UNIVERSITAS SCIENTIARUM SZEGEDIENSIS
UNIVERSITY OF SZEGED

Food allergy

Dr. Gyimes Ernő- Csercsics Dóra

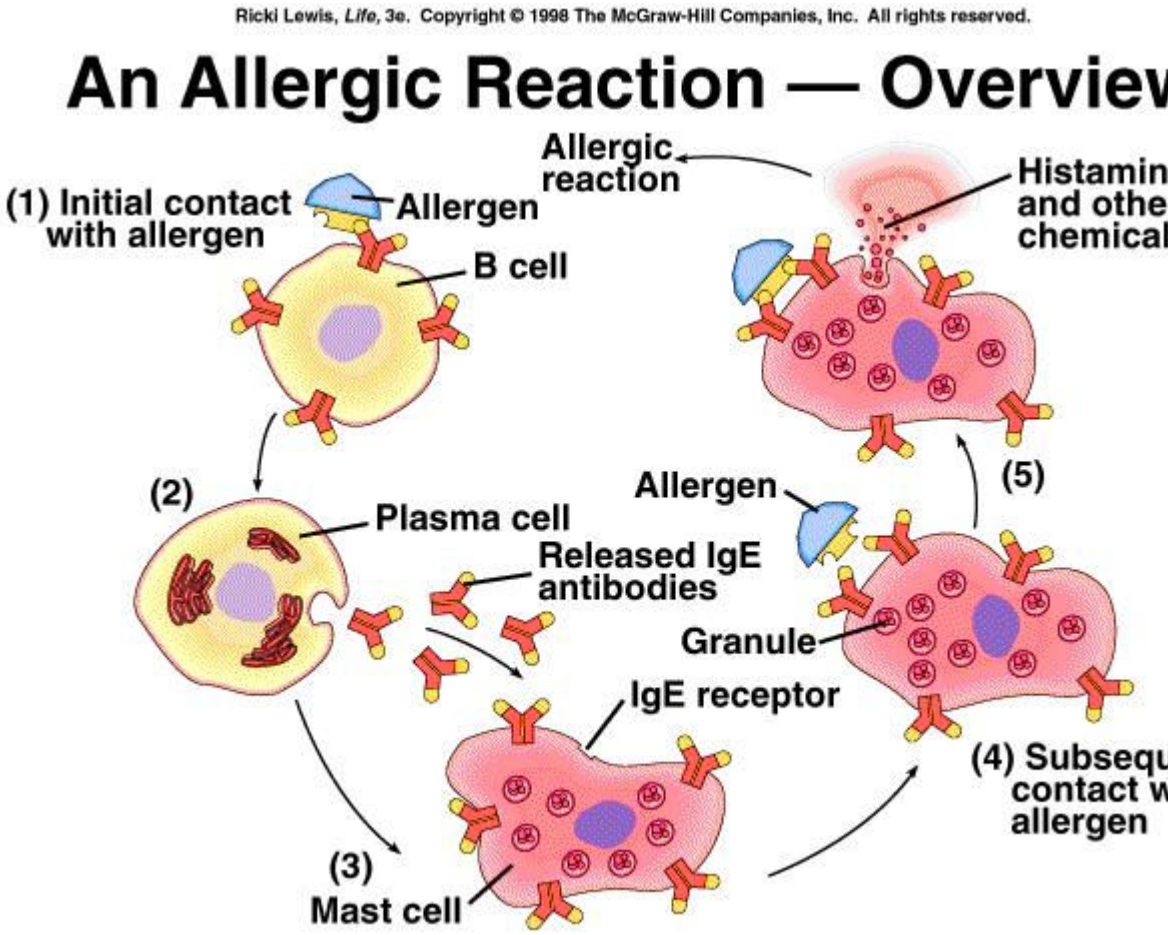
TÁMOP-4.1.1.C-12/1/KONV-2012-0014

SZÉCHENYI 2020
MAGYARORSZÁG KORMÁNYA
Európai Unió
Európai Szociális Alap
BEFEKTETÉS A JÖVŐBE

