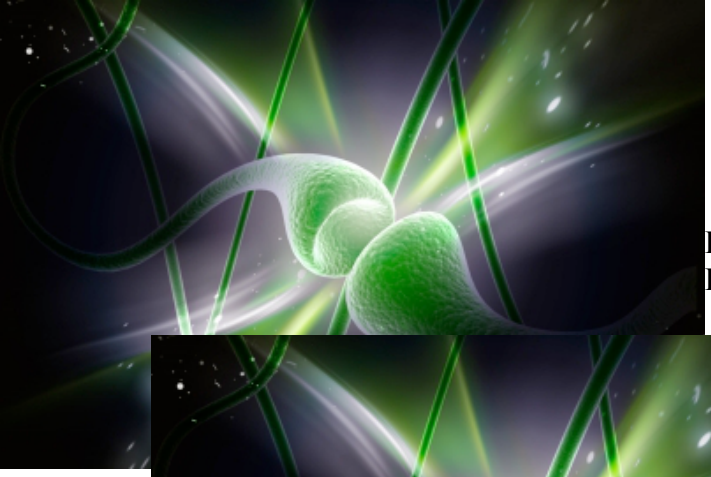
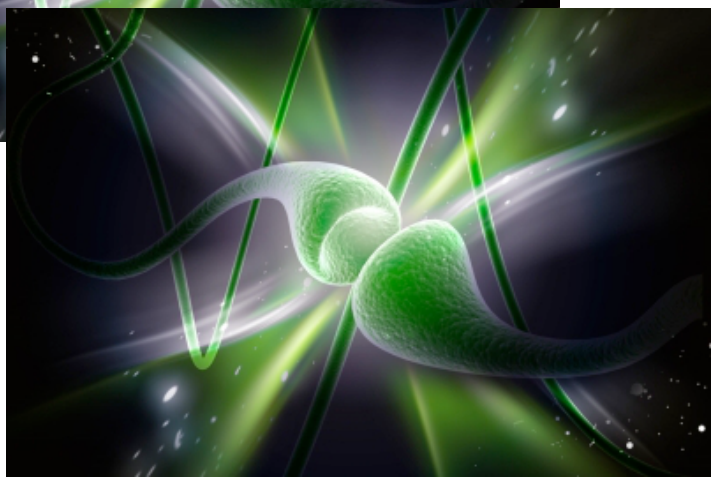


Excitotoxins: The FDA-Approved Way to Damage Your Brain



Synapse, www.freedigitalphotos.net

Why Excitotoxins Ain't Nothin' to Get Excited About

Did you know that brain-damaging poisons lurk in dozens of everyday so-called "health" foods with the full consent of the FDA? These not-so-friendly additives are called "**excitotoxins,**" and they play a critical role in the development of serious neurodegenerative damage such as Parkinson's disease, Alzheimer's disease, Amyotrophic Lateral Sclerosis (ALS), migraines, and seizures.

What, you may wonder, is an excitotoxin, exactly? Excitotoxins are substances—usually amino acids—that stimulate taste receptors on the tongue. They are not preservatives and they have no nutritional value. In other words, they are nothing other than "chemicals added to foods to make them 'tastier,'" explains Dr. Cathie Lippman, MD and founder of the Lippman Center for Optimal Health. "Excitotoxins are not preservatives and they have no nutritional value." The most common excitotoxins are aspartame and monosodium glutamate (MSG).

Glutamate also happens to be the most commonly used neurotransmitter by the brain … but don't let that fool you into thinking it's safe to ingest. It's *not*. That's because the body produces glutamate only in tiny concentrations, whereas when you consume glutamate as an additive in your food, its concentration is much higher. And that's just too much excitement for your brain—and your whole body.

"Excitotoxins cause a brain cell to become very excited and your neurons basically fire spastically until they finally burn out," explains Lippman. Worse yet by far is what happens several hours after this this spastic neural firing, which is neural death. Yes, the neurons simply die—as if they've been excited to death. Once you lose those neurons, they are gone for good; there is no way to repair that damage.

Excitotoxins also generate extreme levels of free radicals that cause additional cell death. Russell

Blaylock, M.D., author of the 1995 book *Excitotoxicity: The Taste that Kills*, has researched and written extensively on excitotoxins. In 2007, he wrote in his *Blaylock Wellness Report* that "newer studies have shown that feeding MSG to animals not only dramatically increases the free radicals and lipid peroxidation products in the walls of their arteries, the increase lasted for what would be the equivalent of decades in humans." In addition, these chemicals can cross the placental barrier, possibly harming the brains of unborn children.

