

Glutamate News

IGIS responds to allegations about glutamate made by Truth in Labeling

23 November 2002

The latest edition of *New Scientist* contains a letter from Truth in Labeling which makes allegations about the safety of glutamate. The following is a transcript of the letter (in italics) followed by the facts about glutamate:

How safe is glutamate?

*From Adrienne Samuels
Truth in Labeling*

People now ingest undetermined amounts of free glutamic acid in the flavour enhancer monosodium glutamate, in other ingredients and in fruits, grains and vegetables that have been sprayed with MSG as they grow.

Free glutamate is a natural component of many foods we eat as part of a normal diet such as meat, fish, vegetables like tomatoes and mushrooms, and cheese. Each day the average person consumes between 10g and 20g of glutamate as part of their normal diet, most of which is consumed as glutamate in the protein in foods. Generally the amount of glutamate added to food as seasoning is in the range of 0.1% to 0.8% of the food consumed so people who consume MSG as seasoning very regularly will be eating perhaps 1g - 3g a day. The body treats glutamate in exactly the same way whether it comes from these sources or from seasoning added to food.

Monosodium glutamate is not sprayed onto crops as they grow.

Glutamic acid as part of a protein has important nutritional value. Free glutamic acid, if injected or applied directly, is capable of killing brain cells.

Glutamic acid is one of 20 amino acids required for healthy development including the making of proteins in the body. The human body produces 48g of glutamate as part of normal metabolism.

Injecting any ingredient directly into the brain is likely to cause damage.

*Hiroshi Ohguro speculates that a diet high in glutamic acid might raise glutamic acid levels in the eyeball (26 October, p.11). Recent research has linked such rises to glaucoma. As *New Scientist* reported, Ohguro found that very large amounts of monosodium glutamate cause retinal damage in rats.*

The doses of glutamate fed to the rats were extremely high (neither of the experimental diets supplemented with glutamate could be considered simply 'high' let alone 'moderate'). The amounts would be the equivalent of a human consuming more than 500g of additional MSG as seasoning every day for months which makes the research irrelevant to human consumption levels.

There is no evidence that lesser amounts of monosodium glutamate over a lifetime won't cause retinal damage in people, too.

This statement ignores what we know about glutamate's role in the body and its metabolism. The body contains about 1,800 g of glutamate (in a 70 kg adult) of which about 10g is free glutamate. Between 10g and 20g of glutamate is consumed everyday and absorbed for use by the body in normal metabolism. The body itself produces glutamate during normal metabolism - approximately 48g of glutamate is turned over in the body everyday. In addition, the average person excretes about 16g of glutamate everyday. Glutamate, from whatever source, consumed as part of a normal diet would be metabolised and would not build up.

The Truth in Labeling Campaign has observed that some MSG-sensitive people can eat a particular "fast food" on a single day without experiencing MSG-reactions - such as nausea, drowsiness and headaches. Yet when these people eat that same fast food two or three days in a row, typical MSG-reactions occur.

Anecdotal reports of adverse reactions to various foods or food ingredients are not uncommon. Research has shown that people who believe they adversely respond to MSG do not do so when evaluated in carefully controlled testing situations.

The glutamate industry, in the form of the International Glutamate Information Service, responded to the New Scientist story with a press release and letters to the other media that reported the study, including on to New Scientist (16 November, p.24). Since 1969, the industry has been claiming that glutamate is safe.

Yet a 1995 review by the Federation of American Societies for Experimental Biology concluded that MSG can cause adverse reactions in an "unknown percentage" of people.

In its 1995 report to the FDA, following a comprehensive review of the scientific literature about monosodium glutamate, the Federation of American Societies for Experimental Biology (FASEB) concluded that there is no difference between naturally occurring free glutamate found in mushrooms, cheese and tomatoes and the glutamate from monosodium glutamate. FASEB found no evidence linking MSG to any serious or long-term effects. The report led the Food and Drug Administration to conclude that MSG is a safe food ingredient at normally consumed levels.

Virtually every migraine clinic in the US recognises monosodium glutamate as a potential headache trigger, for example.

Research shows that glutamate and MSG are not headache triggers. A 1990 review of the literature on food-triggered headaches (Food triggered migraine: a critical review. *Annals of Behavioural Medicine*, 12:51-651, 1990) states that there is no evidence to support an association between MSG and migraine headaches.

Glutamate occurs in a wide range of foods we consume as part of a normal diet including meat, fish, vegetables and dairy products. Glutamate from MSG contributes just a fraction of our daily intake. The body treats glutamate from MSG seasoning and glutamate from other foods in exactly the same way.

The International Glutamate Information Service claims that accurate information can be found at its website, www.glutamate.org. An alternative view can be found at www.truthinlabeling.org.

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