Food Allergy

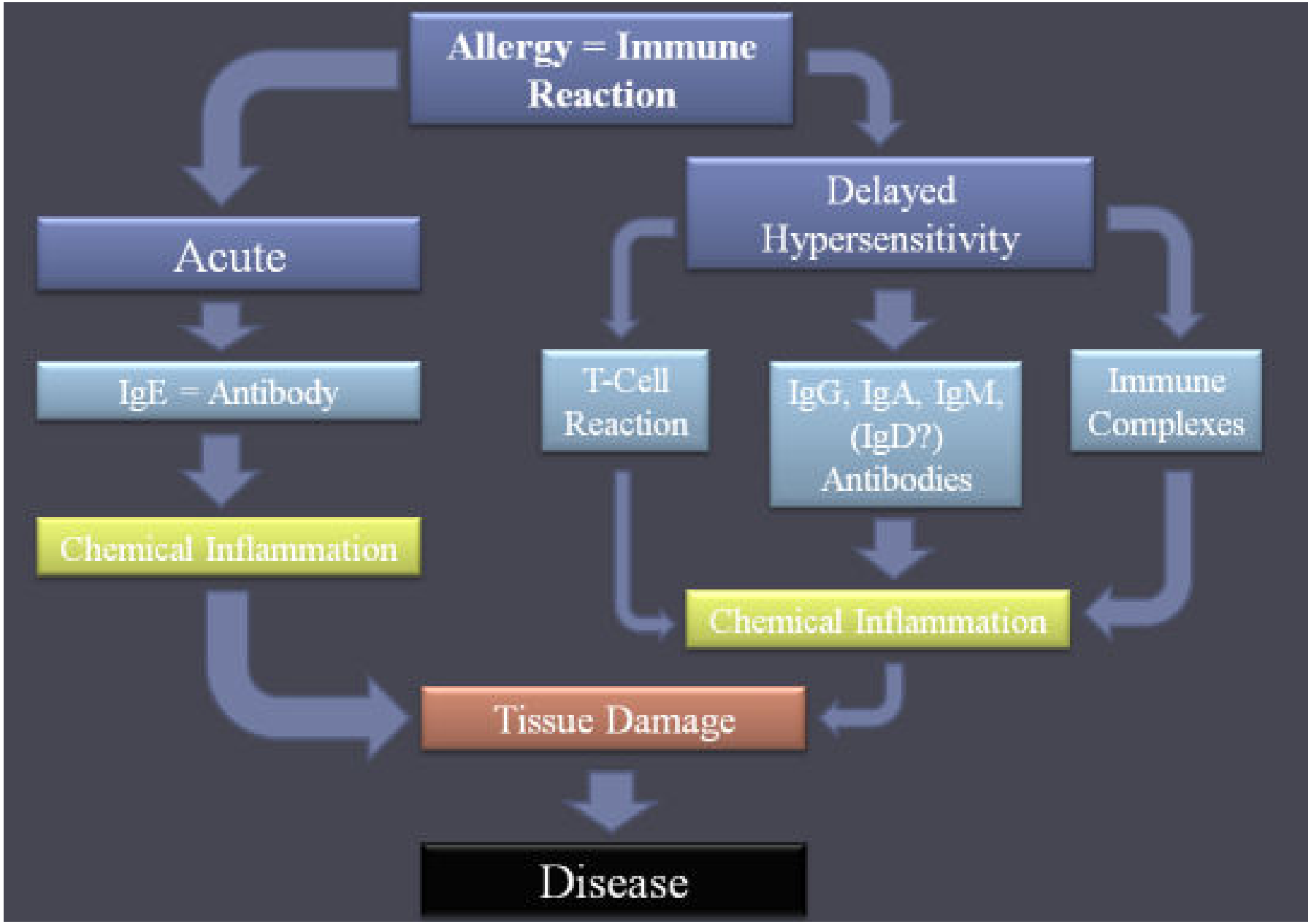
Meaning of food allergy

- The immune system's reaction to a certain food. The immune system mistakenly considers the food to be harmful and creates antibodies to that food. When the food is eaten again, the immune system releases histamine and other chemicals, causing the symptoms of an allergic reaction.



