Key Points

- Discovery of excitotoxicity
- Secret names that glutamate goes by
- How glutamate in foods causes ‘silent’ damage
- Excess brain glutamate is a central mechanism in autism
- How MSG affects human reproduction
- The chemical roots of depression, anxiety, and addiction
- Link between glutamate and Type 2 diabetes

MSG: Deadly Menace Hidden in Your Food

I have written many times about the harmful effects of a commonly used food additive called monosodium glutamate, or MSG. I even wrote a book on the subject called “Excitotoxins, the Taste That Kills.” Since its publication, an enormous amount of research has confirmed much of what I wrote in that book.

Unfortunately, tens of thousands of food products now contain dangerous levels of MSG and other food additives. In response, reputable scientists have appeared before Congressional committees, attempting to have MSG banned from food products. But wealthy and powerful corporations and their lobbying groups have stifled these efforts, covering up evidence of the additives’ harmful effects.

And the media, which receive huge amounts of advertising money from those same corporations, keep the research hidden from the public.

In this month’s issue of The Blaylock Wellness Report, I will share this new information about the many dangers food additives present to the body and the brain.

Short History of MSG

For thousands of years, Japanese cooks have used a seaweed broth called kombu, or “sea tangle,” to enhance the taste of their recipes. But it wasn’t until 1908 that Japanese chemistry professor Kikunae Ikeda isolated the ingredient that was enhancing the taste — the amino acid glutamate.

At the time, it was suggested that glutamate stimulated special taste receptors on the tongue, transmitting to the brain a sensation of intense, pleasurable flavor. This taste was later named “umami.”

During World War II, American soldiers reported that Japanese rations tasted much better than American rations. Soon after the war, Army’s Quartermaster Corps shared the secret of glutamate and umami with major food processors in the United States, including Pillsbury, Oscar Mayer, Libby’s, and Campbell’s. The form of glutamate later added to processed foods in the U.S. was a mixture of sodium and glutamic acid called monosodium glutamate (MSG).

It’s the glutamate in the compound that causes damage. In fact, any form of glutamate, any glutamate-containing additive, and even foods that
are high in glutamate levels have the potential to be detrimental to a person’s health.

The world’s primary manufacturer of MSG is the Ajinomoto company, headquartered in Tokyo, Japan, with affiliates in 23 countries. The term ajinomoto is Japanese for “essence of taste.”

The amount of glutamate additives being put in processed foods has doubled every decade since the late 1940s. By 1972, 262,000 metric tons of MSG had been added to processed foods. Today, the major sources of MSG come from processing starch, sugar beets, and cane sugar or molasses.

Interestingly, wheat gluten was previously used as a source for glutamate additives, because gluten has high glutamate levels (30 grams of glutamate per 100 grams of wheat gluten).

I believe that the high glutamate content of gluten is why so many people — especially autistic children — have bad reactions to gluten-containing foods.

Most wheat today is genetically engineered to have much higher glutamate levels than occur naturally. Worse yet, additional glutamate is added to processed wheat-based foods, including breads and pasta.

**Dr. John Olney: Discovery of Excitotoxicity**

In 1969, the late Dr. John Olney, M.D., a researcher, immunologist, and neuroscientist at Washington University School of Medicine in St. Louis, Mo., came across an article written 12 years earlier by two ophthalmology researchers — D.R. Lucas and J.P. Newhouse.

The researchers described a study of infant mice given a high dose of MSG to see if it would improve the health of the animal’s retinas. Instead of improvement, they saw extensive destruction of retinal neurons.

Dr. Olney explained to me that he had repeated the study using a single dose of MSG.

He found not only destruction of the retina, but also discrete areas of destruction within the animals’ brains — primarily the hypothalamus, which controls weight and regulates glandular secretions in the endocrine system.

In the new study, the animals that were exposed to MSG early in life ended up being short in stature and grossly obese, and had difficulty reproducing (fertility problems).

They also had shrunken glands, including the thyroid, adrenal glands, ovaries, and testes.

Dr. Olney also discovered that when neurons were exposed to small concentrations of glutamate in a culture, they at first appeared normal, but several hours later suddenly shrunk and died.

