

## Second Place – High School - Non-Fiction/Essay

### MSG – The Tasteful Toxicant

By Alex Schwartz

You are in the kitchen and you spot your favorite bag of barbeque potato chips. You quickly tear the flimsy plastic open. You smell the familiar salty-sweet smell and dig in. A little bit later, you look down and find that you have eaten half the bag! Finally you decide to roll up the half eaten bag and put them back into the cabinet. Satisfied, you walk away. Fifteen minutes later, you find you are craving yet another snack!! What you may have thought as a weakness-in-will may actually be a flavor enhancer sabotaging your diet. This tremendous desire is most likely started by Monosodium Glutamate commonly known as MSG. By identifying what MSG is, what MSG does, and how to recognize and replace MSG, you will see the wisdom in eliminating this additive from your diet.

What is MSG? Monosodium Glutamate is a chemical flavor enhancer added to canned, boxed and prepared food items. MSG can be made of wheat or corn gluten as well as fermented yeast and many kinds of sugars. How exactly is MSG made? According to an article by A. Leung and S. Foster, entitled: Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics published 1996, Monosodium glutamate can generally be produced by two methods: (1) hydrolysis and (2) microbial fermentation.

According to Merriam-Webster's online dictionary the word hydrolysis is "a chemical process of decomposition involving the splitting of a bond and the addition of the hydrogen cat-ion and the hydroxide an-ion of water." This sounds like a lot to take in, but the bottom line of hydrolysis is splitting chemical bonds in foods, or in this case, proteins.

Also, MSG can be made through microbial fermentation which is essentially just the usage of bacteria, like yeast, which is fermented thus creating the much used, popular MSG additive.

What exactly does MSG do? Although the taste of this salt is delicious, it is also a deadly neurotoxin. A neurotoxin is an excitotoxin that excites brain neurons to death. Ultimately, this chemical harms your nerves which harms your brain, resulting in neurological issues and diseases such as Alzheimer's and Parkinson's. According to a website called Resources for Life, an article written by Gregory Johnson, published September 3rd 2010, the FDA conducted a 350 page study stating that MSG causes the following side-effects:

- chest pain
- headache
- nausea
- drowsiness
- weakness

According to the Database of Select Committee on “Generally Recognized As Safe” Substances, I was able to dig up a 1980’s review on Monosodium Glutamate stating, “MSG suggests a hazard to the public when used at the rate that is now current.” There are even more products consumed today containing MSG than there were 25 years ago. So consumption is at a much higher level.

As explained you can see that MSG poses a hazard to human consumption, so what is the solution to protect ourselves? Read the label. Take a little time to read and become familiar with and aware of the ingredients in packaged foods such as: spices, autolyzed yeast extract and natural flavorings. There are trace amounts of naturally occurring MSG in food that won’t appear on the label of your jar of tomato sauce. These are natural flavorings and not generally harmful. Although, companies can slip MSG in foods under the label as natural flavorings which are harmful. Also the ingredient labeled spices, can but may not always mean, that MSG is within the product but typically, inserting the word “spices” is just another tactical way for food manufactures to sneak in the poisonous MSG taking people unaware. According to Fit Day.com, there are other alternatives to MSG to flavor foods such as:

- Aged cheeses
- Seaweeds
- Red wine
- Spices such as: parsley, cumin, and paprika.

Along with the list above you can roast or braise food to enhance the flavor of meats and vegetables.

Some benefits to eating foods without MSG are lessening the risk for cancer and the risk of developing diseases such as Celiac or Parkinson’s. Food cravings may also disappear or lessen. Now that I have adjudicated the perils of MSG and shown what it does to the human body, what action can be taken to rid our diets of MSG? Though not much can be done to keep food manufacturers from using MSG, educating ourselves and our families to the dangers, avoiding

processed foods, choosing healthy alternatives to flavor foods, and eating organic as much as possible is a step in the right direction. Monosodium Glutamate makes for good business; it enhances foods, masks bad tastes, and promotes addiction. Eliminating MSG will promote good health instead of potential risk. Eat the potato chips but check the product label first!