

Salt intake is strongly associated with obesity

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A study published in the journal “Progress in Cardiovascular Diseases” refutes the frequently repeated claims that a comprehensive salt reduction would not produce any overall health benefits, or would even increase diseases and shorten the life-span.

Professors, Dr. Heikki Karppanen of the University of Helsinki and Dr. Eero Mervaala of the University of Kuopio report that an average 30-35 % reduction in salt intake during 30 years in Finland was associated with a dramatic 75 % to 80 % decrease in both stroke and coronary heart disease mortality in the population under 65 years. During the same period the life expectancy of both male and female Finns increased by 6 to 7 years.

The most powerful explaining factor for the favorable changes was the more than 10 mmHg (“point”) decrease in the average blood pressure of the population. A marked decrease in the average cholesterol levels of the population also remarkably contributed to the decrease of heart diseases. The extensive use of drugs contributed less than 10 % of the observed decreases in blood pressure, cholesterol, and cardiovascular diseases.

“To our surprise, the sales figures of the American Salt Institute divulged that salt intake increased more than 50 % in USA during 15 years from mid-1980s to the late 1990s”, says Professor Karppanen. The study reports that the prevalence of high blood pressure, which had long shown a decreasing trend, turned to a marked increase concomitantly with the increase in salt intake.

Perhaps the most interesting finding of the study is the close link between salt intake and obesity. The study reports that increasing intakes of sodium (salt) obligatorily produce a progressive increase in thirst. The progressive increase in the average intake of salt explains the observed concomitant increase in the intake of beverages which, in turn, has caused a marked net increase in the intake of calories during the same period in the United States.

Between 1977 and 2001, energy intake from sweetened beverages increased on the average by 135 % in the United States. During the same period, the energy intake from milk was reduced by 38 %. The net effect on energy intake was a 278 kcal increase per person a day. The American Heart Association has estimated that, to burn the average increase of 278 kcal a day and avoid the development or worsening of obesity, each American should now walk or vacuum 1 hour 10 minutes more every day than in 1977. Unfortunately, this has not been the case.

In a decade from 1976-1980 to 1988-1994 the prevalence of obesity increased 61 % among men and 52 % among women. During 1999 to 2002, the prevalence of obesity was 120 % higher among men and 99 % higher among women as compared with the 1976 to 1980 figures. The increased intake of salt, through induction of thirst with increased intake of high-energy beverages has obviously remarkably contributed to the increase of obesity in the United States.

It is noteworthy that, until 1983 the use of salt did not change or even showed a continuous decreasing trend in the United States. The prevalence of obesity was relatively low and remained essentially unchanged from early 1960s to early 1980s.

The study suggests that a comprehensive reduction in salt intake, which would reduce the intake of high-energy beverages, would be a potentially powerful means in the so far failed attempts to combat obesity in industrialized societies.

The authors conclude that there now is conclusive population-wide evidence, which indicates powerful beneficial health effects of comprehensive salt reduction. Decrease of obesity is now added to the previous list of recognized benefits. The population-wide long-term experience from Finland indicates that a remarkable decrease in the salt intake has not caused any adverse effects.

Professor Karppanen states that “the repeated warnings of various industries on possible harmful effects of comprehensive salt reduction are unjustified and even unethical”.

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