

# Allergen Bureau

## Food Allergen Fundamentals

**FACILITATED BY:**  
**PRESENTED BY:**

Lisa Clark  
Baking Association  
of Australia

Informing the  
food industry



# Food Allergen Management Guidance

*For industry, by industry*

The Allergen Bureau is the peak industry body representing best practice food industry allergen management globally.

**Become a member today.**

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# Allergen Bureau

- Established in 2005, pre-competitive, 'not-for-profit', Allergen Bureau directors provide voluntary, unpaid services
- Membership based organisation established to provide food industry with rapid responses to questions about allergen risk management in food ingredients and manufactured foods

Become a member



# Allergen Bureau

## Vision

A trusted food supply for allergen sensitive consumers around the world.

## Mission

Lead the global food industry in best practice allergen management, sharing information that builds trust and transparency that supports allergen sensitive consumers to make informed choices.



# Food Allergen Fundamentals

## Core allergen principles

Food allergy & food intolerance

Regulatory requirements

Precautionary Allergen Labelling

Allergen Management

Our resources



# Food Allergy & Food Intolerance

This section describes

- food allergy
- anaphylaxis
- food intolerance
- Coeliac disease

A top-down view of various food items arranged on a light-colored surface. The items include several wooden bowls containing different types of seeds (chia, sesame, flax), nuts (almonds, cashews), and grains (oats). There are also fresh produce items like a halved avocado, a green apple, a bunch of spinach, and some red kidney beans. The text 'Allergen Bureau' is overlaid in the bottom right corner.


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# Food Allergy

A food allergy is an overreaction by the body's immune system to a certain food.

The body produces antibodies against a food protein and releases histamine and other chemicals causing inflammation.

An allergic reaction often occurs within minutes, though can take place up to two hours after ingestion.

A circular inset image on the right side of the slide. It shows a close-up of a person's hand reaching towards a white plate. On the plate, there are several slices of golden-brown toast stacked together. The background is blurred, suggesting an indoor setting like a cafe or kitchen.

Small amounts of an allergen can trigger a reaction and avoidance of the allergen is the only way to manage the condition.

# Food Allergen

A normally harmless substance.

Usually proteins.

A food may comprise of one or more allergenic proteins. E.g. Cows milk has allergic proteins in whey and casein.

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In this presentation an 'allergen' is a food which requires a mandatory allergen declaration.





# Signs of a Food Allergic Reaction

Food allergy symptoms vary in nature and severity between individuals. Signs of a mild to moderate allergic reaction can include:

- swelling of the lips, face, eyes
- hives or welts
- tingling mouth
- abdominal pain
- vomiting



In Australia & New Zealand, food allergy occurs in approx. 10% of infants, 4-8% of children, and 2% of adults\*

# Anaphylaxis

Anaphylaxis is a severe allergic reaction involving swelling of the airways and can be fatal if not treated with adrenaline within minutes.

In rare cases multiple organ systems are affected and death can occur in as little as ten minutes.

The incidence of anaphylactic reactions to food in allergic individuals is increasing.

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Individuals with food allergy may be at risk of anaphylaxis.



# Impact of Food Allergy

There is currently no cure.

Sensitivity differs between individuals and depends on type of food, amount ingested and other activities at time of ingestion.

People with food allergy do not know when their next allergic reaction will occur or how severe it will be.



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Avoidance of the food is  
the only protection.

Foods of public health significance in ANZ with the potential to cause

# Allergic Reactions

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**Wheat** (of the genus *Triticum*, including spelt, and its hybridised strain such as triticale)



**Any of these tree nuts**  
almond, Brazil nut, cashew, hazelnut, macadamia, pecan, pine nut, pistachio, walnut



**Crustacea**



**Egg**



**Fish**



**Lupin**



**Milk**



**Mollusc**



**Peanut**



**Sesame seed**



**Soybean**

# Food Intolerance

A food intolerance is an adverse reaction that does not involve the immune system.

It includes reactions to non-protein substances in foods like carbohydrates, chemicals, food additives, toxins and irritants.

Unlike food allergy, symptoms can occur many hours after ingestion.

An example is  
lactose intolerance



Foods of public health significance in ANZ with the potential to cause non-allergic, hypersensitivity reactions. Also known as...

## Food Intolerance

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**Added sulphites**  
in concentrations of  
10mg/kg or more



**Any of these cereals containing gluten**  
wheat, barley, oats,  
rye and their hybrids



**Lactose**  
intolerance is due to a  
sugar naturally  
occurring in milk



# Coeliac Disease

It is a genetic autoimmune disease caused by gluten, a protein in wheat, rye, barley, oats and their various subspecies and hybridised strains.

