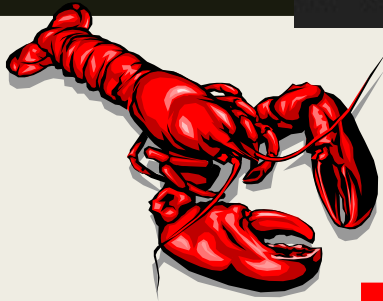


FoodGrads



FOOD ALLERGENS



Topics to Cover

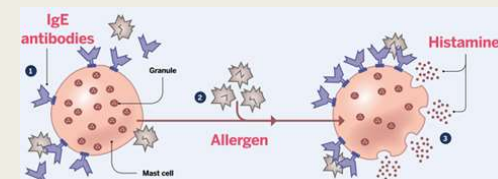
- 1. About Food Allergies*
- 2. Importance of Food Allergens in the Food Industry*
- 3. How to Control Allergens*

Agenda

- 1.0 *What is an Allergy?*
- 1.1 *Symptoms of an Allergic Reaction*
- 1.2 *Anaphylactic Shock*
- 1.3 *The Allergic Response*
- 1.4 *Major Food Allergens*
- 1.5 *Top Allergens (Canada vs US)*
- 2.0 *Where do Allergen Risks Occur in a Food Plant?*
- 2.1 *FoodGrads Allergen Control Program (ACP) Checklist*
- 2.2 *Allergen Management - Industry Best Practices*

1.0 What is an Allergy?

- A reaction of the immune system to a normally harmless substance
- It is an immunologic response to a food protein.
 - *Proteins from a food are recognized by the body's immune system as foreign, for example, peanuts*
 - *The immune system tries to fight it off by releasing massive amounts of chemicals and histamine (reason we use anti-histamines)*
 - *The chemicals trigger the allergic symptoms.*



1.1 Symptoms of an Allergic Reaction

Symptoms

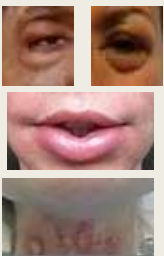
- NAUSEA
- DIARRHEA
- VOMITING
- ABDOMINAL CRAMPS
- RASH
- ECZEMA
- HIVES
- BREATHING PROBLEMS



1.2 The Allergic Reaction

ANAPHYLACTIC SHOCK

- A severe, life-threatening allergic reaction
 - *Constricted airways in the lungs*
 - *Severe lowering of blood pressure and shock (“anaphylactic shock”)*
 - *Suffocation by swelling of the throat*
 - *Multiple organ systems are triggered and death can occur in as little as ten minutes*



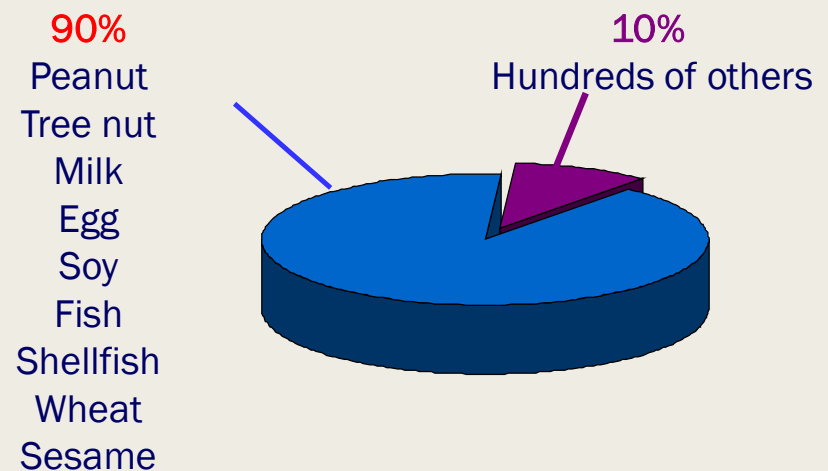
1.3 The Allergic Response

How much does it take for an allergic reaction?

