

FREE GLUTAMIC ACID (MSG): SOURCES AND DANGERS

Why is free glutamic acid added in vast amounts to processed foods? Our large profit-driven food companies have found that manufactured free glutamic acid, in the form of monosodium glutamate (MSG), hydrolyzed vegetable proteins, etc., etc., when added to our processed foods, masks off flavors and makes the blandest and cheapest foods taste wonderful.

The story is fascinating. For thousands of years kombu and other seaweeds have been added to foods in Japan to enhance flavor. In 1908 a Japanese scientist discovered that the active ingredient in kombu is glutamic acid and then the use of its sodium salt, monosodium glutamate, began in Japan. During the Second World War American quartermasters realized that Japanese army rations tasted great. Following the war, they introduced monosodium glutamate, the flavor enhancing ingredient in the Japanese rations, to the food industry; and the world-wide use of processed free glutamic acid began to explode.

Since free glutamic acid is cheap and since its neurotoxic nerve stimulation enhances so wonderfully the flavor of basically bland and tasteless foods, such as many low-fat and vegetarian foods, manufacturers are eager to go on using it and do *not* want the public to realize any of the problems.

An excellent NOHA lecture on the dangers and hidden sources of processed free glutamic acid was given at Evanston's Whole Foods Market on February 14, 2000, by NOHA Board Member Jack Samuels. He is president of the Truth in Labeling Campaign.

Glutamic acid is a neurotransmitter that excites our neurons (not just in our tongues). This electrical charging of neurons is what makes foods with added free glutamic acid taste so good. Unfortunately, the free glutamic acid can cause problems in many people. Actually, our brains have many receptors for glutamic acid and some areas, such as the hypothalamus,¹ do not have an impermeable blood-brain barrier, so free glutamic acid from food sources can get into the brain, injuring and sometimes killing neurons. At least 25 per cent of the U.S. population react to free glutamic acid from food sources. Today, we recognize that those reactions range from mild and transitory to debilitating and life threatening.

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Glutamic acid is widely distributed in proteins. When we eat it bound as part of whole, unprocessed proteins, it helps nourish us as it has for millennia. Glutamic acid bound as part of whole, unprocessed protein does not cause problems in people who react to the free glutamic acid in manufactured food, where it is hidden in ingredients with about 40 different names.

Monosodium glutamate and other forms of free glutamic acid can be manufactured cheaply and sometimes it is even just a byproduct of other food processes. For example, the brewer's yeast from the brewing industry contains free glutamic acid. Since free glutamic acid is cheap and since its neurotoxic nerve stimulation enhances so wonderfully the flavor of basically bland and tasteless foods, such as many low-fat and vegetarian foods, manufacturers are eager to go on using it and do not want the public to realize any of the problems. In 1999 in an article in a peer-reviewed journal, NOHA Board Member Adrienne Samuels, PhD, wrote a history of the many deceptions used by those manufacturers, "The Toxicity/Safety of Processed Free Glutamic Acid (MSG): A Study in Suppression of Information."² She points out "how easily truth can be hidden and how seemingly isolated incidents actually can be badly flawed research, direct suppression of information, and dissemination of biased information orchestrated by one group or industry."

According to Dr. Samuels, the evidence of toxicity is overwhelming. Exposed laboratory animals suffer brain lesions and neuroendocrine disorders. Scientists studying retinal degeneration in mice treated with free glutamic acid have noted that these mice also became grotesquely obese following administration of free glutamic acid. The vulnerable hypothalamus in our brains regulates weight control, as well as other endocrine functions. When the brain is deluged with more free glutamic acid than it can handle, scientists know that problems and diseases can develop. For example, they know that a diverse number of disease conditions such as ALS (amyotrophic lateral sclerosis, a progressive degeneration of neurons and motor cells of the brain), Alzheimer's disease, seizures, and stroke are associated with the glutamate cascade.