Just before the neurons died, they became extremely excited — that is, they generated an enormous number of electrical signals.

It appeared that the neurons died from exhaustion.

Dr. Olney coined the term “excitotoxicity” to describe that pathological process.
Since that groundbreaking discovery, researchers have learned that glutamate is one of about a dozen or so chemicals called neurotransmitters, which relay signals throughout the brain.

In fact, glutamate is responsible for up to 90 percent of neurotransmission in the brain’s cortex, and 50 percent of neurotransmission for the entire brain.

That means glutamate promotes more brain function than better-known neurotransmitters such as serotonin, dopamine, acetylcholine, and norepinephrine. Its role is to excite brain activity.

All neurotransmitters use special receptors located on the synapses of neurons.

Researchers have discovered that not only does glutamate have several types of receptors, but they are also composed of many subtypes of receptor units.

That means nerve cells and neurons can react in an enormous number of ways to elevated glutamate — not just by simple excitation.

It’s very complicated, but this versatility of glutamate gives the brain incredible complexity and the ability to respond to many different situations.

Dr. Olney discovered that the immature brains of young animals were four times more sensitive to the destructive effects of MSG than the brains of adult animals.

He also found that of all species, humans are the most sensitive to MSG. In fact, humans are 20 times more susceptible to brain damage by MSG than rhesus monkeys. Mice are closest to humans in terms of sensitivity.

Of real importance for infant health was the finding that the placenta concentrates glutamate from the mother’s blood. That means the growing baby’s exposure to the excitotoxin is much higher even than the mother’s.

And remember, immature brains are four times more sensitive to destruction by glutamate, and the babies’ brains have not yet developed the protection offered by the adult blood-brain barrier.

Babies are also at high risk because periods of hypoxia (low blood oxygen) are fairly common during early life, especially during birth. Hypoxia, hypoglycemia (low blood sugar), and ischemia (poor blood supply) can all magnify the glutamate’s destruction of the brain.

Secret Names for Glutamate

The way Food and Drug Administration laws were written greatly favors the food industry. Unless a product contains close to 99 percent MSG, manufacturers do not have to put “contains MSG” on the label. As a result, food processors use a host of disguised names to hide the fact that they either contain MSG or other glutamate/aspartate additives.

Here is a list of the most common names used in the industry:

- Hydrolyzed vegetable protein
- Glutavene
- Glutacyl
- Autolyzed yeast extract
- Calcium caseinate
- Sodium caseinate
- E621 (E620-625 are all glutamates)
- Ajinomoto, Accent seasoning
- Gourmet powder

All of these situations are common with small babies. Because their bodies are so much smaller than adults, the same dose of glutamate is more destructive.

How ‘Intrinsic Glutamate’ Is Released

Certain diseases and conditions have been shown to trigger greatly increased release of glutamate within the body.

For example, a viral infection such as the flu makes blood and brain glutamate levels rise several-fold, and remain elevated for a week or even longer.

Chronic infections, such a herpes, cytomegalovirus, and Lyme disease can also cause brain glutamate levels to go up significantly.

This is what’s called “intrinsic glutamate” because it comes from within the body. Immune cells release it when they are activated.

Most glutamate in the body is stored safely within cells. Only glutamate outside the cells is harmful.

Certain toxic metals can also raise glutamate levels in the brain — especially mercury and aluminum, both of which are found in some vaccines.

Even in extremely small concentrations, mercury has been shown to cause glutamate levels in the brain to rise to destructive levels. Higher doses (though still concentrations many people are exposed to) can cause extremely high levels of glutamate in the brain.
For instance, vaccines that contain mercury or aluminum — especially when administered one after another — can produce extensive excitotoxic brain damage.\textsuperscript{13}

Vaccine-induced seizures, periods of sudden unconsciousness (as can occur with the Gardasil vaccine), screaming episodes, and regressive autism are all related to vaccine-induced excitotoxicity.

The elderly are also at high risk from vaccines, especially when several are given in close sequence, as often occurs with the flu, shingles, and pneumococcal vaccines.\textsuperscript{14}

The danger is that inflammation normally increases with aging, and inflammation stimulates excitotoxicity, triggering a destructive process I termed immunoexcitotoxicity.\textsuperscript{15}

Unlike natural infections, vaccines can produce brain inflammation that lasts for years.