About 1 in 70 people in Australia and New Zealand are affected.

A gluten free diet must be strictly adhered to.

Exposure to gluten causes long term health problems such as iron deficiency, osteoporosis, liver disease, infertility and a higher chance of developing other autoimmune conditions.



# Lactose Intolerance

A person who is lactose intolerant cannot digest the sugar component in milk. This is different to an allergy to milk protein.

Declaring milk on a label informs individuals with milk allergy and those with lactose intolerance of the presence of the protein and the lactose.

# Sulphite Intolerance

Sulphites are naturally found in some foods such as garlic and onion. They can also be added to a food (as an additive) to perform a technological purpose (e.g. as a preservative to stop browning).

Sulphite intolerance can trigger asthma symptoms in individuals with underlying asthma.





# Regulatory Requirements

## This section describes

- ANZ food regulations
- ANZ mandatory allergen declaration requirements

Food business organisations who offer foods for sale in ANZ are required to declare certain allergens when present in a food.

# Definitions

- **PEAL = Plain English Allergen Labelling**
  - For Intentional Allergen Presence
  - Covered by the Food Standards code
  
- **PAL = Precautionary Allergen Label**
  - For Unintentional Allergen Presence  
e.g. May be present or May contain.
  - Voluntary



# ANZ Food Regulations

Food Acts & product liability laws require food to be safe, suitable and to comply with relevant laws including the Australia New Zealand Food Standards Code (the Code).

The Code sets out specific requirements including the mandatory declaration of allergens.

- Chapter 1 & Chapter 3

Apply to packaged foods, non-packaged foods, foods offered for retail sale, foods for catering purposes and all other foods.

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The FSANZ website provides more information.  
Go to [www.foodstandards.gov.au](http://www.foodstandards.gov.au)



**PEAL**  
*What do you need to  
know?*

Thank you to FSANZ for assistance

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# What is Plain English Allergen Labelling?

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- New labelling requirements (from 25 February 2024)
- Intended to make allergen information clearer and more consistent
- Will require a specific format and location on food labels using specific, simple, plain English terms in **bold** font

# Foods and Ingredients to be Declared



Egg



Lupin



Barley



Milk



Wheat



Rye



Sesame



Fish



Oats



Peanut



Crustacean



Sulphites



Soy, soya,  
soyabean



Mollusc

## Tree nuts



Almond



Pecan



Brazil nut



Pistachio



Cashew



Walnut



Hazelnut



Pine nut



Macadamia

# What Will you see on Food Labels?

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## INGREDIENTS:

Wholegrain Cereals (48%) (Whole **Wheat**, Whole **Oats**, Whole Triticale [**Wheat**], Whole **Barley**, Whole **Rye**), **Cashews** (5%), **Hazelnuts** (4%), **Almonds** (3%), Rice, Raw Sugar, Coconut (4%), Seeds (2.5%) (Linseeds, Pepitas), Puffed Triticale (**Wheat**), Brown Rice Syrup, Canola Oil, **Wheat** Bran, Oat Fibre, Honey, Malt Extract (**Barley**), Salt, Rosemary Extract, Sodium Caseinate (**Milk**), Vitamin (Natural Vitamin E [**Soy**]).

**Contains: Wheat, Gluten, Cashew, Hazelnut, Almond, Soy, Milk.**

- Allergens declared using one required name only
- Every ingredient containing an allergen must declare, even if repeats allergens
- All allergens in **bold** font
- A statement that summarises allergens in foods (bold), starting with '*Contains*'.
- Statement is next to but separate from ingredient list.
- No extra words. Same typeface.

# How Cereals are Declared

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Ingredients

Summary statement



Wheat



Wheat, gluten



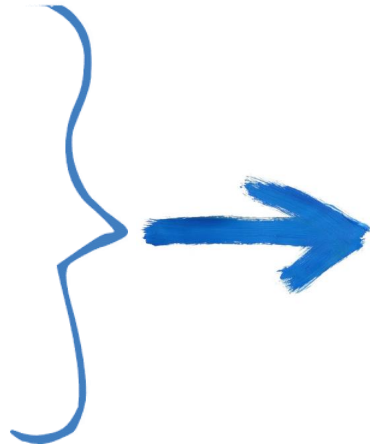
Barley



Rye



Oats



Gluten



# How Allergen Labelling Works in Unusual Situations

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**Foods not required to bear a label**

