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MSG allergy: Fact or myth?

MSG is the sodium salt of glutamic acid (one of the most common amino acids in proteins). It is a popular flavor enhancer that is added to many foods. However it is important to remember that being a common amino acid, it also occurs naturally in almost all foods. Reports of MSG sensitivity have existed for many years in this country. It is curious to know that MSG sensitivity has not been reported by food regulatory agencies in other parts of the world beyond the United States, where MSG is more commonly consumed in the diet.

MSG attributed disease entities

Several disease entities have been attributed to MSG. The most common and popular of these is the so-called Chinese restaurant syndrome. This is a mild, subjective (with no verifiable findings) and short-lived syndrome characterized by burning and flushing of the skin, pressure and tightness of the chest, and tingling and numbness restricted to the face, neck, upper chest and upper arms. MSG has also been linked to asthma recently. A total of 29 cases of MSG-induced asthma have been reported in the medical literature. Two cases of MSG-induced atopic dermatitis (eczema) have been reported. Several cases of orofacial granulomatosis (<http://www.allergycapital.com.au/Pages/OFG.html>) have been attributed to MSG.

Gold standard

It should be pointed out the majority of MSG-linked disease entities reported in the medical literature are anecdotal in nature and have not been tested scientifically or did not stand rigorous scientific scrutiny. Double blind placebo controlled food challenge (DBPCFC) is the gold standard used by scientists to document food allergic reactions. In this procedure a test food or placebo is given to patients in a disguised manner (in a capsule or with flavored syrup to mask the taste of the food) randomly. Both the patient and the test administrator do not know if the patient is ingesting placebo or the suspected food at any given time. The doses of test material or placebo are increased gradually at random intervals and the resulting symptom complexes are recorded carefully.

Once a patient could ingest 10 grams of the test food without any problem, an open feeding of the same food is done to document nonreactivity. Obviously such a procedure is both labor and cost intensive and carries an inherent risk of causing anaphylaxis (a

serious systemic allergic reaction). Therefore it is carried out usually as part of research protocols in university hospitals under close medical supervision.

Fact or Myth?

Numerous human challenges have been conducted in an attempt to confirm the existence of the MSG- symptom complex. Most test subjects (who reported adverse reactions from using MSG) experienced no symptoms or there were no differences in the frequency of reactions to MSG versus placebo. A few individuals reacted with mild symptom complexes when challenged with MSG in doses exceeding 3 grams (3000 milligrams). Such large doses of MSG are usually not ingested in real life situations. Out of 29 cases of asthma attributed to MSG, only one case was confirmed using the above gold standard. Most of these patients had significant and unstable asthma anyway that a natural exacerbation of asthma symptoms (without the agency of MSG) could not be excluded in these individuals. Only 2 cases of DBPCFC proven MSG-linked atopic dermatitis (eczema) have been reported. No such confirmed results are available for orofacial granulomatosis.

The truth

Though MSG-induced disease entities do exist, they are rare and occur far in-between. Most cases do not stand the rigorous scientific tests of scrutiny. Even where the scientific evidence exists, the doses used to induce symptoms in such test subjects is artificially high and do not exist in real life situations. Moreover with the unpopularity of MSG, many restaurants and manufacturers have stopped using MSG.

About the author:

Natarajan Asokan, M.D., F.A.A.P. is a board certified allergist and immunologist and a board certified pediatrician with over 25 years of experience as a physician and 8 years of experience as a practicing allergist & immunologist. He treats adults and children with various allergy & immunology problems. He can be reached at 1739, Beverly Ave, Suite 118, Kingman, AZ 86409, Tel: 928-681-5800, Fax: 928-681-5801, or www.trinityallergy.com