The aluminum from vaccines has been shown in several studies to travel to the brain and initiate immunoexcitotoxicity.\textsuperscript{16}

And those aluminum deposits can remain for a lifetime.

Head injuries, strokes, autoimmune diseases, surgery (even minor surgery), migraine headaches, and stress can all increase brain excitotoxin levels.

Dietary sources of glutamate and aspartate (as from the artificial sweetener aspartame) can also enter the brain and, under certain conditions, cause excitotoxic damage to specific parts of the brain.\textsuperscript{17}

Vulnerability to such damage depends on a lot of variables, including:

- Diet
- Use of specific nutritional supplements
- Presence of pre-existing neurological conditions
- Genetic and epigenetic influences
- Source of the glutamate

Glutamate in liquids such as aspartame-sweetened diet sodas, excitotoxin-containing sauces, soy sauce, soups, and glutamate-containing protein drinks is rapidly absorbed, thus quickly raising levels. Food-based glutamate additives are absorbed more slowly and do not cause high concentrations in the blood.

**Glutamate in Foods: ‘Silent’ Damage**

Defenders of MSG claim that it can’t enter the brain because of the blood-brain barrier, a special vascular system that protects the brain from certain toxic substances in the bloodstream.

Yet several studies have shown that prolonged high levels of glutamate in the blood — as occurs when a person consumes a lot of food and drink containing glutamate additives — can cross an intact blood-brain barrier.

What’s more, there are several areas around the brain that do not contain an intact barrier. We call these openings circumventricular organs (CVOs). MSG and other forms of glutamate can easily enter CVOs.

There are also a number of conditions that can break the blood-brain barrier, including stroke, head injury, chronic degenerative brain diseases, certain chronic inflammatory disorders, exposure to certain pesticides/herbicides or industrial chemicals, and consuming some medications. Even aluminum can open the blood-brain barrier.

Glutamate is often associated with delayed onset of symptoms, which can come on as much as a day after exposure. I once had a patient who told me he ate a hot dog for supper and that night, about an hour after going to bed, he suddenly woke up with thoughts flying wildly through his head like a movie on fast forward.

The poor man thought he was going crazy.

When he checked the label on the hot dogs, sure enough MSG was a major ingredient. I’ve seen many similar cases.

People with migraine headaches often experience delayed onset of a severe headache hours after MSG exposure. Alcohol blocks one of the principle glutamate receptors and can stave off an attack until the body clears the alcohol — then symptoms suddenly appear. High intake of sugars or carbohydrates can also delay an attack.

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The password for every issue is provided in the introductory e-mail.
One of Dr. Olney’s most important findings was that when he fed animals lower doses of MSG, most demonstrated no behavioral symptoms. However, when he examined their brains, they still showed the destructive lesions in the hypothalamus.

The damage to these brain cells could not be seen on regular light microscopic examination, but were easily discernible with electron microscopic examination. The safety studies that reported no damage after exposure to MSG only used light microscopes.

For most people, the damage done by MSG and other glutamate sources is “silent,” giving them false assurance that they are not sensitive to MSG. At least those who suffer profound symptoms have the advantage of knowing to avoid foods high in glutamate.

Too Much Glutamate Wreaks Havoc on Brain Development

Unfortunately, some of the most glutamate-laden foods are targeted to young consumers, even toddlers. In fact, baby foods contained even higher levels of glutamate additives before Dr. Olney testified before Congress about the extreme danger the additive poses to developing brains.

The FDA refused to take action. Yet because of a fear of bad publicity, the maker of MSG agreed to no longer add it to baby foods.

But they didn’t really quit. Even today, you can find additives that contain high levels of glutamate — such as hydrolyzed protein extract, caseinate, and autolyzed yeast — in foods for toddlers.

The human brain forms pathways, develops synaptic contacts, and molds its architecture during the first two years of life. Even at age 4, the brain still requires 20 percent more growth.

Glutamate is actually critical to brain development because it plays a major role in neuron migration, maturation, and molding of the final architecture of the brain. But consuming too much glutamate during periods of critical brain growth disrupts the architecture of the child’s brain.

