

# MSG

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I keeled over after one bite of my salad at Ruth's Chris. I came to on the floor and Dr. Frank Minyard was giving me CPR. The coroner saved my life. MSG in that salad dressing almost killed me," said Frank Proust, in his 40s at the time. Proust (not his real name), a French Quarter resident and attorney specializing in trusts and wills, went to his grave a few decades later convinced that MSG had almost caused his earlier demise. At the time, friends suspected that three martinis on an empty stomach before the salad were the real culprit.

In my practice I see at least one patient a month who tells me they're allergic to MSG. Their symptoms are usually a hornet's nest of diversity and vagueness. Once a person is inoculated with an allergy diagnosis, tincture of time doesn't heal the wounds, even if the original diagnosis was incorrect.

"My grandmother had a list of things I couldn't eat taped to her kitchen wall. I have it memorized," says an actor in New York City I'll call Josh Crane. His dietary precautions excluded seafood of any kind and all Chinese food, because, "you never know when it might contain MSG." Crane had various problems attributed to allergies as a child and his grandmother marched him to an allergist's office in the old Maison Blanche Building for years to get allergy shots. Those primitive allergy shots installed a lifelong fear of certain foods, including all seafood. He still eats today based on the results of those primitive skin tests from the 1970s. He graduated from Jesuit High School without ever peeling a shrimp, sucking a crawfish head or pigging out on Chinese food.

MSG stands for monosodium glutamate, a naturally occurring chemical that imparts a hard to describe savory taste to food – like a vitamin to certain taste buds. Small amounts of glutamate have no flavor of their own but rather enhance flavor by stimulating taste buds, much like a certain odor causes a flashback to your grandmother's cooking. Various body tissues besides taste buds are laced with glutamate receptors but most consumed glutamate is simply absorbed and digested like any other amino acid.

The business end of MSG is glutamate, a naturally occurring amino acid. The monosodium part of the moniker refers to a molecular tag that binds with the glutamate to form a powder/crystal substance that looks like salt or sugar. Like alcohol, glutamate is a fermentation byproduct of a variety of natural substances including sugar cane, beets, potatoes and molasses.

"Fear of [MSG] began in 1968, when the concept of 'Chinese Restaurant Syndrome' was introduced in the New England Journal of Medicine in a chatty piece by Dr. Ho Man Kwok," writes Jennifer 8. Lee in her 2008 book *The Fortune Cookies Chronicles*. (Yes, "8." Is what she uses as her middle name.) Dr. Kwok's report, which started glutamania, wasn't a double blind, placebo-controlled piece of scientific work. It was in a respected journal but the conclusions weren't peer-reviewed. It was simply a letter to the editor that started an MSG hullabaloo that circled the globe.

"I have experienced a strange syndrome whenever I have eaten out in a Chinese restaurant, especially one that served northern Chinese food. The syndrome, which usually begins 15 to 20 minutes after I have eaten the first dish, lasts for about two hours, without hangover effect. The most prominent symptoms are numbness at the back of the neck, gradually radiating to both arms and the back, general weakness and palpitations," writes Dr. Kwok as reported in Lee's book.

Since 1968, testimonials have abounded that MSG causes headaches, heart palpitations, nausea and vomiting. However, several well-designed studies fail to support any widespread MSG sensitivity. When persons who believe they have MSG sensitivity are tested, symptoms can rarely be replicated in a controlled setting.

"I remember when a certain popular Chinese restaurant opened years ago before I even started reviewing restaurants," says local food writer Gene Bourg. "I would get hyper about an hour after eating there. They must've used enough MSG to blow open a safe." What Bourg described is a common sensation associated with Chinese food but it's probably not MSG sensitivity. Our Chinese-American restaurant food contains large amounts of sugars with high glyceric indexes. These foods rapidly break down to glucose. The body responds to this surge in glucose by producing large amounts of insulin. The insulin helps metabolize the glucose but excess insulin drops the body's glucose reserves, causing the ravaging hunger and hyperactivity so common a few hours after consuming a large Chinese feast.

Two groups do have reproducible short-term reactions to MSG. When given large amounts of MSG, some people do indeed develop classic symptoms: numbness, burning sensations, tingling, facial pressure or tightness, chest pain, headache, nausea, rapid heartbeat, drowsiness and weakness. Certain other persons with asthma react to smaller amounts of MSG more likely to be encountered in the

foods we eat. Asthmatics may experience the tingling sensations as well as difficulty in breathing.

The name "Chinese Restaurant Syndrome" gives Chinese food a bad rap, since glutamate is universally present in what we eat and not just in Chinese foods. Actually, an Italian favorite has the highest concentration of natural glutamate found in any food: Parmesan cheese. Other foods naturally containing glutamate include milk, mushrooms, tomatoes and all meats. The more politically correct name is "MSG Symptom Complex."

Our grocery store aisles are packed with hidden glutamates: bouillon cubes, chicken and beef broth, clam juice, cornstarch and syrup, nonfat dry milk, tapioca, soy sauce, Worcester sauce, Maggi sauce and almost any flavoring or seasoning mix. Glutamate is added to these foods under assumed names such as extracts of hydrolyzed protein or yeast. The FDA requires that MSG be on the label only if actual MSG crystals are added to a food product.

Conclusion: MSG Symptom Complex occurs but even folks with documented MSG sensitivity don't get the symptoms with usual amounts with one exception: Some persons with severe asthma react to lower amounts. **Scientific studies and MSG**

A typical amount of MSG found in a meal contains less than 0.5 grams of the chemical. Three grams in a meal is a large dose and 5.0 grams is more than any cook ever uses. Aspirin and sulfites are two other chemicals that can provoke acute attacks in persons with asthma.

Thirty-two asthma patients, including several with histories of asthma provoked by eating at Chinese restaurants, swallowed amounts of MSG from 0.5 grams to 5.0 grams. Overall, 19 didn't develop any symptoms even after the 5-gram dose of MSG. Within an hour or two though, seven of the volunteers had flushing sensations and wheezing. Another six persons had delayed asthma flares six to 12 hours after ingestion but without any of the usual sensations associated with MSG.

Using a fancy medical device to measure facial blood flow, another researcher gave large MSG doses to volunteers without asthma. He was unable to document facial flushing in any of the volunteers including those with self-reported MSG sensitivity.

In yet another study, 61 persons with histories of MSG related symptoms after eating in Chinese restaurants swallowed identical appearing capsules of either placebo or whopping 5-mg doses of MSG. Thirty percent developed no symptoms at all after swallowing a 5-mg dose of MSG, even though they all firmly believed themselves to be sensitive to it.

Thirty-six percent reported headache, muscle tightness, numbness or tingling, general weakness and flushing after MSG but not after swallowing the placebo. But a full quarter of the subjects reported these symptoms after receiving just placebo, showing the importance of double blind and controlled experiments.

Those who developed symptoms after receiving real MSG then enrolled in what scientists call a dose ranging study. Again in a double blind fashion, they took between 0 and 5 grams of MSG. It took a 2.5-gram dose for these folks to develop the flushing and other symptoms attributed to MSG. This 2.5-gram dose is far more than would be contained in most servings of food or sauces containing MSG.