



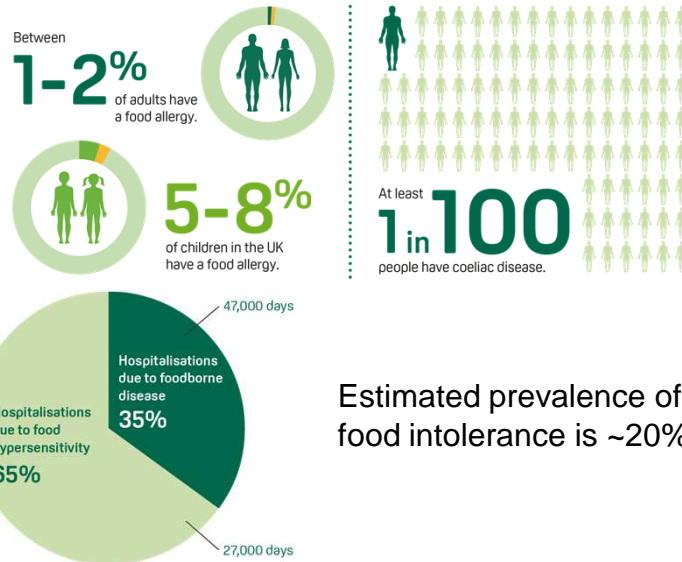
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- Food is safe
- Consumers can make informed choices about what to eat



## Food hypersensitivity in the UK



## It's not a new thing...

- In 1908 First case report of anaphylactic reactions induced by food “the alimentary anaphylaxis” – Henry Hutinel
- In 1912 American pediatrician Oscar Menderson Schloss described scratch test as a practical diagnosis of food allergy

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# IMPACT OF FOOD ALLERGY

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Health Impact and Quality of Life

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## Impact of food allergy



The symptoms can include:

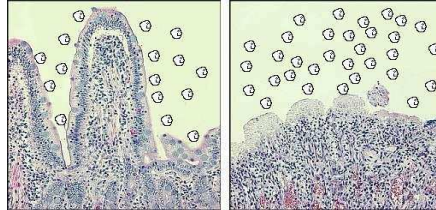
- rashes (usually very itchy)
- tingling sensation in the mouth
- swelling of the lips, tongue, face and throat
- difficulty breathing
- diarrhoea
- vomiting
- abdominal cramps
- and on rare occasions anaphylaxis (shock / collapse)



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## Coeliac disease

- Eating gluten leads to damage to the lining of the gut, which affects absorption of nutrients



- If diet is not controlled, this can lead to malnutrition, anaemia, osteoporosis and bowel cancer
- Need to avoid cereals containing gluten – wheat (spelt and Khorasan), rye, barley and oats



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## Impact of food allergy – Quality of Life

**Cummings et al., 2010** (Allergy, 65) FA has a detrimental affect on QoL and psychological distress (stress, depression and anxiety)

**Knibb et al., 2015** (Clin Transl Allergy, 5 (Suppl 3)

- Life long condition, has significant impact on QoL of the individual and to parents of children with food allergy
- Higher QoL measures when child is older, low perceived likelihood of a severe reaction and has fewer number of allergies
- Lower QoL if child has asthma, eczema, egg allergy, history of anaphylaxis or hospitalisation due to food allergy






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**Role of Legislation**

- There is no cure for food allergies or intolerances
- Dietary management is through strict avoidance diets
- Information gives a safe and informed choice
- Legislation required as an enabler



Food Standards Agency  
food.gov.uk

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## Evolution of Allergen Labelling

- 1985 Codex Alimentarius Committee : 8 foods of public health concern
- EU labelling regulation initially didn't address the needs of allergic consumers
  - 25% rule meant that allergen information was missed out
  - 25% rule abolished – allergens to be declared regardless of level
- Food Labelling Directive 2000/13/EC detailed Annex IIIa allergens and exemptions
- EU Food Information for Consumers Regulation 1169/2011 and Annex II list of allergens



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## Annex II Allergens



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## Overview of allergen labelling