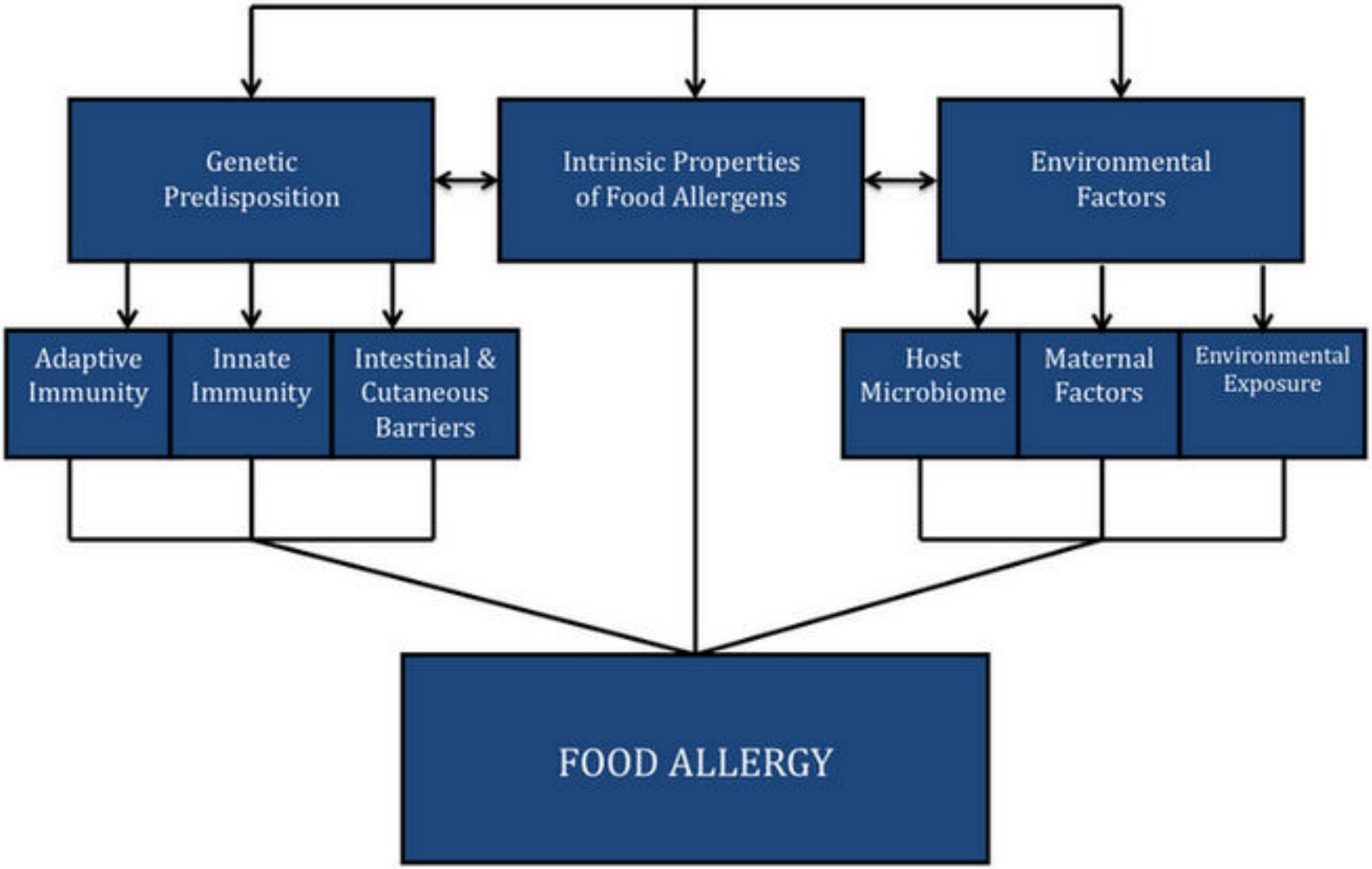
(Source:https://www.foodallergy.org/document.doc?id=143)

Source: intranet.tdmu.ed



Source: lactosesintolerances.blogsp

Factors that Predispose to Development of Food Allergy



Source: www.discoverymedicine

Food intolerance
(non-allergic hypersensitivity)

