

Mustard Allergy – the facts

The mustard plant belongs to the *Cruciferae (Brassicaceae)* family. Mustard used in food is often a mixture of seeds from two or more species of *Brassicaceae*, like *Sinapis alba* (yellow mustard), *Brassica nigra* (black mustard), and *Brassica juncea* (oriental mustard). Flour from the yellow species (*Sinapis alba*) is used most commonly in Europe, while oriental mustard (*Brassica juncea*) is used most commonly in the United States and Japan.

Allergic reactions described in several case reports appeared to be triggered by small amounts of mustard, like contaminated cooking utensils. The major allergens of mustard are heat-resistant and are not greatly affected by food processing.

The Food Standards Agency reports on its website that people who are allergic to mustard will react to any food that comes from the mustard plant, including:

- **jars of mustard**
- **mustard powder**
- **mustard leaves**
- **seeds and flowers**
- **sprouted mustard seeds**
- **Mustard oil.**

Mustard consumption in different countries varies according to local food habits. Mustard can be found in barbecue sauce, fish paste, ketchup, tomato sauce, marinades, some mayonnaise, processed meats, sausages, piccalilli, pickles, pizza, salad dressings and salad oil. Mustard is also used in various traditional remedies and as a laxative, expectorant and antiseptic agent for the treatment of various gastrointestinal, respiratory and skin diseases.

Mustard can be used as a powder, as seeds, as the condiment and as leaves that can be used in salads. Mustard oil is used in Bengali cooking and in Russia for frying. In Italy mustard is used to make a sweet mustard syrup with fruits to eat as a relish with meats. The generic term is mostardo di frutta, although the most famous is mostardo di Cremona.

The Symptoms

The allergic symptoms due to mustard are similar to those due to other foods. Symptoms include severe anaphylaxis, oral allergy syndrome, subjective symptoms such as a burning sensation, swelling of lips and tongue, difficulty in breathing and swallowing, asthma, nausea, generalised urticaria, rhino-conjunctivitis and atopic dermatitis.

How common is it?

Prevalence in the UK is not known but is believed to be rare. Some sources suggest the presence of irritating substances in mustard may cause symptoms that aren't actually allergy, leading to a false perception of prevalence.

Mustard allergy is encountered in small children.

Some studies claim that mustard is among the most common food allergens in certain European regions with the majority of information about mustard allergy coming from Spain and France.

Pre-packaged foods

All pre-packaged food sold within the EU must declare major allergens including the presence of mustard, even if they appear in minute quantities.

What members of the Anaphylaxis Campaign tell us:-

A questionnaire was recently sent to those Anaphylaxis Campaign members who have told us that they are allergic to mustard. There were 15 replies, 3 concerning children under the age of 18 and the remainder concerning adults. Symptoms suffered included mouth symptoms (11), skin rash (6), throat swelling (6), wheezing (8), gut symptoms (3) and collapse (3). Four had suffered mild symptoms only (mouth symptoms or rash), while the remaining 11 had suffered severe allergy or anaphylaxis.

In 7 cases the worst reaction resulted from eating a pre-prepared packaged meal. In 3 cases mustard was present in an added sauce or dressing and in 2 cases mustard was present as a contaminant.

A recent European study noted a strong association between allergy to mustard and allergy to mugwort pollen, a common cause of summer hay fever. Mugwort pollen is known to contain a strong allergen which is closely similar to certain plant food allergens including mustard. When people are found to suffer from both mustard and mugwort allergy, it seems likely that sensitisation to the pollen allergy occurs first, mustard allergy then arising as a direct consequence of the pollen allergy due to cross-reactivity. This condition has been called the 'mustard mugwort allergy syndrome'.

In the same study, coexisting allergies to tree nuts and legumes (peas and beans) were also common. Like mustard, these foods have also been shown to cross react with mugwort pollen.

The same association appears to be true among the mustard allergic children and adults who responded to The Anaphylaxis Campaign survey. Nine out of 15 were hay fever sufferers and 11 out of 15 also suffered from allergy to tree nuts or legumes (peas and beans).

The content of this Fact Sheet has been **Peer Reviewed by Dr. Michael Radcliffe, Consultant in Allergy Medicine, Royal Free NHS Trust.**



Disclaimer – The information provided in this factsheet is given in good faith. Every effort has been taken to ensure accuracy. All patients are different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

About the Anaphylaxis Campaign – *"supporting people with severe allergies"*

The Anaphylaxis Campaign is the only UK charity to exclusively meet the needs of the growing numbers of people at risk from severe allergic reactions (anaphylaxis) by providing information and support relating to foods and other triggers such as latex, drugs and insect stings. Our focus is on medical facts, food labelling, risk reduction and allergen management. The Campaign offers tailored services for individual, clinical professional and corporate members.

Visit our website www.anaphylaxis.org.uk