

The Facts on Monosodium Glutamate

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One food ingredient that is commonly on the receiving end of bad press is monosodium glutamate, or MSG. However this is unfounded. Monosodium glutamate can be safely used to add flavour and appeal to foods, and even to reduce sodium levels in foods.

What is monosodium glutamate and where is it found?

Monosodium glutamate is the sodium salt of glutamic acid. Glutamate is a naturally occurring amino acid that is found in nearly all foods, especially high protein foods such as dairy products, meat and fish and in many vegetables. Foods often used for their flavouring properties, such as mushrooms and tomatoes, have high levels of naturally occurring glutamate. The human body also produces glutamate and it plays an essential role in normal body functioning.

Monosodium glutamate added to foods produces a flavouring function similar to the glutamate that occurs naturally in foods. It acts as a flavour enhancer and adds a fifth taste, called “umami”, which is best described as a savoury, broth-like or meaty taste.

In the European Union, monosodium glutamate is classified as a food additive (E621) and regulations are in place to determine how and when it can be added to foods. Typically, monosodium glutamate is added to savoury prepared and processed foods such as frozen foods, spice mixes, canned and dry soups, salad dressings and meat or fish-based products. In some countries, it is used as a table-top seasoning.

How is monosodium glutamate made?

In past times, monosodium glutamate was extracted from natural protein-rich foods such as seaweed. Today, this time-consuming practice is no longer used and monosodium glutamate is made from an industrial fermentation process.

Is monosodium glutamate linked to adverse reactions?

Despite a small number of persons reporting sensitivity to monosodium glutamate, scientific studies have not shown any direct link between monosodium glutamate and adverse reactions in humans. Monosodium glutamate used to be blamed for the “Chinese Restaurant Syndrome” because the first anecdotal report was made following consumption of a Chinese meal and monosodium glutamate is widely used in Asian cooking. Symptoms said to be experienced included burning sensations along the back of the neck, chest tightness, nausea and sweating. However, a double-blind controlled challenge of individuals claiming to suffer from the “syndrome” failed to confirm monosodium glutamate as the causative agent. Other studies have found that allergic-type reactions after Asian meals are more often due to other ingredients such as shrimp, peanuts, spices and herbs.

If you think you are sensitive to monosodium glutamate or any other food ingredient, the best advice is to check with your doctor or with a dietitian.

How much sodium is in monosodium glutamate?

Monosodium glutamate contains about one third of the sodium of table salt and is used in smaller amounts. When monosodium glutamate is used in combination with a small amount of table salt, it can help to reduce the total sodium in a recipe by 20 to 40% while maintaining flavour.

Is monosodium glutamate safe for children?

Children metabolise glutamate in the same way that adults do and monosodium glutamate is safe for children. In fact, human breast milk contains 10 times more glutamate than cow's milk.

The bottom line

Monosodium glutamate is one of the most extensively studied food ingredients in our food supply. Hundreds of studies and numerous scientific evaluations have concluded that monosodium glutamate provides a safe and useful taste enhancer for foods.

References

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