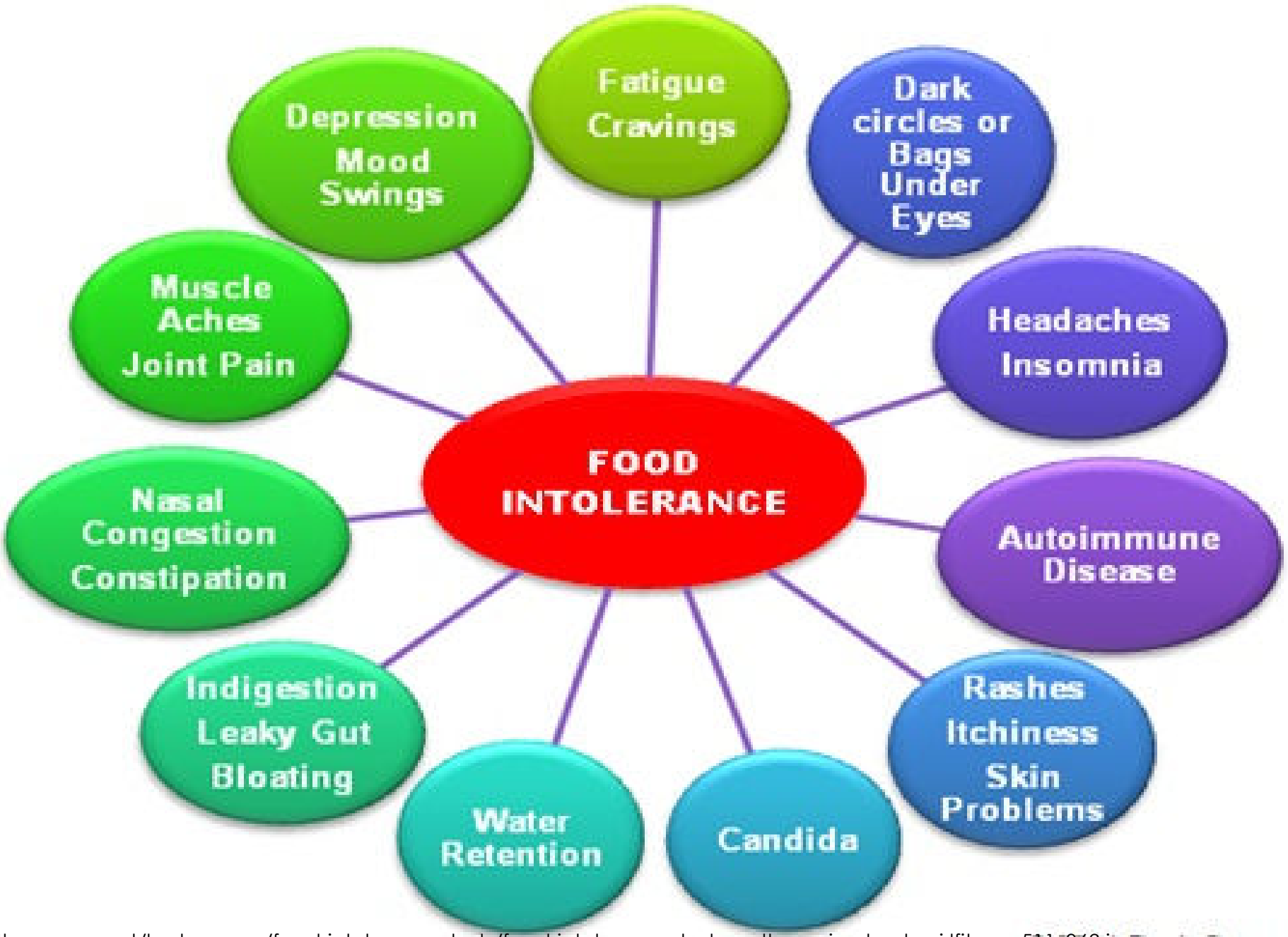
- Much more common. The onset of symptoms is usually slower and may be delayed by many hours after eating the offending food; the symptoms may also last for many hours, even into the next day. Intolerance to several foods or a group of foods is not uncommon, and it can be much more difficult to decide whether food intolerance is the cause of chronic illness, and which foods or substances may be responsible.
- The symptoms caused by intolerance are much more variable and can include fatigue, bloating, irritable bowel, joint pains, rashes, nettlerash, eczema, migraine and various other symptoms. Chronic conditions such as Arthritis, Eczema, Irritable Bowel Syndrome, ME (Chronic Fatigue Syndrome), Rheumatoid Arthritis, Migraine and Ulcerative Colitis are sometimes linked to allergy or intolerance to foods or other substances.