In effect, their brains are miswired. During development, glutamate concentration in the brain should undergo a programmed rise and fall. Any disruption of glutamate levels during these critical milestones can wreak havoc on the brain.

Unfortunately, this can occur when high concentrations of glutamate are added to toddlers’ food. Remember that small children’s brains are four times more sensitive to glutamate damage than adult brains. And because of toddlers’ and infants’ small body weight, it takes even less glutamate to cause serious damage.

The Autism Connection

Growing evidence indicates that excess brain glutamate is a central mechanism in autism. Research suggests that the way vaccines are given is a major culprit.

Babies receive a hepatitis B vaccine and a flu shot soon after birth. This activates the brain’s microglia, which are the immune cells in the brain.

Two months later, the babies receive up to six more vaccines during a single office visit, causing the microglia to become fully activated and triggering intense immunoexcitotoxicity within the brain.
In their early years, children are subjected to a battery of such vaccines every two months, greatly elevating brain glutamate levels as well as inflammation. Today, the average child receives no less than 36 vaccines before he or she enters school — a tremendous assault on the developing brain.

I believe those who insist vaccines do not cause autism are lying. Their research showing no link has been shown to be phony. Testimony by a whistleblower research scientists at the Centers for Disease Control and Prevention (CDC) proves they knew vaccines caused autism, and that they destroyed evidence to hide the link.

Dr. Brian Hooker and his co-authors showed that delaying all vaccines until after 36 months dramatically reduced the incidence of autism in children, especially black children (most likely because they have low vitamin D3 levels).

Still, the CDC refuses to even consider this. And autism isn’t the only problem caused by vaccines. There is compelling evidence that they are linked to tics, speech problems, learning problems, and behavioral problems of various kinds — including episodes of violent behavior.24

Dr. Andrew Wakefield, who I know well, was set up to be destroyed by the British government because his research constituted compelling evidence of a link between the measles vaccine and some cases of autism.

Recent evidence has also shown that the present vaccine schedule can lead to:

- Dementias
- Chronic muscle pain
- Weakness
- Allergies
- Asthma
- Type 1 diabetes
- Leukemia

Severe impairment of the immune system is now being seen as a result of the enormous number of vaccines our children are being subjected to early in life.

Exposing children to high levels of glutamate in foods and drinks does further damage. Some mothers have reported dramatic improvements in autistic or otherwise affected children when they were put on low-glutamate diets.

For instance, uncontrollable and even violent

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**Foods Naturally High in Glutamate**

- Mushrooms (especially portabella)
- Tomatoes (much higher in pureed or tomato sauces)
- Wheat, oat or barley products
- Gluten (extra gluten is often added to foods)
- Cheeses (especially gorgonzola, parmesan and Roquefort)
- Cured meats
- Protein mixes and bodybuilding protein products
- Most dairy creamers
- Green peas, black beans (moderate levels)
- Skim milk, non-fat or dry milk
- Peanuts, walnuts, and cashews (as well as peanut and other nut butters)
- Worcestershire sauce
- Grapes and grape juice (not extreme)
- Most pizzas
- Ketchup, barbeque sauce
- Low-fat foods
- Produce sprayed with AuxiGro (an MSG spray used in agriculture)
- Salad dressing (other than oil & vinegar or balsamic) especially creamy dressings
- White and red sauces in restaurants
- Pasta, noodles, breads, crackers, and other wheat, oat or barley products
- Red meats (less in pork, fish, and chicken)
- Gelatin

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**A note from Dr. Blaylock:** Advertisements for various supplements may appear in the newsletter or attached to the newsletter. I have nothing to do with these advertisements and do not endorse them. The only supplements I endorse are those that I list in the newsletter. This is not to say that I object to the supplements; it’s just that I am not familiar with the supplements being advertised.

Please note that this advice is generic and not specific to any individual. You should consult with your doctor before undertaking any medical or nutritional course of action.
children have become calm, courteous, well-behaved, and able to learn. Reintroducing glutamate additives causes a complete relapse of prior behavior.

