MSG - the poisoning of America

According to John E. Erb, author of "The Slow Poisoning of America", there may be an actual chemical responsible for the massive obesity epidemic, and that chemical may be Monosodium Glutamate, commonly known as MSG. Scientists routinely use MSG to make lab animals fat for research purposes. When given MSG, animals will become obese without any increase in their food intake. In studies done on rats and mice, MSG triples the amount of insulin the pancreas creates, causing them to become obese.

MSG appears to affect the hunger and weight control center of the brain

Studies done with monkeys, dating as far back as 1969, found that MSG causes lesions in the hypothalamus, the portion of the brain that is recognized to affect weight control (as well as functions of the nervous system). Damage to the hypothalamus has been recreated in test after test. And the bad news for humans is that, based on tests of blood plasma levels, humans are 20 times more sensitive to MSG than monkeys; and **children are 4 times more sensitive to MSG than adults**. Neonatal exposure to MSG causes a permanent reduction in the secretion of growth hormone, leading to stunted growth and irreversible obesity.

But the dangers of MSG aren't limited to obesity...

People's reactions will vary depending on their sensitivity to MSG. Although some may experience no discernable symptoms, long term neurological damage can occur to anyone who ingests it. MSG has been linked to diabetes, stroke, epilepsy, multiple sclerosis, stomach disorders, fatigue, depression, headaches and migraines, grand mal seizures, irregular or rapid heart beat, nausea and vomiting, numbness in the finger tips, autism, ADD/HD, Asthma-like symptoms, fibromyalgia type pain, disorientation and confusion, and degenerative disorders such as Parkinson's and Alzheimer's.

MSG has no nutritional value…and has been found to be "addictive"

Most people have heard of MSG, mainly in connection with Chinese food, but few realize how widely it is used in today's processed foods. MSG is a food manufacturer's dream because they can use a reduced amount of a food, add some cheap MSG and fillers, and get a "big" taste while saving money. MSG works by stimulating taste buds and changing the perception of how a food tastes. It intensifies and enhances flavor and odor appeal, lessens the acidity of certain foods, such as tomatoes, suppresses bitterness and sourness, enhances the flavor of bland tasting low-fat foods, has excellent storage properties, and is a useful blending agent for preparations requiring mixed spices. MSG stretches the flavor of ingredients, thereby lowering production costs. But probably the biggest advantage to food manufacturers is the "addictive" qualities of MSG. Many people experience increased hunger, and cravings, (in addition to water retention, swelling, irritability, and fatigue) within one hour, to one day after eating foods filled with MSG. A study of the elderly showed that they ate more food when it contained MSG. Maybe that's why you can't stop eating those chips and snack foods once you've started!

The affects of MSG are compounded by continued ingestion all day long, from a wide variety of different manufactured products. McDonalds, Burger King, Taco Bell, and many sit-down chair restaurants such as TGIF, Chilis, Denny's and Applebees use MSG in abundance. At Kentucky Fried Chicken, MSG was found to be in every chicken dish, salad dressing, and gravy. And you'll find it on the labels of many of America's favorite foods, like, Doritos, Lays potato chips, Top Ramen, Hamburger Helper, canned gravies, frozen prepared meals, and salad dressings (especially the low fat ones). Countless restaurants receive many of their key entrees, sauces, salad dressings, soups and more from suppliers who offer pre-prepared, pre-packaged and ready to heat menu selections. These are the items to watch out for. If a restaurant isn't purchasing fresh produce and ingredients, and preparing each dish from scratch, then you can count on them containing MSG.

What about foods labeled "No MSG"

Some foods advertise "No MSG", or No added MSG", but actually contain large amounts of a hidden MSG derivative, called "free glutamate". Many people experience adverse reactions but are not aware that the cause may be exposure to this substance, free glutamate, which is created in manufacturing processes. When any product contains at least 79% free glutamic acid it must be called MSG. Quantities of less than this amount, do not fall under MSG labeling restrictions, and can be called any number of innocent sounding names, such as "natural flavoring". In larger

quantities, free glutamate is toxic to everyone, but for those who cannot metabolize it effectively, even very small doses can act like a poison. MSG stimulates or damages glutamate receptors, making them more sensitive to subsequent ingestion of MSG. Science suggest that free glutamates may act as a "slow neurotoxin" with damage, such as dementia, only becoming apparent years later.