**Foods sold to caterers**

**Foods exempt from statement of ingredients**

- small packages
- individual portion packs
- single ingredient foods

Declare using required name only



# Some Foods do not Have to Declare as They are Exempt

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Glucose syrups from wheat starch



Wheat

Alcohol distilled from wheat or whey



Wheat or milk

Beer and spirits



Wheat, barley, rye, oats

Isinglass (used for wine clarity)



Fish

Soybean oil

- Degummed, neutralised, bleached or deodorised



Soy

Soybean derivatives

- Tocopherols, Phytosterols



# Required Names -Groups

Cereals (Ingredient list)	Cereals (Summary Statement)
Barley	gluten (where relevant)
Oats	gluten (where relevant)
Rye	gluten (where relevant)
Wheat	Wheat, gluten (where relevant)

Tree nuts (Ingredient list)	Tree nuts (Summary Statement)
Cashew	Cashew
Pistachio	Pistachio
Walnut	Walnut
Pecan	Pecan
Almond	Almond
Brazil nut	Brazil nut
Hazelnut	Hazelnut
Macadamia	Macadamia
Pine nut	Pine nut

# Explaining the Timeline?

## Standard 1.2.3

Information requirements –  
warning statements, advisory  
statements and declarations

### *Food Standards (Proposal P1044 – Plain English Allergen Labelling) Variation*

Item [3] of the Schedule	197	F2021L00145 24 Feb 2021 FSC138 25 Feb 2021	Clause 4	Clause 4 a transitional arrangement for variations to the Code made by Item [3.1], [3.2], [3.3], [3.4] and [3.5] of the Schedule.  The transition period is the period of time that commences on 25 February 2021 and ends on 25 February 2024.  The post-transition period is the period of time that commences 26 February 2024 and ends on 26 February 2026.
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PEAL  
Updates

## PLAIN ENGLISH ALLERGEN LABELING (PEAL) COMPLIANCE SIMPLIFIED

### 25 February 2024

Food packaged and labelled on or before  
**25 February 2024** in accordance with the  
old requirements may be sold for up to 2  
years.

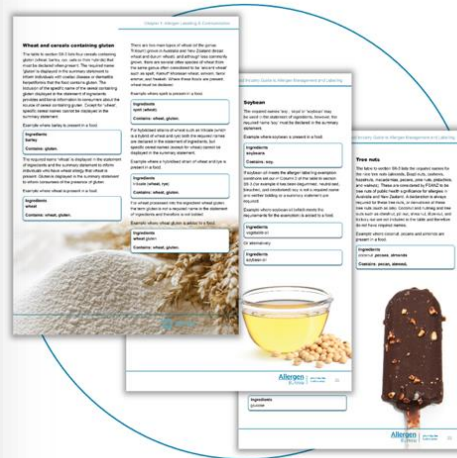
### 26 February 2024

Food packaged and labelled from  
**26 February 2024** must comply with the  
new PEAL requirements.

### 25 February 2026

All food packaged and labelled must  
comply with the new PEAL requirements

# Examples Provided...



See FIGAML for more examples of how to declare allergens in the statement of ingredients and summary statement.

**Ingredients**  
wheat gluten  
**Contains: wheat, gluten.**

**Ingredients**  
spelt (wheat)  
**Contains: wheat, gluten.**

**Ingredients**  
triticale (wheat, rye)  
**Contains: wheat, gluten.**

# Bread Shop Application

- 1) Food baked elsewhere & sold on site with prepackaged label: **All labelling requirements apply.**
- 2) Food baked & packed on site or food baked for display in assisted service display cabinet:
  - = Food not required to bear a label
  - Declarations must be displayed in connection with the food or provided to the purchaser upon request using the required names.
  - Contains: allergen a, allergen b



**What About :**

**Precautionary Allergen  
Labelling (PAL)  
Statements**

**e.g. "May contain" or  
"Made on a premise that  
also uses..."**

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# Precautionary Allergen Labelling statements (PAL)

- A voluntary statement used to communicate a potential cross contact allergen risk to a consumer
- Creates a challenge for the consumers to determine:
  - Which products they should avoid
  - Which ones are safer purchase

**Allergen Advice: Contains Soybean, Gluten. May Contain traces of Milk, Eggs, Fish, Sesame, Sulphite, Crustacea and Tree Nuts due to shared equipment.**

