

Sudden Cardiac Death: The Role of Aspartame, MSG and Other Excitotoxins

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Over 460,000 people per year are now dying of a disorder called sudden cardiac death according to CDC statistics. This is a condition striking otherwise healthy people, who have experienced no obvious symptoms of heart disease prior to their deaths. An alarming number of these deaths are occurring in young athletes, both in high schools, colleges, as well as among professional athletes.

While cardiologists have found coronary disease and suspect previous scars from silent heart attacks in a number of these individuals, one mechanism is getting no attention at all, and that is excitotoxic damage caused by food additives and the artificial sweetener aspartame. This is despite growing evidence that the excitotoxic mechanism plays a major role in cardiac disease.

Previously, it was thought that excitotoxin food additives, such as *monosodium glutamate and aspartic acid in aspartame*, cause their damage in the cardiovascular centers in the brain stem and/or by over stimulating sympathetic centers in the hypothalamus of the brain. Both of these mechanisms have been shown to result in sudden cardiac death in experimental animals.

A particular deadly combination occurs in young athletes, which includes low magnesium intake, high calcium intake, low intake of omega-3 fatty acids and excitotoxin food additives. Strenuous exercise—especially in extreme heat is known to deplete the body's magnesium stores, as is consumption of carbonated drinks and taking calcium supplements. In addition, adrenalin secretion, increased during exercise, increases heart muscle irritability and magnesium loss as well.

When calcium supplements are taken in the face of existing magnesium deficiency, both magnesium and calcium is driven into the bones, resulting in a sudden magnesium depletion crisis. Low magnesium is known to produce both seizures and cause sudden cardiac arrest. In a classic experiment, it was found that stressing animals who were magnesium deficient resulted in an almost 100% mortality from sudden cardiac arrest. Adding magnesium cut mortality dramatically.

A considerable amount of evidence has shown that low omega-3 fat intake significantly increases the risk and severity of cardiac arrhythmias, the main cause of sudden cardiac death. Likewise, a number of studies have shown that Americans are significantly deficient in these protective fats.

Finally, recent research has shown that the brain is not the only tissue having glutamate receptors. Numerous glutamate receptors have been found within the heart's electrical conduction system, as well as heart muscle. When an excess of food-borne excitotoxins, such as MSG, hydrolyzed protein, soy protein isolate and concentrate, natural flavoring, sodium caseinate and aspartate from aspartame, are consumed, these glutamate receptors are over stimulated, producing cardiac arrhythmias.

When magnesium stores are low, as we see in athletes, the glutamate receptors are so sensitive that even low levels of these excitotoxins can result in cardiac arrhythmias and death. This is especially

so when combined with the other factors mentioned. Under such conditions, free radicals and lipid peroxidation products build up within the muscle cells, leading to the same outcome.

High consumption of aspartame adds an additional cardiac muscle toxin, methanol. A number of studies have shown that consuming aspartame and MSG (and similar excitotoxins) together greatly magnifies the toxicity. Young people live on junk foods, most of which contain a number of excitotoxin additives. Several studies have shown that the levels being consumed by our youth equal those causing the damage in experimental animals. Humans are five times more sensitive to these toxins than any animal.

These same factors operate in older individuals as well. Most over age 50 years are depleted of magnesium, have low omega-3 fat intakes, are under stress and take a number of medications that worsen nutrition, especially magnesium levels. Because they are more likely to also have coronary artery disease and other medical conditions, their risk of sudden cardiac death is even higher.

Both athletes and those over age 45 years should take magnesium supplements, antioxidants, omega-3 oils, eat more vegetables and avoid foods and artificial sweeteners containing excitotoxins such as aspartame and MSG. This will do a lot more than trying to rescue a person with an external defibrillator after the fact.

Dr. Blaylock is the author of *Excitotoxins: The Taste That Kills and Health & Nutrition Secrets to Save Your Life*. He can be seen in the movie, *Sweet Misery: A Poisoned World on Aspartame*. His web site is www.russellblaylockmd.com