

Monosodium Glutamate

(An excerpt from "Battling the 'MSG Myth'" by Debby Anglesey)

Glutamic acid is just one of many amino acids that are the building blocks of proteins. It occurs naturally in many foods such as tomatoes, milk, and mushrooms. It is also found in the cells of our bodies, including mother's milk, and involves a wide variety of brain functions since it functions as a neurotransmitter. This natural glutamate in plants and animals is known as L-glutamic acid.

Our normal digestive process slowly breaks down this natural or "bound" glutamic acid and it is then delivered to glutamate receptors in our body and brain. Broken down this way, it is harmless. In a factory, however, the bound glutamic acid in certain foods (corn, molasses, wheat) is broken down or made "free" by various processes (hydrolyzed, autolyzed, modified or fermented with strong chemicals, bacteria, or enzymes) and refined to a white crystal that resembles sugar. This substance is known as monosodium glutamate or MSG. It is 78.2% glutamate, 12.2% sodium, and 9.6% water. It is odorless and has no distinct flavor, although some describe a salty/sweet flavor. Its chemical formulation has been modified and it is technically known as D-glutamic acid. It also contains some L-glutamic acid, pyroglutamic acid, and other contaminants. This factory made version causes sensitive individuals more serious reactions than any other form of glutamic acid. Keep in mind that there is no D-glutamic acid, pyroglutamic acid, or other contaminants in the protein found in plants and animals, only L-glutamic acid.

We are getting far too much MSG in the growing number of processed food items that we have come to rely on. Since free glutamate can be a component part of certain food additives, such as autolyzed yeast or hydrolyzed protein, the FDA allows it to go into food unlabeled as MSG. A label may say "yeast extract", "calcium caseinate", or "beef flavoring", but the product still contains varying amounts of "free" glutamic acid. This makes it very difficult for consumers who are trying to avoid it. It is also very dangerous for those who suffer severe reactions to it.

Monosodium glutamate in the form of a dried seaweed (Kombu) has been used for thousands of years in East Asian countries. Today, free glutamate or MSG is made from many different raw materials (mostly corn) using various chemical processes previously mentioned. Strong acids, alkalies, enzymes, bacteria, and heat are used to hydrolyze animal, vegetable, or milk products. Calcium and sodium caseinate are products of hydrolyzed milk protein. Maltodextrin comes from processed corn and although corn syrup and cornstarch are not as highly processed as maltodextrin is, they may not be totally free of glutamate as a result of their production. Yeast extract or autolyzed yeast is made by chemically processing natural yeast in a method similar to hydrolyzing. Barley malt and malt extract have small amounts of MSG because of an enzyme reaction used to produce them. Whey protein concentrate or protein isolate may contain MSG if hydrolyzed milk proteins are present or added. Soy protein isolate or soy protein concentrate is processed from soy beans and is often a component of textured protein. Most smoke flavor or smoke flavorings use hydrolyzed protein to intensify flavor. Some other "free" glutamate containing products are gelatins, which are highly processed by-products of animal protein that always contain MSG in varying amounts, and soy sauce, made from a fermentation process of soy beans. MSG can also be added to cheaper brands of soy sauce to enhance the flavor. Carrageenan is made from a type of seaweed known as Irish moss. It may contain MSG depending on its manufacturer. MSG or hydrolyzed milk protein is often added to it. The book, Battling the MSG Myth goes on to cover many other hidden sources and the foods in which they are hidden.

Hidden Names for MSG

Foods **always** contain MSG when these words are on the label:

MSG	Gelatin	Calcium Caseinate
Monosodium glutamate	Hydrolyzed Vegetable Protein (HVP)	Textured Protein
Monopotassium glutamate	Hydrolyzed Plant Protein (HPP)	Yeast Extract
Glutamate	Autolyzed Plant Protein	Yeast food or nutrient
Glutamic Acid	Sodium Caseinate	Autolyzed Yeast

Foods made with the following products **often** contain MSG.

Malted Barley (flavor)	Flavors, Flavoring	Modified food starch
Barley malt	Reaction Flavors	Rice syrup or brown rice syrup
Malt Extract or Flavoring	Natural Chicken, Beef, or Pork, Flavoring "Seasonings" (Most assume this means salt, pepper, or spices and herbs, which sometimes it is.)	Lipolyzed butter fat
Maltodextrin	Soy Sauce or Extract	"Low" or "No Fat" items
Caramel Flavoring (coloring)	Soy Protein	Corn syrup and corn syrup solids (some companies use another process to make their product, saying it is MSG free)
Stock	Soy Protein Isolate or Concentrate	Citric Acid (when processed from corn)
Broth	Cornstarch	Milk Powder
Bouillon	Flowing Agents	Dry Milk Solids
Carrageenan	Wheat, rice, or oat protein	Protein Fortified Milk
Whey Protein or Whey	Anything enriched or vitamin enriched	Annatto
Whey Protein Isolate or Concentrate	Protein fortified "anything"	Spice
Pectin	Enzyme modified "anything"	Gums
Protease	Ultra-pasteurized "anything"	Dough Conditioners
Protease enzymes	Fermented "anything"	Yeast Nutrients