**Dangerous Behaviors in Teenagers**

Social critics and analysts declare that our teenagers are out of control. Far too many are unruly, discourteous, violent, and disruptive. And they are extreme risk-takers. Along with that strange behavior has come a dramatic rise in teen suicides.

While there are many sociological explanations for this crisis, compelling research also points to diet.

Injecting small amounts of glutamate into certain parts of animals’ brains can throw them into a violent rage. Consumption of soy products over long periods has also been shown to cause aggressiveness. Of course, soy is high in glutamate.

Recent research has also shown that excess glutamate can trigger major depression as well as anxiety and suicides. Other studies found that blocking certain glutamate receptors dramatically reduces depression, especially in people with drug-resistant depression.

While most brain development is complete by age 10 to 12, the prefrontal cortex — a part of the frontal lobe that governs a variety of complex behaviors — does not fully mature until age 26 or 27.

The prefrontal cortex is critical for controlling violent emotions, antisocial behavior, and risk-taking. It is a major brake on the amygdala, the brain’s central control for emotions and emotional memory (particularly fear and aggression).

For instance, the prefrontal cortex allows a person to evaluate planned future actions and determine the risks and social propriety of those actions.

High levels of glutamate in this part of the brain during its final development can impair the ability to make such judgments.

Because teenagers eat a lot of junk food, they are exposed to a toxic mix of synergistic excitotoxins. The younger the teenager, the greater the risk.

As they reach the end of their teens, many young people will once again be required to take a large number of vaccines in order to begin college, especially if they have not kept up their vaccines.

Some receive as many as 11 vaccines at a single sitting in order to enter college.

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**Hows MSG Affects Reproduction**

It has been noted that an increasing number of young couples are having difficulty conceiving. While many factors have been examined, one of the most powerful demonstrations has been the effect of MSG on the reproductive systems of both males and females.

Most studies have found that large doses of MSG can damage the testes, mainly the seminiferous tubules and the cells that form the sperm. In one study, in which low doses of MSG were used, researchers also found significant damage to the germinal epithelial cells and Leydig cells that form sperm.

Sperm counts were much lower in the MSG exposed animals.

Females were damaged by MSG as well. In one study using female rats, researchers found significant damage to the animals’ ovaries, including the ova (eggs) themselves, along with degeneration of reproductive tissues.

Damage to the animals’ fallopian tubes after exposure to MSG was also noted.

This intensely activates microglia in the brain, triggering immunoexcitotoxicity.

Combine that with dietary excitotoxins, and you have a very dangerous mix.

It’s no wonder so many young people suffer disjointed thinking, learning difficulties, destructive behavior, and difficulty understanding complex concepts. They also lack impulse control, which unfortunately increases their risk of suicide.

**Roots of Depression, Anxiety, and Addiction**

Researchers studied people with major depression who were resistant to psychotropic drugs and found that giving them a glutamate receptor-blocking drug called ketamine eradicated depression for most with just a single dose. And the effect lasted for two weeks.

Researchers also found that the most effective antidepressants were the ones that reduced glutamate toxicity.

It has long been believed that low levels of the neurotransmitter serotonin is the cause of depression. But the serotonin theory of depression has never been proven — and there is considerable evidence to indicate it’s not correct.

One enigma that has faced psychiatric researchers...
was why it took two weeks or more for serotonin-elevating medications to relieve depression. After all, if depression was caused by low levels of serotonin in the brain, then drugs that raise the neurotransmitter’s levels should have worked immediately. (Serotonin levels increase rapidly with such drugs.)

Researchers discovered that the drugs were slowly reducing microglial activation, and that was why patients’ depression improved.

Microglia are a major source of brain glutamate. In fact, when a person suffers from chronic inflammation, the serotonin in his or her brain is metabolized into a powerful glutamate receptor stimulator called quinolinic acid, which not only makes the depression worse, but can also cause degeneration of the brain.32, 33

This may explain why there is such a strong connection between serotonin-enhancing medications such as SSRIs (selective serotonin reuptake inhibitors), which drastically raise brain serotonin levels, and high rates of suicide and homicidal thoughts.

Many of the horrific school shootings we have witnessed in recent years involved these medications.

