



Food Allergies – the Basics for Food Manufacturers

Food allergies affect only a small percentage of the population, however their effects can be severe or even fatal. It is estimated that up to 2% of adults and 8% of children in Australia suffer from food allergies and approximately 10 Australians die each year of severe allergic reactions from food. The only successful way to manage a food allergy is to avoid eating foods that contain the allergen.¹

This Note gives a brief overview of food allergies and the Australian labelling requirements of allergenic substances in food products.

What are food allergies?

A true food allergy is an immune system response to the ingestion of a food allergen molecule, usually a protein, that the body mistakenly believes is harmful. When the individual eats food containing the allergen, the immune system produces antibodies that trigger the release of cellular chemicals that cause the changes we see in our bodies as symptoms. An individual must first be sensitised by exposure to the protein to develop antibodies, which then react to further exposures.²

Food allergy is different from food intolerance. A true food allergy involves the immune system whereas food intolerance is usually caused by chemical agents, such as sulphites, or by certain genetic deficiencies, for example an enzyme deficiency, such as lactase deficiency. People suffering from lactose intolerance have the inability to produce the enzyme (lactase) which breaks down the milk sugar (lactose).²

What are the symptoms of food allergy?

Food allergy symptoms usually have a rapid onset, often within minutes of ingesting the food, however sometimes symptoms are delayed for up to a few hours after eating.

Food allergy symptoms vary greatly from mild reactions to severe, potentially fatal reactions (e.g. anaphylactic shock which requires immediate medical attention). The most common symptoms of allergy affect the skin (e.g. hives, dermatitis, swelling of the lips), the gastro-intestinal tract (e.g. vomiting, diarrhoea, abdominal cramping), and the respiratory tract (e.g. swelling of the throat, wheezing, asthma). In more severe cases, such as anaphylaxis, additional symptoms occur that affect

the cardiovascular and circulatory systems, and can result in shock and death.³

What are the main foods that cause allergies?

The key foods that account for the majority of allergic reactions are peanuts, tree nuts, fish, shellfish, eggs, milk, soy and wheat. However, in addition to these key food allergens, more than 160 foods have been documented as having caused allergies.² Some of the more unusual documented food allergens include kiwi-fruit and peaches.



How do you know if your products need labelling for food allergens?

The Australian New Zealand Food Standards Code, Standard 1.2.3 states that it is mandatory to declare certain substances and their derivatives in food. For packaged food, this information must appear on the label, in other cases this information must be shown with the food display or provided to consumers on request.⁴

The substances, and their derivatives, that may cause allergies and that must be declared according to 'Standard 1.2.3' include:

- Cereals and cereal products containing gluten, namely wheat, rye, barley, oats, spelt and their hybridized strains (other than where these substances are present in beer and spirits as defined in Standards 2.7.2 and 2.7.5 respectively).
- Crustacea and crustacea products.
- Egg and egg products.

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- Fish and fish products.
- Milk and milk products.
- Peanuts and soybeans, and their products.
- Added sulphites in concentrations of 10 mg/kg or more.
- Tree nuts* and sesame seeds, and their products. (* - coconut is the fruit of the palm *Cocos nucifera* and is not generally considered to be a tree nut. Examples of tree nuts include: walnuts, cashews, almonds, brazil nuts, etc).
- Royal jelly presented as a food or royal jelly present in a food.
- Bee pollen.
- Propolis.

It is worth noting that some of the substances in the 'Standard 1.2.3' list are not strictly true allergens (e.g. sulphites), however these substances can cause serious adverse reactions and are therefore included in the Standard.

One way to comply with the declaration clause of 'Standard 1.2.3' is to list these substances and their derivatives in the ingredient list of the food label. For example, milk used in the production of cheese is an ingredient and therefore it needs to be declared in the ingredient listing on the label of the cheese. Also, it is best practice that food allergen information on ingredient labels should be listed in common language. For example, sodium caseinate should be listed as milk.⁵

It is particularly worth noting that the declaration in 'Standard 1.2.3' includes all derivatives of those substances present in the food. The extent of the declaration applies when:

- these substances are present as an ingredient,
- an ingredient of a compound ingredient,
- a food additive or a component of a food additive, and
- a processing aid or a component of a processing aid.⁴

For example, a product containing glucose, caramel or starch derived from wheat would need to declare that the product contains wheat in the ingredient listing.⁶

For further information on the correct terminology to use in the ingredient listing, as well as the best approach to presenting this allergen information on the product label, refer to the Australian Food and Grocery Council's 'Food Industry Guide to Allergen Management and Labelling.'

Another requirement of 'Standard 1.2.3' is that particular substances (i.e. bee pollen, propolis and royal jelly) that may cause allergies, must have 'mandatory statements.' Foods containing bee pollen and propolis must contain a statement to the effect that the product contains bee pollen or propolis which can cause severe allergic reaction. Royal jelly or foods containing royal jelly must contain the following warning statement: "This product contains royal jelly which has been reported to cause severe allergic reaction and in rare cases, fatalities, especially in asthma and allergy sufferers."⁴ For further information on these 'mandatory statements' refer to Food Standards Australia New Zealand's 'User Guide to Standard 1.2.3 – Mandatory Warning and Advisory Statements and Declarations.'



Where to go for further information?

- The Allergen Bureau - contains a centralised collection of information about food allergens relevant to the Australian and New Zealand Food Industry. It covers a range of current information, including international food allergen regulations and summaries of the latest scientific research. It is an initiative of the Australian Food & Grocery Council - Allergen Forum, and is operated within the Australian Food Safety Centre of Excellence.⁵

For further details go to: www.allergenbureau.net or email info@allergenbureau.net or call 1800 263 829

- The Australian Food and Grocery Council - 'Revised Food Industry Guide to Allergen Management and Labelling, (February 2007)'.
For further details go to: www.afgc.org.au or email afgc@afgc.org.au or call (02) 6273 1466.

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- Food Standards Australia New Zealand 'User Guide to Standard 1.2.3 – Mandatory Warning

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and Advisory Statements and Declarations,'
(July 2001) www.foodstandards.gov.au

- Anaphylaxis Australia Incorporated – a charitable, non-profit organisation whose main aim is to support and assist those affected by anaphylaxis, and to raise awareness of life-threatening allergies in the community by providing science-based information, resources and services.

For further details go to www.allergyfacts.org.au or call 1300 728 000.

References

1. Anaphylaxis Australia, (2005), 'Food Allergy Basics Fact Sheet,' www.allergyfacts.org.au
2. Australian Institute of Food Science and Technology - Scientific Affairs Committee, (March 2003), 'Scientific Summary Paper on Food Allergies.'
3. Deibel, K., Trautman, T., DeBoom, T., Sveum, W.H., Dunaif, G., Scott, V.N., and Bernard, D.T., (1997), 'Review - A Comprehensive Approach to Reducing the Risk of Allergens in Foods,' Journal of Food Protection, Vol. 60, No. 4, pp 436-441.
4. Food Standards Australia New Zealand, (2003), 'Standard 1.2.3: Mandatory Warning and Advisory Statements and Declarations,' The Australia New Zealand Joint Food Standards Code, Vol 2.
5. The Allergen Bureau, (2007), 'Allergen Bureau Website,' www.allergenbureau.net
6. The Australian Food and Grocery Council, (February 2007), 'Revised Food Industry Guide to Allergen Management and Labelling.'

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