- Sensitivity differs between individuals and depends on food type
- Trace amounts can trigger a reaction
- Lowest dose to cause a reaction has not been calculated
- There is no cure for food allergies
- The only protection is Avoidance of the food

1.4 Major Food Allergens

- There are more than 160 foods can cause allergic reactions in people with food allergies,
- The law identifies the most common allergenic foods.
 - *These foods account for 90 percent of food allergic reactions, and are the food sources from which many other ingredients are derived.*
 - <https://wicworks.fns.usda.gov/resources/food-allergies>



1.5 TOP Food ALLERGENS (Canada vs US)

Canada

1. PEANUTS
2. TREENUTS
3. FISH
4. SHELLFISH
5. CRUSTACEANS
6. MILK
7. EGGS
8. SOYBEANS
9. WHEAT OR TRITICALE
10. SESAME
11. MUSTARD
12. SULPHITES

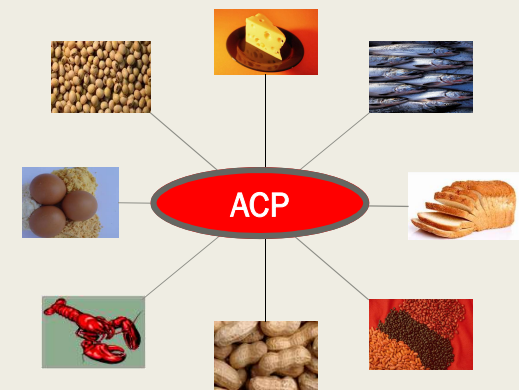
US

1. PEANUTS
2. TREENUTS
3. FISH
4. SHELLFISH/CRUSTACEANS
5. MILK
6. EGGS
7. SOYBEANS
8. WHEAT / GLUTEN



2.0 Where do Allergen Risks Occur?

- Incorrect Ingredient Specifications from a Supplier
- Raw Material is Cross Contaminated further up the Supply Chain
- Allergen Cross Contamination in the Production Process
- Reworking an Allergen Product into a non Allergen Product
- Improper Cleaning of Equipment from Allergen to Non Allergen Run
- Storage of Allergens on top of non Allergens
- Human Error in Mixing Allergens



2.1 FoodGrads Allergen Control Program (ACP) Checklist

- Developing an Allergen Control Program
 - ☐ *Form a cross functional team*
 - ☐ *Map the process to identify risks for cross contamination*
 - ☐ *Conduct a risk assessment*
 - ☐ *Develop procedures or processes to prevent cross contamination*
 - ☐ *Validate the cleaning procedures with allergen testing kits*
 - ☐ *Assess ingredients to determine the level of risks for cross contamination further upstream (suppliers). Are suppliers running other allergens on line producing your ingredients?*
 - ☐ *Provide allergen training for employees on an ongoing basis*
 - ☐ *Audit the Allergen Control Program*
 - ☐ *Continuously improve the ACP*

3.0 Allergen Management – Industry Best Practices

- Flag ingredient allergens for employees to easily recognize (coloured labels)
- Sequencing of production runs by moving from non allergens to allergen containing products
- Train.....Train....Train Employees
- Visit suppliers to understand their processes and your ingredient risk
- R&D and Marketing Programs when adding new allergens and decisions to minimizing the number of allergens in the plant
- Utilize test kits and work with industry experts to validate cleaning procedures and processes
- Understand differences in country allergen regulations when importing
 - *Countries do not recognize priority allergens of other countries*



Question #1

- **What is an allergen**
 - a. Gluten intolerance where the body is unable to breakdown gluten
 - b. A reaction of the immune system to a normally harmless substance
 - c. An immunologic response to a food protein
 - d. (b) and (c)
 - e. All of the above

Question #2

- **What is an anaphylactic reaction?**
 - (a) A severe, life-threatening allergic reaction
 - (b) Symptoms include the swelling of the throat
 - (c) Only small amounts can cause a reaction to an allergic person
 - (d) All of the above

Question #3

- **How can allergen contamination be prevented in a food plant?**
- (a) Implement proper cleaning when moving from one allergen to the next
- (b) Maintain ripped ingredient bags in the WH
- (c) Use labels to cleaning identify materials
- (d) (a) and (c)
- (e) Small amounts of undeclared allergens is acceptable

Question #4

- **Top priority allergen programs in the US and Canada both include Peanuts, Tree Nuts, Fish, Soybeans, Milk, and Chicken**
- (a) True
- (b) False

Question #5

- **What is your role in an Allergen Management Program?**
 - a. Follow allergen procedures
 - b. Report any allergen cross contamination
 - c. Prevent undeclared allergens from reaching consumers
 - d. All of the above