**ALLERGENS  
CONTAINS WHEAT (GLUTEN), SOY AND SESAME. MAY CONTAIN TRACES OF CRUSTACEA.**

**CONTAINS MILK.  
May Contain Peanut, Almond, Brazil Nut, Cashew, Hazelnut, Macadamia, Pecan, Pine Nut, Pistachio, Walnut, Egg, Sesame, Soy, Sulphites, Lupin.**

**CONTAINS: HAZELNUTS & CASHEWS.  
May be present: Peanuts, other tree nuts, egg, sesame & dairy.**

**CONTAINS SOY.  
PRODUCED IN A FACILITY THAT  
MANUFACTURES MILK AND WHEAT**

**MAY CONTAIN HAZELNUTS  
AND ALMONDS.  
Made in a factory that also handles milk.**

**CONTAINS WHEAT, SOYBEAN, MOLLUSCS  
PRODUCED IN A FACILITY THAT ALSO PROCESSES PRODUCTS CONTAINING EGGS, PEANUTS, FISH,  
CRUSTACEANS AND SESAME.**

**✓ Made in a factory that does not process peanuts**

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Wheat Flour (Wheat Flour, Calcium Carbonate, Iron, Niacin, Thiamin), Figs (25%), Glucose Syrup, Sugar, Palm Oil, Salt, Raising Agent/Leavening (Sodium Bicarbonate), Acidity Regulator (Citric Acid) \*Produced in a factory handling Tree Nuts, Soya, Milk but on a different line

Examples of products in the market



# Allergen Cross Contact

A residue or other trace amount of a food allergen that is unintentionally incorporated into another food.

Cross contact sources can be from

- agricultural co-mingling into a raw material
- carry-over due to using an ingredient that contains cross contact
- processes using shared equipment or work areas
- personnel
- inadequate cleaning of equipment



# Precautionary Allergen Labelling (PAL)

- Voluntary
- **Should not be used indiscriminately**, but when after all your best efforts the product is likely to contain enough allergen to make someone sick.
- Are important to help consumers know what food is safe for them to eat
- Most helpful when applied consistently across industry
  - **May be present: allergen x, allergen y.**

May contain ...	May contain traces of ...	Packed in an environment where ... may be present	Made in a facility that also processes ...
Produced in a factory which handles ...	Produced on shared equipment that also processes ...	Made on the same production line as...	Made in a production area that also uses...
No nuts in ingredients, but cannot guarantee to be nut-free	Not suitable for ... allergy sufferers	Due to methods used in the manufacture of this product, it may occasionally contain ...	May be present: ...

# How do I Know if I Need a PAL?

1. Review all your ingredient specifications and understand if they have any cross contact risks.
2. Check your allergen management procedures in your bakery. Do they control risks or are risks likely to remain.
  - Flour cross contact in Flourless product
  - Sesame seeds on non sesame containing products
3. Don't label if risk is controlled
4. Use a PAL if the risk remains
5. Consider using a statement that advises the allergic consumer of the allergens that are present in the bakery



The Allergen Bureau's VITAL (Voluntary Incidental Trace Allergen Labelling) Program is a standardised allergen risk assessment process for food industry



Trial VITAL  
Online  
today



Developed **by** industry **for** industry and is adopted on a voluntary basis

# Allergen Management

## This section describes

1. Allergen management
2. Allergen risk review
3. Allergen analysis

The food industry uses this knowledge to identify and manage allergens within their facilities and to determine if cross contact allergens are to be declared.

A top-down view of various food items arranged in wooden bowls and on a light-colored surface. The items include chia seeds, sesame seeds, an avocado, spinach, goji berries, almonds, cashews, a green apple, and a bowl of oats. The text 'Allergen Bureau' is overlaid in the bottom right corner.

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# Allergen Management

**The procedures, policies and practices contributing to the control of allergens within a food business.**

This should be considered as a fundamental element of existing food safety management plans and processes including Good Manufacturing Practice.

HACCP Plans should be adapted to include allergens as an independent category of food safety hazard.

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# Examples of Allergen Management

- Ensure all ingredients you purchase have a specification or product information form (PIF) that indicates both the intentionally present allergen and cross-contact allergens.
- Standardise recipes wherever possible so the allergen content of products is always the same.
- Avoid Ingredient substitution wherever possible, and when accepting a different brand or product, check the specification or PIF.
- Store Allergens in a manner to minimise cross-contact. Closed containers, separate area for nuts or seeds, Flour or milk powders stored on the bottom of the pantry not the top shelf.
- If possible, make products from the least allergens in the recipe to the most allergens in the recipe. Segregate by time if space is not an option.
- Consider separate utensils or tools where practical.
- Maintain high levels of cleaning and hygiene and visually inspect to ensure equipment is clean.
- If making free claims understand you must have procedures in place that 100% prevent cross-contact from occurring. If sharing equipment – cleaning verification and product testing are very important.
- Ensure all staff are trained and knowledgeable. See All About Allergens **free training**.

