

Monosodium Glutamate (MSG) is a flavour enhancer that is added to food to bring out the savoury taste. Glutamate is found naturally in some protein-containing foods like meat, peas, yeast extracts, soy sauce, mushrooms and cheese. With the food additive number 621, MSG has been reported to cause a reaction in some people known as “Chinese Restaurant Syndrome”. It has therefore been considered a controversial ingredient in some foods and restaurant meals. But is MSG really that bad? Here are the facts...

### WHAT IS MSG?

MSG is the sodium salt of glutamic acid (or glutamate) which is a non-essential amino acid<sup>1</sup>. There are 20 amino acids that combine to make specific proteins in the body<sup>2</sup> and the body can make its own glutamate. Glutamate helps the body make other amino acids and is also a neurotransmitter in the nervous system<sup>1</sup>.

Glutamate is found in a wide variety of foods. It can be found in either a free form (on its own) or bound to other amino acids in the form of protein<sup>3</sup>. It is the free glutamate that is associated with flavour enhancing properties. Glutamate is made commercially through fermentation of molasses from sugar beet or sugar cane and starch<sup>1</sup>.

### WHICH FOODS CONTAIN MSG?

Glutamates occur naturally in protein foods such as meat, fish, poultry and vegetables<sup>1</sup>. Free glutamates are found in foods like tomatoes, tomato paste, cheese and mushrooms<sup>3</sup>.

Glutamates are added to food to enhance it's flavour. They are added in the form of MSG in hydrolysed vegetable protein, yeast extracts, flavours and fermented soy products such as soy sauce<sup>1</sup>. Common foods that can contain added MSG include savoury foods such as stocks, seasonings, soup, sauces and savoury snacks/meals.

MSG is classified by Food Standards Australia New Zealand (FSANZ) as a ‘flavour enhancer’ and has the additive number 621<sup>4</sup>. This number is listed in the ingredient list of foods that have added MSG.

### WHY IS MSG ADDED TO SOME FOOD?

MSG does not have a distinct flavour on its own, but it helps to intensify the natural savoury flavour of foods. Some restaurants and manufacturers therefore add MSG to help enhance the flavour of food.

The taste gained from naturally occurring or added MSG in foods is described as ‘Umami’ - the fifth basic taste after sweet, sour, bitter and salty<sup>1</sup>. Umami is the savoury taste that people enjoy in foods<sup>5</sup>.

One of the other reasons that MSG is added to food is to help reduce the sodium content. MSG is lower in sodium than table salt. Therefore the sodium content of processed foods can be lowered by using MSG to replace some of the salt<sup>6</sup>.



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### WHAT IS CHINESE RESTAURANT SYNDROME?

Chinese Restaurant Syndrome is a combination of symptoms such as headaches, numbness, tingling, flushing, weakness and muscle tightness which some people have experienced after eating a meal at a Chinese restaurant<sup>5</sup>.

It has commonly been claimed that MSG is responsible for these symptoms. Around 1-2% of the population is estimated to experience Chinese Restaurant Syndrome, however there may be factors in the food other than the MSG that cause symptoms<sup>1</sup>.

There have been a number of studies to test the association between MSG and Chinese Restaurant Syndrome, however there is no consistent clinical evidence to support this<sup>1,5</sup>.

### IS MSG SAFE?

Yes. MSG has been extensively studied over the past 30 years to investigate its effects on the body. MSG is permitted for use in Australian foods as FSANZ research shows that it is safe for general consumption at the current levels<sup>1</sup>. Other international agencies such as the US Food and Drug Administration (FDA) and the World Health Organisation (WHO) have also verified the safety of MSG<sup>1,7</sup>.

### WHAT DOES “NO ADDED MSG” MEAN?

Many products and restaurants claim “no added MSG” due to the consumer demand for products without MSG. This claim means that the manufacturer has not added MSG into the food. It is important to remember that there may be naturally occurring glutamates in the food even if it has a “no added MSG” claim.

#### References

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