- **Mandatory**
  - Declare deliberate use of allergenic ingredients or processing aids (regardless of level of inclusion)
- **Voluntary**
  - Unintentional presence of an allergen in food (precautionary allergen labelling)
  - Declare absence of an allergen in food (free from claims)



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## Allergen legislation

- EU Food Information for Consumers Regulation No. 1169/2011
- Allergenic ingredients information made available by food businesses
- Existing requirements for prepacked foods retained –added requirement to **emphasise** allergens within the ingredients list
- Introduction of extra requirement to **provide** allergen information for non-prepacked foods
- National provision to enable allergen information to be given orally (needs to be verifiable)



## Food Allergen Legislation - Enforcement

- Enforced in UK using Food Information Regulations SI's (1855/2014 (England))
- Graduated approach to enforcement (informal warning to formal warning (IN's) and onto prosecution)
- Unlimited fines
- Criminal offence for breaches



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### Peanut curry death: Restaurant owner Mohammed Zaman jailed

© 23 May 2016 | England



## Indian restaurant owner jailed for six years for killing customer with curry

Paul Wilson had asked for a chicken tikka masala with 'no nuts', but his curry had been cooked with a ground nut mix containing peanuts





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### **Article 36 Article 2 and 3 (a) – Voluntary information**

- Voluntary food information requirements:
  - Not mislead
  - To not be ambiguous or confusing
  - Where appropriate, based on relevant scientific data
- Possibility of implementing acts on the application of requirements with regard to the unintentional presence in food of substances or products causing allergies or intolerances



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### **Precautionary allergen labelling – may contain “x”**

- No specific / defined requirement in legislation
- GFL Regulation 178/2002, Art 14 (2), (3b) Food must not be unsafe...injurious to health
  - How much is too much?
- No internationally agreed approach for dealing with unintentional presence of allergens leading to inconsistencies
  - Barriers to trade



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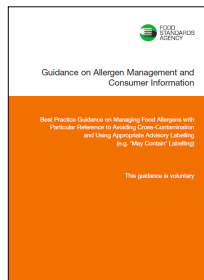
## Guidance available on PAL

Food Standards Agency (2006)

Food Drink Europe (2013)

Campden BRI Guideline 71 (2013)

Qualitative not quantitative!



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## FOOD INCIDENTS

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Risk assessment, risk management,  
the FSA's approach

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## Food Allergy incidents

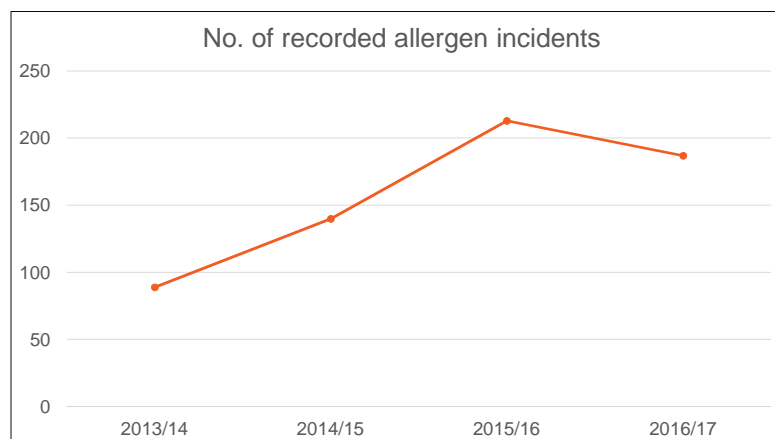
FSA report of Food Incidents in 2016/2017

