry in Europe, EuSalt provides authoritative information to the public at large and other interested parties about salt and its many uses. EuSalt also promotes the responsible use of salt and represents the industry as a whole at the level of the European and international institutions. The association was founded in Paris in 1957 as the European Committee for the Study of Salt (ECCSS) and was later renamed into the European Salt Producers’ Association (ESPA). In early 2004, the association was moved to Brussels and was renamed EuSalt. The association is managed by Robert Speiser and Wouter Lox, who are assisted by Enrica Francesconii.