Source: http://www.allergyuk.org/food-allergy-or-food-intolerance/food-allergy-or-food-intolerance

Causes and identifying of food intolerance

- Some people may be lacking an enzyme that is required for proper digestion of the food.
- Although this is rare, others seem to be intolerant of substances that occur naturally in the food (e.g. histamine or salicylates) which don't affect other people. There may be increased sensitivity to natural components such as caffeine, or to food additives. This means that there is no easy blood or skin test to identify intolerance. Some tests have been developed that may be helpful but none of them give a *definite* answer; they can only guide us about what *might* be causing a problem, but this then needs careful checking.
- The most accurateway of identifying whether food intolerance is contributing to a chronic illness is an **Elimination and Challenge Diet.** This should only take place after a consultation with a qualified specialist, ideally after referral from your General Practitioner. A dietitian can provide an elimination diet tailored to your specific needs. Elimination diets must be followed **strictly** and for the correct period of time, to be effective.

Source: http://www.allergyuk.org/food-allergy-or-food-intolerance/food-allergy-or-food-intolerance



e: http://lunar.thegamez.net/lactosenew/food-intolerance-tests/food-intolerance-test-results-are-in-chunkygirlfitness-511x368.jpg

Key facts about food allergy

- People suffering severe reactions need emergency expert help from a trained paramedi usually with injectable adrenaline.
- In the UK, about ten people die every year from food-induced anaphylaxis.
- There are also about 1,500 asthma deaths, some of which might be triggered by food allergy
- For those at greatest risk, the tiniest trace of food allergen can trigger severe symptoms an in some cases, cause fatal or near-fatal symptoms.
- Many of those who die or suffer 'near miss' reactions had no idea that they were at ris Those who are aware of the risk can find the day-to-day unpredictability of living with foo allergy risks stressful.
- Teenagers and young adults seem to be at particular risk of severe reactions.
- Many people with a food allergy also have asthma, which can make food reactions mor severe if it's not controlled by regular medication.

(Source: http://allergytraining.food.gov.uk/english/food-allergy-facts.aspx)

Food allergy in numbers

- About 4 percent of the U.S. population – 12 million Americans – have a food allergy.
- Milk, eggs, peanuts, tree nuts, fish, shellfish, soy, and wheat account for 90 percent of all food allergy reactions.
- Seafood allergies affect 6.9 million Americans.
- Peanut and tree nut allergies affect 3.3 million Americans.
- There is no cure for a food allergy; strict avoidance of the allergy-causing food is the only way to prevent a reaction.
- A severe or life-threatening allergic reaction is called anaphylaxis (pronounced ana-fil-axis).
- The Centers for Disease Control and Prevention estimates that food allergies account for approximately 300,000 ambulatory care visits in the U.S. for children under the age of 18 each year.
- Even a trace amount of an allergy-causing food is enough to trigger an allergic reaction in some people.

Source: https://www.foodallergy.org/document.do

Difference between an allergic reaction and food poisoning

- Consuming certain foods that have been mishandled can cause adverse reactions that mimic food-allergic reactions. Examples of mishandled foods include those that are thawed and then refrozen or kept at refrigerator temperature for a long time before cooking.
- Typical symptoms of food poisoning include vomiting or diarrhea. These symptoms usually **manifest** themselves **several hours after** an individual consumes the food but also can occur days later. Individuals who contract food poisoning after eating fish or shellfish may mistakenly consider themselves allergic.