One common symptom of major depression is memory loss. MRI studies have shown that shrinkage of the brain’s hippocampus, where recent memory elaboration occurs, starts early in the course of depression.34 This part of the brain is especially sensitive to damage from excess glutamate.

With tens of millions of people consuming massive amounts of excitotoxins in food, consider what that means for depression, anxiety, mood disorders, as well as obsessive compulsive-disorder (OCD) and other psychiatric conditions.

Treatment of anxiety disorders costs more than $63 billion a year in the U.S. alone, and an enormous amount of time is lost from work.

The amygdala, a large nucleus in the brain’s temporal lobe, plays a major role in fear, anxiety, phobias, and post-traumatic stress disorder (PTSD).35, 36

Interestingly, the area most connected to these disorders contains 85 percent to 95 percent glutamate-receptive neurons, and imaging studies of patients with the disorders indicate that they have excessive activity in this nucleus.37

Drugs that reduce glutamate receptor activity have shown significant benefits in reducing symptoms in cases of PTSD.

Any type of stress can overactivate glutamate-receptive neurons and lead to degeneration in these particular areas of the brain. A number of psychiatric conditions — including anxiety, depression, obsessive-compulsive disorder, generalized anxiety disorder, and social phobias — are linked to excess glutamate within the brain.

Converting to a diet low in glutamate has been shown to greatly benefit these disorders.

Inflammation is directly linked to excitotoxicity — a relationship that I termed immunoeexcitotoxicity. In fact, inflammation and excitotoxicity always occur together — and inflammation greatly enhances the harmful effects of glutamate.

This explains why depression is so prevalent among the elderly, because as people age their bodies become more inflamed.

In addition, their defenses against the effects of excitotoxicity are reduced.

Another condition that can magnify the harmful effects of glutamate and inflammation is hypoglycemia — or low blood sugar. A drop in blood sugar rapidly

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Other Effects of MSG

One of the more harmful effects of MSG is its effects on arteries. Studies have shown that exposure to MSG in mice produced high levels of inflammation and free radical generation within the walls of arteries that was prolonged.

They also discovered that the MSG drastically lowered the antioxidant enzymes and protective molecules from the arterial wall as well. Earlier studies had demonstrated that MSG also cause hyperlipidemia, hyperglycemia, and inflammation, all risk factors for atherosclerosis.

When we recall that most experts in atherosclerosis agree that the principle cause of atherosclerosis is chronic inflammation and free radical generation, we can appreciate how dangerous adding MSG and other forms of excitotoxin additives to foods and drinks can be.

MSG has been shown to damage the kidneys. For those interested in information on how the MSG cover-up operates and an excellent analysis of MSG dangers should get a copy of Dr. Adrienne Samuels’ excellent book, “It Wasn’t Alzheimer’s. It Was MSG.”

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raises brain glutamate levels. And under conditions of low brain energy, even normal levels of glutamate can become excitotoxic.\textsuperscript{38} In fact, much of the brain damage caused by severe hypoglycemia is not due directly to a loss of cell energy. Rather, it is secondary to excitotoxicity.

A number of flavonoids and other nutrients have been shown to reduce anxiety and depression along with psychiatric disorders.\textsuperscript{39} These include:

- Hesperidin
- Curcumin
- Quercetin
- Ferulic acid
- Baicalein
- Ginkgo biloba
- Ginseng
- B-vitamins (especially niacinamide, riboflavin-5-phosphate, pyridoxal-5-phosphate, methylcobalamin, and folic acid)
- Vitamin C
- L-theanine
- Taurine
- Grapeseed extract
- DHA
- Valerian

Compelling evidence indicates that glutamate receptors play a major role in addictions, not just to narcotics and alcohol, but also such things as gambling, sex, and eating.\textsuperscript{40}

Recent studies suggest that blocking certain of these receptors, or lowering brain glutamate levels, can prevent symptoms of both addiction and withdrawal, and lower the chances of addiction relapse.\textsuperscript{41}

Excessive activation of glutamate receptors in the prefrontal cortex (called the nucleus accumbens) drives the desire for addictive substances. Over time, the addiction circuit becomes persistently overactive — much like a learned memory.\textsuperscript{42, 43}

It’s clear that a diet high in glutamate additives (as well as aspartame) could make a person more prone to addictive behavior and cause those suffering from a present addiction to fail in efforts to control the addiction.

