

The Aspartame Information Service responds to allegations about aspartame safety published by three anatomists from the Universities of Pretoria and Limpopo.

The paper by Humphries et al published in the *European Journal of Clinical Nutrition* contains no new data about aspartame but rather presents a distorted review of anecdote and opinion which amounts to nothing more than scaremongering. Above all, the authors have ignored that aspartame is broken down by the digestive system to very small quantities of common dietary components and cannot therefore cause the adverse effects that they hypothesise.

Aspartame is made from two amino acids or parts of protein, identical to those found in, for example, meat, cheese, fish, or mothers' milk. The two amino acids in aspartame are aspartic acid and phenylalanine. We consume these amino acids in much greater quantities in foods we eat daily as part of our normal diet. For example, a 220 ml glass of milk contains seven times as much aspartic acid and more than three times as much phenylalanine as a 330 ml serving of soft drink sweetened with aspartame alone. A new born baby will obtain more aspartic acid and phenylalanine from his mother's breast milk every day than there is in a litre of soft drink sweetened with aspartame. There is more methanol in a small banana than in a soft drink sweetened with aspartame.

A major review of the science relating to aspartame published in 2007 in *Critical Reviews in Toxicology* looked specifically at data relating to neurology and concluded:

"Studies that mimic human exposure do not show any evidence of neurological effects. Aspartame is not neurotoxic."

"The data from these studies, in general, do not support the hypothesis that aspartame in the human diet will affect nervous system function, learning or behaviour."

"The effect of aspartame on behaviour, cognitive function, and seizures has been studied extensively in animals, healthy children, hyperactive children, sugar-sensitive children, healthy adults, individuals with Parkinson's disease, and individuals suffering from depression. Overall, the weight of the evidence indicates that aspartame has no effect on behaviour, cognitive function, neural function, or seizures in any of these groups."

Furthermore, all of the issues raised in this paper have been considered by regulatory authorities across the world. In 2002, the European Commission's Scientific Committee on Food concluded that:

"Aspartame is unique among the intense sweeteners in that the intake of its component parts can be compared with intakes of the same substances from natural foods."

At a time when governments and the medical profession are increasingly concerned about overweight and obesity, it is perverse to raise ill-founded fears about a popular choice which helps people to control their calorie in-take. By providing sweetness without calories, aspartame can make a useful contribution to weight control. For example, a soft drink sweetened with aspartame can have as little as one Calorie per serving. In Europe alone, overweight and obesity are estimated to cause 70,000 new cancer cases every year.

The reason for publication of this article at this point in time remains obscure. It is noteworthy that the authors do not indicate the source of their funding for their paper.

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