

## Irreconcilable Differences Part 3 of 4

September 2010

### ▣ The Mineral Sodium (Na)

Sodium is an essential nutrient. Infants consume an average of 0.12g per day from human breast milk. Peak requirements occur between ages 9 to 50 yrs, at 1.5g/d. People aged 70+ should consume 1.2g/d. The two major physiological roles of sodium are maintenance of body fluid equilibrium, and, neuron (both brain and nerve) functioning.

### ▣ The Mineral Chloride (Cl)

Chloride is an essential nutrient. Infants consume an average of 0.18g per day from human breast milk. Peak requirements occur between ages 9 to 50 yrs, at 2.3g/d. People aged 70+ should consume 1.8g/d. The three physiological roles of chloride are regulation of cell fluid volume, regulation of electrical excitability, and transportation of nutrients and fluids across epithelium (cells that line body cavities and structures). The critical contribution of chloride to human health became public under disastrous circumstances: "In 1980 [...], a manufacturer of soybean-based infant formula wished to market a version with a decreased sodium content [...]. To achieve this marketing objective, the manufacturer removed the sodium chloride from the formula [...] which resulted in a deficiency of chloride in the formula. The result was a condition known as metabolic alkalosis, characterized by lethargy, poor appetite, failure to gain weight, vomiting and diarrhea. Several infants died as a result." (Modern Nutrition in Health and Disease. 2006. pg.1813). Such an event would never happen today, due to the USA's *1980 Infant Formula Act* - the most detailed and comprehensive piece of legislation ever passed by US Congress - and similar regulations worldwide.

### ▣ Sodium + Chloride = NaCl = Salt

The blend of sodium and chloride is the common and ubiquitous salt. Salt is a necessary nutrient. The minimum required for good health approximates the natural content of unprocessed food, 0.5g/d. Maximum recommended intake is 2.8g/d. The average intake in industrialized countries is 10g/d, taking a serious toll on human health. Several citizen groups, healthcare professionals and governments have undertaken corrective action.

### ▣ CASH (Consensus Action on Salt and Health)

In 1996, UK citizens had one of the highest salt intakes at 10 -12 g/d. When COMA (Committee on Medical Aspects of Food) failed to receive the sought-after endorsement of the then Chief Medical Officer to reduce the salt content of the UK food supply, CASH came into being. This rabble-rouser group, along with the UK Food Standards Agency, has been instrumental in coercing (it almost amounts to public shaming) food processors and the foodservice sector to lower the salt content of its offerings. Accordingly, UK salt intake as of July 2008 was 8.6g/d. The ultimate goal is 6g/d.

### ▣ WASH (World Action on Salt and Health)

Started in 2005, this organization is represented by 81 countries, and serves to encourage multi-national food companies to reduce the salt content of their products.

### ▣ Sodium Reduction Strategy for Canada

This 2007 initiative includes informing the food industry of the targeted sodium content of key food categories; assessing the current degree of compliance with these recommendations; and, surveying the length of lead time (maximum is the sunset year 2016) for processors to re-formulate and become compliant, if necessary.

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"We must never forget that what the patient takes beyond his ability to digest does harm." (*Dr. Samuel Gee, 1839-1911. English paediatrician; first to completely describe celiac disease and prescribe dietary management.*) **FF**

### ▣ Some Web sites

<http://www.actiononsalt.org.uk/index.htm>

<http://www.worldactiononsalt.com/>

<http://www.hc-sc.gc.ca/fn->

[an/nutrition/sodium/strateg/index-eng.php](http://www.hc-sc.gc.ca/fn-an/nutrition/sodium/strateg/index-eng.php)

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