

Module 04 Lecture 02

Allergens

Allergens - Definitions

- ***Food allergy***
 - ◆ an immunological reaction to a food protein
- ***Food intolerance***
 - ◆ an adverse reaction to a food or food component
 - ◆ neither immunologically nor psychologically based

Allergens

- ***Common ingredients involved (Codex list)***
 - ◆ **barley, oats, wheat, triticale and their products (gluten and starch included)**
 - ◆ **crustaceans, shellfish and their products**
 - ◆ **eggs and egg products**
 - ◆ **fish and fish products**
 - ◆ **legumes, peas, peanuts, soybeans and products of these**
 - ◆ **milk and milk products (including lactose)**
 - ◆ **sulphite in concentrations of 10mg/kg or more**
 - ◆ **tree nuts and their products**

Anaphylaxis

- **A rare, but severe, reaction to an allergen.**
- **425 cases published 1979-1994 (includes 54 case of reactions to peanuts, 53 to celery, 23 to crustaceans)**
- **Symptoms: nausea and stomach pain. Blood pressure drops and death can occur within 10 minutes (aggravated by exercise and cold beverages)**
- **Can occur if an allergen is not listed on the food label, or if it has entered the food via cross-contamination.**

Preventing allergic reactions

- ***Main controls for the food industry***
 - ◆ **ensure that ingredient listings are accurate, indicating all components of the product**
 - ◆ **minimise potential for cross-contamination and mislabelling**

Preventing allergic reactions

➤ *Food processing*

- ◆ ensure that the design and installation of equipment allows easy, adequate cleaning
- ◆ minimise the chances of cross-contamination by ensuring good plant layout (e.g dust from peanut operations)
- ◆ include allergens in HACCP studies

Preventing allergic reactions

➤ *Planning of food production*

- ◆ **produce products containing allergens last in a production run to minimise chance of cross-contamination**
- ◆ **clean thoroughly between formulation changes**
- ◆ **ensure availability of correct packaging, which accurately lists the ingredients**

Preventing allergic reactions

➤ *Cleaning*

- ◆ **keep equipment clean to minimise potential for cross-contamination**
- ◆ **clean the production line thoroughly after producing a product containing allergens**
- ◆ **ensure that cleaning procedures are available and up to date**

Preventing allergic reactions

- ***Labelling and packaging***
 - ◆ **ensure that the label gives an accurate description of the product formulation**
 - ◆ **ensure that the label is used on the correct product**
 - ◆ **ensure that labels are updated when formulation changes are made**

Key messages

- food allergy affects 1-2% of the population
- a wide range of foods is involved
- most sufferers have minor symptoms
- a tiny percentage get anaphylaxis, which can be fatal
- peanuts, nuts, milk, eggs, fish may cause anaphylaxis
- food allergy has a very high public profile
- product labels must show correct formulation
- cross-contamination within the factory must be minimised
- HACCP plans for all products must consider allergens
- education is vital to minimise allergic reactions to food