**Link to Obesity and Type 2 Diabetes**

What was first referred to as syndrome X is now called metabolic syndrome, which is a constellation of factors that include significant obesity, hypertension, abnormal blood lipids, and insulin resistance (Type 2 diabetes).

More than 3 million cases of metabolic syndrome are diagnosed each year in the U.S. — and incidence is rising among the young.

Most studies cite the typical western diet as the cause of metabolic syndrome — especially intake of high fructose corn syrup.

What has been overlooked is research showing that feeding animals MSG soon after birth can produce metabolic syndrome.

In fact, one of the earliest observations that Dr. Olney made was that the animals fed MSG early in their lives became grossly obese — and later it was extremely difficult to reduce that obesity with either diet or exercise.

A number of studies have shown that in societies where obesity is a major problem, MSG-laden foods are common.\textsuperscript{44, 45}

A special protein called leptin helps the body control fat accumulation. But the area in the brain where leptin operates — the arcuate nucleus of the

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— Dr. Russell Blaylock
hypothalamus — is the very same area most easily damaged by MSG.46

Even low doses of MSG have been shown to damage the arcuate nucleus. A number of studies have also linked MSG consumption to obesity.47,50

It is now known that glutamate receptors exist in every tissue and organ in the body. The insulin-controlling cells in the pancreas (called islets) contain a great number of these glutamate receptors. And it has been shown that consuming MSG can stimulate insulin release.

It is thought that glutamate interferes with the action of insulin on cells — the condition called insulin resistance — by stimulating widespread inflammation.51

With Type 2 diabetes being the fastest growing metabolic disorder among both adults and children, we should all be aware that studies closely link MSG exposure to insulin resistance, which causes of this type of diabetes.52,53

Excess dietary glutamate has been shown to damage intestinal cells, the liver, and cause inflammation in the intestines and colon.54,55

Glutamate also controls the neurons in the brainstem that regulate blood pressure, which links excess glutamate in the diet to hypertension.

It has also been shown that a combination of high fructose corn syrup and MSG can worsen metabolic syndrome and result in fatty liver disease.56-58

When combined with MSG, trans fat was found to cause abnormal blood lipids and impair memory in experimental animals.59

These two food additives are very commonly combined in processed foods.

Protection against MSG damage can be gained by taking vitamins C and E and quercetin. Taurine has also been shown to prevent obesity and correct the abnormal blood lipids caused by MSG in the diet.60

One of the defenses made by the makers of MSG is that metabolic syndrome and obesity are not prevalent in Japan, despite their regular consumption of MSG. But in fact, studies have shown that the Japanese consume less MSG than Americans, on average.

More importantly, higher intake of omega-3 oils significantly reduces the toxicity of MSG.61 The Japanese, whose diet is heavy in fish, have high intake of omega-3s.

It should be noted that the principle maker of MSG, the Ajinomoto company, funds publishing of a large number of papers in scientific journals. They want to confuse the issue of MSG safety.

Most of these studies, in my estimation, are purposefully fraudulent.

If you examine the medical literature, you will see that the completely independent laboratory studies of MSG have found significant safety problems. But none of the papers funded by the Ajinomoto company or their special association — called the International Glutamate Technical Committee (IGTC) — have.

Worse yet, they promote MSG as beneficial to health, especially for the elderly. This is outrageous.

**REFERENCES**

Can Supplements Be Trusted?

**Q:** With no government oversight, how can we trust in the integrity of the supplements we are buying?

— Elizabeth D., Wilmington, N.C.

**A:** That is a very important question. There are several manufacturers that make shoddy products. The best protection is to make sure the product has undergone independent testing by a reputable laboratory.

Companies that use pharmaceutical grade products are of the highest quality. Cheap brands, such as those often sold in pharmacies, are frequently of poor quality. Giant bottles of vitamin E, for example, that are really inexpensive and contain dl-alpha tocopherol vitamin E are of extremely poor quality.

Pharmaceutical company products are regulated by the government, which is essentially ruled by the pharmaceutical companies. Many are quite deadly.

Are Any Vaccines Safe?