According to Dr. Blaylock, "We now know that the excitotoxic process plays a major role in many life-threatening maladies." He cites possible associations between excitotoxins and a slew of serious health conditions, including:

• strokes
• brain injury
• brain tumors
• degenerative brain diseases (Alzheimer's, Parkinson's and Lou Gehrig's disease)
• meningitis
• neurological Lyme disease
• encephalitis
• schizophrenia

A Taste of Things to Come

Unfortunately, the practice of adding these chemicals to food is completely legal, and has grown increasingly common since excitoxins were first introduced into our food supply in 1945.

Associate Professor of Japanese History and Culture Jordan Sand details the pathway of these taste-spiking chemicals after their development by the food industry shortly after World War II, when researchers isolated monosodium glutamate (MSG) from the Japanese seaweed kombu. The process of isolating MSG involves stripping away the healthy components of the kombu, including the enzymes and minerals. The MSG that remains is many times, perhaps even thousands of times, more concentrated than the glutamate that would be naturally occurring in the seaweed.

Today, MSG shows up in virtually all prepared foods, including restaurant food. This is true even for restaurants whose menus proudly proclaim, "We add no MSG." That's because restaurants don't need to add MSG—its already loaded plentifully into the food they get from their suppliers.

According to Dr. Blaylock, Americans are practically drowning themselves in MSG, with a generous chaser of aspartame (which comes from the amino acid aspartate, and is used to artificially sweeten diet sodas and coffee—blue and pink packets—and sugarless candies and gum. Since the 1980s, claims Blaylock, Americans have consumed 282,000 metric tons of MSG and 800 million pounds of aspartame. "The amount of MSG consumed every decade doubles. Both are excitotoxins and are found in foods, drinks, medications, vaccines, and even fertilizers," he says.

Unappetizing Research

Almost since excitoxins first hit the market, research raised alarms. The first truly damning studies came in 1957, when, according to Dr. Blaylock, "a couple of curious researchers were conducting an experiment to see if [glutamate] could help repair a diseased retina.They fed rats the glutamate (also called glutamic acid) in the form of MSG (monosodium glutamate). What they found shocked them.

The retinal cells that allow vision had been swept away as if by a great windstorm. They reported their findings in an obscure ophthalmology journal, where it was quickly forgotten."
Despite being swept under the medical rug, these opthamology studies were not trivial. To the contrary, they were groundbreaking, and should have, in the view of many of today's experts, been show stoppers.

"Initial studies on mice showed that MSG destroyed the cells in the retina of the animal's eyes," says Blaylock. "Further studies showed that this applied to the whole brain. One dose of MSG could destroy the sensitive cells in the hypothalamus, which is a tiny organ in the brain very important for hormonal function and directing other processes in our bodies."

Other experts speculate that up to 90% of migraine headaches could be linked to exposure to excitotoxins and other additives (as well as food allergies). Aspartame is thought to trigger migraines and increases migraine frequency. Notably, experts don't believe that excitotoxins are the direct cause of neurological diseases like Parkinson's or Alzheimer's, but research does show that excitotoxins increase one's susceptibility to these diseases. Furthermore, as Dr. Russell Blaylock explains, excitotoxins are known to cause migraines, seizures, neurological disorders, blurred vision, increased appetite, overeating, infertility and reproductive disorders, impaired brain function, cancer, and heart and cardiovascular damage.

Infants, young children and children in utero who are all rapidly developing are especially prone to damage from exposure to excitotoxins. "The younger the child," says Dr. Lipmann, "the greater the potential damage. This is particularly significant when we consider how many pregnant women get these chemicals in the processed foods they eat."

FDA: Blind Eye, Deaf Ear

Despite the tireless efforts of many—and despite reams of truly shocking research—the FDA has staunchly resisted taking action against aspartame or MSG, or even requiring clearer food labeling for excitoxins. "After this [research] became available, food companies continued to use MSG and the FDA did nothing about the potential damage to babies … until Congress intervened. So the companies stopped using straight MSG and started using hydrolyzed vegetable protein instead," says Dr. Lippman.

In practical terms, this means that food companies are deliberately adding dangerous chemicals to the food they sell in order to stimulate your hunger and disturb your natural appetite control—and that they are doing so with the full complicity of the FDA, the very agency charged with protecting the public from just this sort of profit-driven and health-harming manipulation. The reality is that the research against excitoxins is too compelling and too longstanding to be ignored.

Carolyn Dean, MD, ND is a medical doctor and nutrition expert, author of "Future Health Now Encyclopedia." Dr. Dean argues that part of this problem is that the American food industry would find it difficult or impossible to get rid of excitotoxins in food – so instead they tell us and the FDA that they're safe. Unfortunately almost all research in this area originating in the U.S. is completed by interested parties, the companies who use excitotoxins in their products. This means that the information presented to the FDA is biased. Furthermore, as exposés by Jennifer Ferrera and others have shown, there is a troubling tie between the FDA and companies like Monsanto that leads the FDA to approve these chemicals when they should take action against them, as Dr. Dean points out.