# Allergen Risk Review

The process of thoroughly investigating the allergen status of food.

This begins with raw materials and continues throughout the manufacturing process until the food is packed and labelled.

The information collected in an allergen risk review can be used to inform both:

- an allergen management program
- a risk assessment





# Allergen Risk Review website

A web based interactive 'Factory Map' which

- provides detailed information & guidance for conducting an allergen risk review
- includes each aspect that an allergen risk review should address
- by clicking on each icon shows how a risk review impacts that production step

Resources!



[allergenbureau.net/risk-review](http://allergenbureau.net/risk-review)

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## Allergen Management

### BOTH

- are documented systematic approaches
- identify allergen risks & allergen challenges in manufacturing
- cover all aspects of the supply chain / supply matrix

### BUT

although similar, they are not the same

## Allergen Risk Review



# Food Allergen Analysis is Useful to...

**Confirm, Verify and Monitor** the allergen status of ingredients and foods.

**Extremely important if making “Allergen Free” claims.**

**Such claims require a VERY HIGH level of due diligence to support.**

Need to ensure the method is suitable – Talk to the laboratory about what you are doing and why.



# Our Resources



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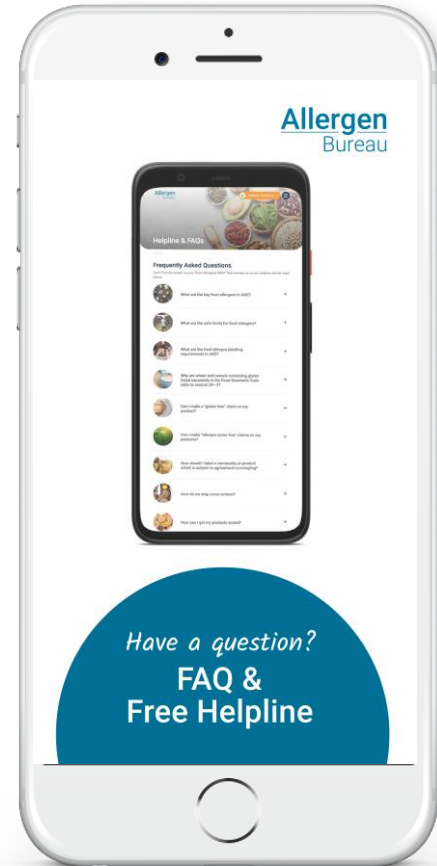
# Free Helpline

- Allergen labelling
  - Allergen management
  - The VITAL Program
  - VITAL Online
  - “Curly” questions!
- 
- Members – Priority and unlimited.
  - Non Members – One priority consult, then standard time frames

Email: [info@allergenbureau.net](mailto:info@allergenbureau.net)

Phone: +61 437 918 959 (International)

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**2023 Food Industry Guide to Allergen Management and Labelling**  
For Australia and New Zealand

**PEAL updated**

A joint work of members of the Australian Food and Grocery Council and of the Allergen Bureau

**The Food Industry Guide to the VOLUNTARY INCIDENTAL TRACE ALLERGEN LABELLING (VITAL) PROGRAM**  
Version 3.0

**PEAL updated**

April 2021

Informing the food industry [allergenbureau.net](http://allergenbureau.net)

**UNEXPECTED ALLERGENS IN FOOD**

Revised & updated  
January 2021

Informing the food industry [allergenbureau.net](http://allergenbureau.net)

**ASSESSING AGRICULTURAL CROSS CONTACT**

AUGUST 2022

Informing the food industry [allergenbureau.net](http://allergenbureau.net)

Food allergen management guidance - for industry by industry

Food allergen management, labelling, and the VITAL Program

Incidental Trace Allergen Labelling

The VITAL Program



**RAW MATERIAL RISK MATRIX QUESTIONNAIRE**

Question	Yes	No	Not Applicable	Not Answered	Comments
1. Are you a manufacturer or importer of food products?					
2. Do you have a food safety management system (FSMS) in place?					
3. Do you have a food safety management system (FSMS) in place?					
4. Do you have a food safety management system (FSMS) in place?					
5. Do you have a food safety management system (FSMS) in place?					
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Resources for the Food Industry