LETTER TO EDITOR

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Monosodium Glutamate and Chinese Restaurant Syndrome: separating facts from fiction

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Dear Sir,

Monosodium glutamate (MSG) is a sodium salt form of non-essential amino acid called glutamic acid, which is widely used as a flavor enhancer in food industry and restaurants [1]. The large majority of the global MSG production is from Asian countries. China is the largest producer, consumer and exporter of MSG worldwide. A variety of symptoms are attributed to dietary intake of MSG based on multiple anecdotal reports and small clinical studies of variable quality. In 1968, Kwok [2] reported some transient subjective symptoms such as numbness, general weakness, and palpitation after having Chinese dishes from Chinese restaurants. It was named as "Chinese Restaurant Syndrome" (CRS) in his letter to the editor of New England Journal of Medicine. In the following year, Schaumberg et al [3] reported the pharmacological effects of MSG as burning sensations, facial pressure, and chest pain and CRS was attributed to MSG.

Afterwards, several epidemiologic surveys of reactions to MSG and clinical studies with MSG ingested along with food and without food were conducted [4]. The results from the majority of the epidemiologic studies revealed that there was no correlation between susceptibility to CRS and MSG intake. Limitations of epidemiologic study designs in addressing this issue were of concern. Similarly, the clinical studies ranging from uncontrolled open challenges to double-blind, placebo controlled studies failed to show significant reactions to MSG. However, the large doses of MSG intake without food may cause more symptoms than placebo in subjects who were considered to have adverse reactions to MSG. But these adverse responses were inconsistent and not reproducible, and were not observed when MSG was consumed with food [4].

The U.S. Food and Drug Administration (FDA) consider adding MSG to food as "generally recognized as safe" (GRAS), and never confirmed its harmful effects [5]. Federation of American Societies for Experimental Biology (FASEB) concluded that MSG is safe but identified some short-term, transient, and generally mild symptoms, such as headache, flushing, numbness, drowsiness, tingling and palpitations in some sensitive persons who consume 3 grams or more of MSG without food [5]. This is very unlikely because a typical

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food serving contain MSG less than 0.5 grams and consuming more than 3 grams without food at a time is improbable. In conclusion, circulating myths around safety of MSG use are not in line with the scientific consensus.

Key words

Chinese restaurant syndrome, Monosodium glutamate, pharmacological effects

Competing interests

None

References

1. Jinap S, Hajeb P. Glutamate. Its applications in food and contribution to health. Appetite. 2010;55(1):1-10.
2. Kwok RH. Chinese-restaurant syndrome. N Engl J Med. 1968;278(14):796
3. Schaumburg HH, Byck R, Gerstl R, Mashman JH. Monosodium L-glutamate: its pharmacology and role in the Chinese restaurant syndrome. Science. 1969;163(3869):826-8.
4. Geha RS, Beiser A, Ren C, Patterson R, Greenberger PA, Grammer LC, Ditto AM, Harris KE, Shaughnessy MA, Yarnold PR, Corren J, Saxon A. Review of alleged reaction to monosodium glutamate and outcome of a multicenter double-blind placebo-controlled study. J Nutr. 2000;130(4S Suppl):1058S-62S.
5. U.S. Food and Drug Administration (FDA), Food Additives & Ingredients, available at: https://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm328728.htm accessed on 01/06/2017