**Q:** Are there any vaccines you feel are safe for infants and children or adults?

— Sue T., Tallahassee, Fla.

**A:** There are two important things to consider: Are vaccines effective, and are they safe? The preponderance of scientific evidence — not the phony research paid for by the vaccine industry and the CDC — indicates that no vaccine is safe. The government policy of shielding these companies from liability has made things much worse, because now the vaccines are more contaminated than ever.

One of the most important things to know is that no child should be vaccinated during the first three years after his or her birth. Delaying for the first six years is even better. That’s because this is the time when the brain is undergoing its most active development. Numerous studies have shown that stimulating the immune system, as occurs with vaccines, can significantly and in some cases severely disrupt brain development.

The incidence of autoimmune diseases among our young people has exploded since the number of vaccines has increased.

In addition, the vast majority of reliable studies show that most vaccines are not effective and lose what effectiveness they have quite rapidly. The flu vaccine has been shown to be no better than a placebo.

A person can better build immune protection through good nutrition — but that doesn’t make vaccine makers billions.

What Can Help Scleroderma?

**Q:** A young woman in my church has scleroderma. She has had both breasts removed and has some lung issues. Is there anything that can help with scleroderma?

— Nikki P., Oneida, Tenn.

**A:** Scleroderma is a disease of the connective tissues that can involve scarring, blood vessel problems, and varying degrees of pain. The disease is caused by overproduction of type 1 collagen, and is associated with high levels of inflammation, lipid peroxidation, and free radical generation.

A number of natural compounds have shown significant benefit for scleroderma, including curcumin with bioperine, EGCG (Teavigo), grape seed extract, apigenin, luteolin, vitamin E, DHEA, and probiotics (which improve gastrointestinal symptoms).

Magnesium should also help as it improves blood flow and reduces inflammation.

Glutamate additives (MSG, hydrolyzed proteins,
carrageenan, caseinate) all worsen the scleroderma, and should be avoided. Omega-6 oils (corn, safflower, sunflower, peanut, soybean and canola oils) should be avoided.

A diet high in vegetables and low in sugars and meats, especially red meats, will also help. Iron deficiency should be corrected.

I will pray for your friend.

**What Are Your Views on Inflammation?**

**Q:** When I graduated from medical school in 1960, there was one pathology textbook that emphasized that inflammation is the body’s response to injury and not a cause of injury except in the case of auto-inflammatory diseases. Would you care to comment on present medical views of inflammation?

— Don J., San Francisco, Calif.

**A:** In general, inflammation is a healthy response that is necessary for healing wounds and protecting the body from infections. With healthy inflammation, the process ends abruptly after a short period.

There are two situations in which it is extremely harmful: when the inflammatory reaction is especially intense (as with cytokine storms), and if it is prolonged, which triggers high levels of free radicals, lipid peroxidation products, and destructive nitrogen species. All of those things can damage DNA, cell enzymes, cell membranes, and mitochondria, as well as triggering excitotoxicity in the brain. This can result in atherosclerosis, cancer, neurodegenerative diseases, and organ destruction.

**Why Limit Iron With Cancer?**

**Q:** In your book “Natural Strategies for Cancer Patients,” you write that one way to deprive cancer of iron is to use a special iron-chelating agent, such as deferoxamine. Could you explain that further?

— Betty R., Belpre, Ohio

**A:** The idea is to reduce elevated iron levels and deny the tumor cells iron, which they need for growth and invasion. Deferoxamine is a drug and has a lot of complications. Natural iron chelators include baicalein (the best), IP6, curcumin, quercetin, EGCG, green and white tea, and hesperidin. All have powerful anticancer effectiveness. Cancer patients should not take an iron supplement unless they have severe iron deficiency.
Newsmax has set aside 5,200 copies of an all-new book, *Be a Millionaire Next Year*, to be given away FREE as part of this exclusive offer. Our goal is to help the millions of Americans who have never been able to save for retirement because they’re following outdated rules many financial advisors are still pushing. So we tasked our top editors at *The Franklin Prosperity Report* to uncover proven financial strategies that can put you on the track to become a millionaire by next year. Here is just a small sampling of the financial secrets we are giving away — FREE . . .

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