In fact, way back in 1981 the FDA's own doctors recommended that aspartame not be approved based

on the studies of mice exhibiting brain tumors. Unfortunately, this did nothing to stop the approval. Dr. Adrian Gross, former FDA toxicologist, testified before the Senate on the aspartame issue, stating, "It is clear beyond any shadow of a doubt" that aspartame has caused cancer in laboratory animals.

Nevertheless, this health-harming substance, just like MSG, is totally legal in the U.S.

Protect Yourself From Toxic Excitement

You may think that if you're a Whole Foods shopper, you're avoiding exposure to excitotoxins. Sadly, that's just not the case.

Today, there are more than 70 excitotoxins lurking in most packaged and processed foods like soups, sauces, gravy mixes, frozen dinners, diet foods, beverages, chips, and fast foods. The main culprits are MSG, aspartame (NutraSweet), cysteine, hydrolyzed protein, and aspartic acid.

Unfortunately, MSG is called by at least 30 different names on food labels, including—as I mentioned—the simple and oh-so-harmless seeming word, "spice." Dr. Lippman's office provides a handout with a detailed list of hidden names for excitotoxins.

You'll have to become a compulsive label reader, watching for excitoxins in all their guises, including the "natural flavoring" listed suspiciously on the label of my "organic vegetable stock." Think about that: how devious is it to disguise excitotoxins as *natural flavoring*? I always tried to make my own stock and from here on out I'll be making it a "must" in the plan. My man's flavored Coffeemate has excitotoxins (sodium casseinate) and so I'm happy to have just learned how to make my own flavored creamer that's all natural and all real food, no monkey business. Of course, the diet soda that I indulge in is full of excitotoxins, and the one store-bought bottle of salad dressing in our refrigerator also contains excitotoxins—and this is an upscale, "natural" brand, so don't be fooled!

Needless to say, unless you make all of your own food or eat only whole foods it's not always easy to avoid excitotoxins. But, once you get used to looking for these food additives, it does get simpler. Clearly, we can't yet rely upon so-called "watchdog" agencies like the FDA is not going to keep excitotoxins off of your dinner table; instead, we all need to actively screen our purchases.

Consumer demand is what drives the continued production of so many foods containing excitotoxins—and that means we can force a change. And even if you don't think that kind of change is possible, you can protect yourself and your family. Try raw organic honey or stevia if you need a sweetener, and bring it with you when you eat out.

Nutritionists—including Dr. Lippman—recommend several natural supplements you can take to increase your body's ability to protect itself from excitotoxins, including magnesium, omega 3 fatty acids, red clover, and of course antioxidants. Perhaps most important, stick to foods that aren't processed and keep reading those labels obsessively. Don't forget my excitoxic "natural" soup stock and salad dressing! Once you get a handle on offending products, you can cross off them off your shopping list and replace them with better alternatives (as with the Coffeemate) or simply drop them altogether (as with the diet soda).

Dr. Dean insists that "the bottom line really is magnesium; it's hard to fight these big guys, these companies head on, so protect yourself." While there are several minerals that help to fight the effects

of excitotoxins, magnesium causes a blood brain barrier and supports detox pathways in the body, and it is instrumental in “about 80% of the body's biological/biochemical enzyme systems.” Since magnesium makes most of these work and neutralizes the effects of neutron damage producing energy at the mitochondiral level, Dr. Dean tells us that “magnesium is the obvious choice to enhance any biological function. Magnesium is the best one; don't get overwhelmed by a list.”

How much magnesium is right depends on the person. Dr. Dean has found that the average effective dose in her patients is 600-700 milligrams daily, almost double the USRDA. Some of her patients need 3-4 times that to overcome their existing problems. “Eventually you'll need less; when you have enough in your body you get a laxative effect which isn't dangerous.” Dr. Dean also recommends that we make sure to get a balance of other minerals: “1/4 or 1/8 teaspoon of good sea salt in every 16 ounces of water that you drink is ideal because that gives you a good amount of 72 trace minerals.”

We have to keep raising our voices for political action, we can’t give up, even when we can’t control the outcome. But in the meantime, we can control what we choose to purchase and ingest. Money speaks, and so do our intentions. Ultimately, the fastest and most powerful way to stop the flood of excitoxins into our food supply may be to strive, whenever and however possible, to withhold our dollars from this toxic marketing scheme.