Source: https://www.foodallergy.org/document.do

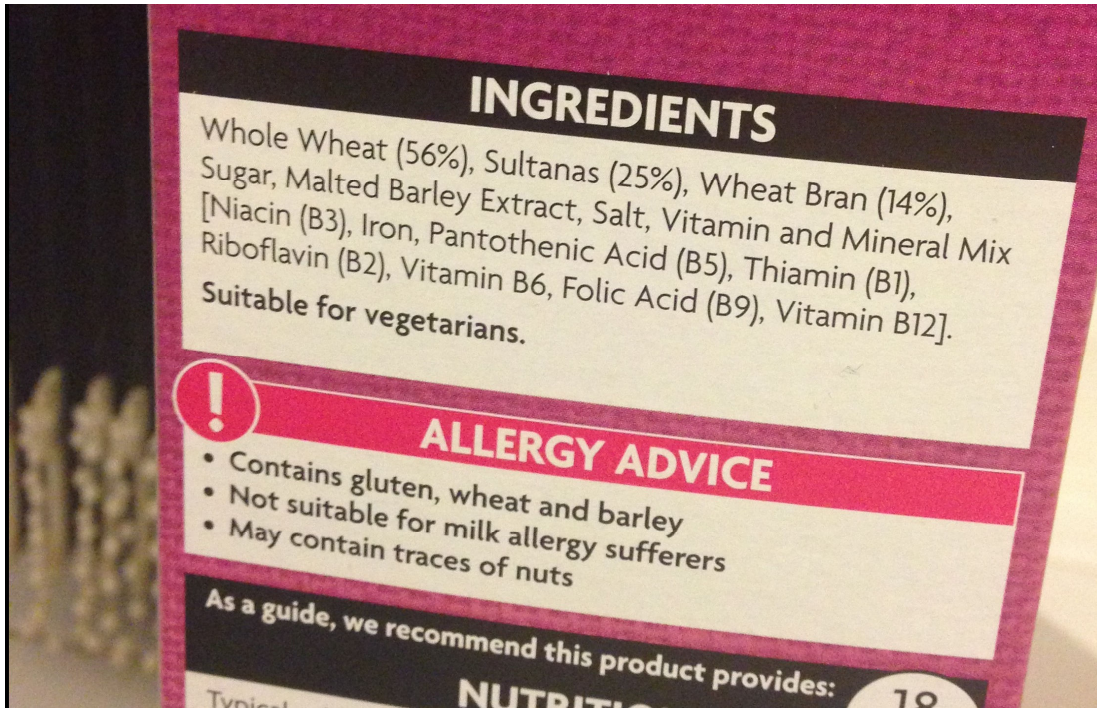
Who is affected

- Most food allergies affect younger children aged under the age of three. It is estimated that around one in every 14 children of this age has at least one food allergy.
- Most children who have food allergies to milk, eggs, soya and wheat in early life will "outgrow" this allergy by the time they start school.
- Peanut and tree-nut allergies are usually more persistent. An estimated four out of five children with peanut allergies remain allergic to peanuts for the rest of their lives.
- Food allergies that develop during adulthood, or persist into adulthood, are likely to be lifelong allergies.
- For reasons that are unclear, rates of food allergies have risen sharply in the last 20 years.
- However, deaths from anaphylaxis-related food reactions are now very rare. There are around 10 deaths related to food allergies in England and Wales each year.

Source: http://www.nhs.uk/conditions/food-allergy/Pages/In

Regulation of allergens in EU

- Allergenic ingredients must be indicated in list of ingredients with clear reference to name of the substance or product as listed in Annex II of the EU Food Information for Consumers Regulation No.1169/2011 and Commission Delegated Regulation (EU) No. 78/2014 amending Annex II to Regulation (EU) No 1169/2011.
- In Europe, food allergens are monitored and assessed by clinical and scientific experts through the European Food Safety Authority (EFSA).



(Sources: http://allergytraining.food.gov.uk/english/food-allergy-facts.aspx; www.gfdining.co.uk)

Law of food allergy in US

Under the **Food Allergen Labeling and Consumer Protection Act of 2004** (Public Law 108-282), companies are required to disclose on the label whether the product contains a major food allergen in clear, plain language. The allergens have to clearly be called out in the ingredient statement. Most companies list allergens in a statement separate from the ingredient statement.

On 4 January 2011, President Barack Obama signed into federal law the Food Safety and Modernization Act of 2010 (S510/HR2751, 111th Congress). Section 112 of this Act establishes voluntary food allergy and anaphylaxis management guidelines for public kindergartens, elementary and secondary schools.

picshy

Source: https://en.wikipedia.org/?title=Food_alle

Types of food allergies

Food allergies are divided into three types, depending on symptoms and when they occur.