Identifying MSG can be difficult

The tricky part for consumers is that current labeling allows for free glutamate to be hidden under more than 40 different names making it extremely difficult for MSG sensitive individuals to identify. (see the list at the end of this article). Some common names are natural flavoring, natural chicken flavoring, natural turkey flavoring, etc., or basically any new name a manufacturer chooses. For example, hydrolyzed vegetable protein, another name for free glutamate, is widely used in many manufactured food products. Brain lesions have been produced again and again experimentally using hydrolyzed vegetable protein. Also, it has been determined that when these substances are combined together, as can be found in the lengthy ingredient list of many prepared foods, they become much more toxic than when used individually. Commercial soups, sauces, and gravies that are in liquid forms are **even more toxic than solid forms**, because liquids are rapidly absorbed and attain high concentrations in the blood.

Dairy foods and lactose intolerance:

The presence of free glutamate in pasteurized dairy products has resulted in adverse reactions that have led many people to erroneously believe they are lactose intolerant. For MSG sensitive individuals, the most common problem in dairy products appears to be from a free glutamate identified on labels as "Carrageen". It can be found in most whipped cream, chocolate milk, buttermilk, cream cheese, cottage cheese, sour cream and ice-cream.

What is the difference in manufactured "free" glutamate, and natural "bound" glutamate?

Man-Made "Free" Glutamate: Glutamic acid that has been freed from protein through a manufacturing process, prior to being ingested.
Natural "Bound" Glutamate: Created by the body as a natural part of the digestion of protein.

Many defenders of MSG like to point out that glutamate, or glutamic acid, is naturally occurring in the body. But people only express MSG sensitivity when glutamic acid has been freed from protein, by a man-made process, prior to ingestion. The body's natural "bound" glutamic acid is made of L-glutamic acid only, an important and necessary substance, which is handled very differently by the body than the man-made, manufactured free glutamate. Naturally occurring "bound" glutamate, exists in very, very small concentrations and is slowly broken down and absorbed by the body, so it can be utilized by muscle tissue, before toxic concentrations can build up. Manufactured free glutamate, found in processed food, is presented in substantially higher concentrations than can possibly be utilized by the body. At these higher concentrations, cell death, known as excitotoxicity, is triggered by a rapid cascade of reactions. Excess stimulation causes a rapid firing of impulses repetitively, until the point of cell death…hence the name excitotoxin. According to a study done by the University of Pennsylvania "Children under the age of 5 are particularly vulnerable. Constant exposure to low levels of food additives could permanently alter hormone secretion. Such effects could unknowingly affect the efficacy of drug therapy or the susceptibility to chemically induced cancers in adulthood."

The amount of manufactured free glutamate created is dependent on the method used to produce it. It can be found in anything protein-fortified, enzyme fortified, and fermented. Manufactured free glutamate can be created by many methods such as autolysis, hydrolysis, enzymolysis, and/or fermentation. If the manufacturing process is acid hydrolysis, carcinogenic propanols will be included as contaminants, which creates an additional cause for concern. With the ever increasing demand for processed foods, each year the FDA approves more and more chemicals for use in foods…but how many of these chemicals are neurotoxic and/or carcinogenic? Only the future can tell.

MSG has been found to cause serious damage to several areas of the brain

It has been clearly demonstrated that free glutamate places humans at risk, and plays a critical role in the development of several neurological disorders, but the FDA dismisses much of this extensive research. Numerous complaints have been filed since its initial use began in the 1940's. By 1948 many major food suppliers were using MSG, and since then, its use has doubled each decade. The average American now consumes 1.92 pounds of MSG each year.

According to Russell L. Blaylock, M.D., author of “Excitotoxins: The Taste That Kills”, “…excitotoxins play a critical role in the development of several neurological disorders including migraines, seizures, infections, abnormal neural development, certain endocrine disorders, neuropsychiatry disorders, learning disorders in children, AIDS dementia, episodic violence, lyme borreliosis, hepatic encephalopathy, specific types of obesity, and especially the neurodegenerative diseases, such as ALS, Parkinson's disease, Alzheimer's disease, Huntington's disease, and olivopontocerebellar degeneration”.

Will the “blood-brain barrier” protect you from dangerous MSG?

Another argument used by the MSG industry is that glutamate cannot enter the brain because of the “blood-brain barrier”. But there are several areas that normally do not have a barrier system, one of which includes the hypothalamus. High concentrations of blood glutamate, coming from manufactured foods, are able to enter the brain by seeping through this unprotected area by way of the hypothalamus or other circumventricular organs. In studies, one of the most consistent findings relating to MSG exposure was damage to the hypothalamus.