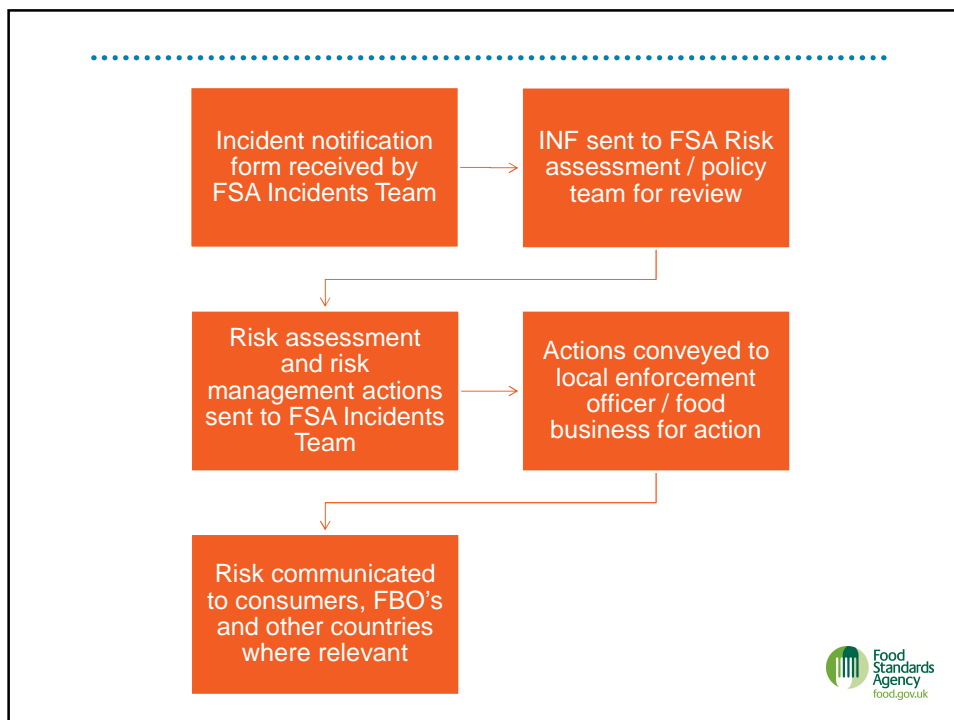
- Not determined / other 15%
- Pathogenic microorganisms (14%)
- Residues of veterinary medicinal products (9%)
- **Allergens (8%)**
- Chemical contamination (other) (6%)



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## Trends in recorded incidents





### FSA approach to risk assessment

- For unintentional presence of allergens
- Decision based on available information
- Risk to the consumer = Likely dose exposure
  - Amount of allergen reported (protein, total protein, DNA)
  - Portion size and/ or consumption data
  - Clinical threshold data (NOAEL/LOAELs), reference doses...



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## Managing risk – a public health approach

- Risk management for public health purpose is managed on a population level
- Population data used to derive allergen reference doses
  - ED01 – where 1% of population may react
  - ED05 – where 5% of population may react
- Where we see a reaction we do not expect severe reactions



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## Cost of Recalls

- Financial impact to the food business
  - Removing product from warehouse and shelves
  - Cost of communicating the issue
  - Destroying the affected product
  - Replacing affected product with a safe product
  - Loss of profits
  - Cost of refunds





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### Allergen detection methods

- Must link to the hazard (protein)
- Help inform and underpin decisions on allergen management protocols, risk communication/ labelling decisions, regulatory / enforcement action
- What defines an allergenic food? e.g. DNA sequence, specific protein(s)
- Problem: cross reactivity – similar looking proteins



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## Bart Ground Cumin recalled

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Last updated: 31 January 2015

The FSA has issued an alert to people with nut allergies about a batch of ground cumin sold by The Barts Ingredients Company Ltd which has been found to contain traces of almond protein not listed on the label. This makes the product a possible health risk for anyone with an allergy to almond.

### Allergy alert



## Prunus dulcis



vs

## Prunus mahaleb




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### **Role of analysis in effective enforcement**

- Review whether they can detect allergens at set allergen management thresholds (action levels)
- Need relevant quality control materials and/or reference materials
- Explore new technologies



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### **An ideal world would look like**

To harmonise RM approaches to PAL we need to have...

- Consistent approach to risk assessment and risk management
  - Agree reference doses
  - Agreed reporting units for analysis to inform risk assessment
- Established performance criteria? – use any method but need to perform to set criteria
- Reference and quality control materials to ensure results are what they should be