- **IgE-mediated food allergy** – the most common type, triggered by the immune system producing an antibody called immunoglobulin E (IgE). Symptoms occur a few seconds or minutes after eating. There is a greater risk of anaphylaxis with this type of allergy.
- **non-IgE-mediated food allergy** – these allergic reactions are not caused by immunoglobulin E, but by other cells in the immune system. This type of allergy is often difficult to diagnose as symptoms take much longer to develop (up to several hours).
- **mixed IgE and non-IgE-mediated food allergies** – some people may experience symptoms from both types.

Source: http://www.nhs.uk/conditions/food-allergy/Pages/Intro1.aspx

Foods that need to be labelled on pre-packed foods when used as ingredients I.

https://www.foodallergy.org/document.doc?id=143

Foods that need to be labelled on pre-packed foods when used as ingredients II.

- Celery (including celeriac)
- Mustard
- Sesame
- Sulphur dioxide/sulphites, where added and at a level above 10mg/kg in the finished product. This can be used as a preservative in dried fruit
- Lupin which includes lupin seeds and flour and can be found in types of bread, pastries and pasta
- Molluscs like clams, mussels, whelks, oysters, snails and squid

(Source: http://allergytraining.food.gov.uk/english/food-allergy-facts.aspx)

Common allergens and people affected

Food	Infants/Young children	Older Children And Adults	Anaphylaxis
Milk (cow/goat)	•		•
Chicken egg	•		•
Soy	•		
Peanut	•	•	•
Tree nuts (walnut, hazel/filbert, cashew, pistachio, Brazil , pine nut, almond)		•	•
Wheat	•		
Fish		•	
Shellfish (shrimp, crab, lobster, oyster, scallops)		•	•
Fruit		•	•
Vegetables		•	•
Seeds (cotton, sesame, psyllium, mustard)		•	•
Spices		•	

Source: http://www.worldallergy.org/professional/allergic_diseases_center/foodalle

The most common symptoms of an allergic reaction include

Body part affected	Physical reaction
Eyes	Sore, red and/or itchy
Nose	Runny and/or blocked
Lips	Swelling of the lips
Throat	Coughing, dry, itchy and swollen throat
Chest	Coughing, wheezing and shortness of breath
Gut	Nausea and feeling bloated, diarrhoea and/or vomiting
Skin	Itchy and/or a rash

When someone has a severe reaction to an allergen, this can lead to faintness and/or the person might collapse.

Source: http://allergytraining.food.gov.uk/english/body/

Anaphylaxis

- In the most serious cases, a person has a severe allergic reaction (anaphylaxis), which can be life-threatening.
- Symptoms of anaphylaxis:
  - breathing difficulties,
  - lightheadedness
  - feeling like they are going to faint or lose consciousness
  - itchy skin or a raised, red skin rash
  - swollen eyes, lips, hands and feet
  - feeling lightheaded or faint
  - swelling of the mouth, throat or tongue, which can cause breathing and swallowing difficulties
  - wheezing
  - abdominal pain, nausea and vomiting
  - collapse and unconsciousness

Source: http://www.nhs.uk/conditions/food-allergy/Pages/Int

Causes and triggers of anaphylaxis

- Anaphylaxis is the result of your body's immune system overreacting to a harmless substance, such as food.
- Substances that trigger allergic reactions are known as allergens.
- Anaphylaxis usually develops within minutes of contact with an allergen, but sometimes the reaction can happen up to four hours later.
- The most widely reported triggers of anaphylaxis are:
  - insect stings – particularly wasp and bee stings
  - peanuts and tree nuts
  - other types of foods – such as milk and seafood
  - certain medicines – such as antibiotics

Source: wonder

: http://www.nhs.uk/Conditions/Anaphylaxis/Pages/Introduction.aspx

Diagnosing food allergy

- First, GP will ask you some questions about the pattern of your symptoms.
- Referral to an allergy clinic for testing.
- The tests needed can vary, depending on the type of allergy:
  - **If your child had symptoms that came on quickly** (an IgE-mediated food allergy) you will probably be given a skin-prick test or a blood test.
  - **If your child's symptoms developed more slowly** (non-IgE-mediated food allergy) you will probably be put on a food elimination diet.

Source: www.allergy-clinic.co.uk

Source: http://www.nhs.uk/Conditions/food-allergy/Pages/diagn

Skin-prick testing

- During a skin-prick test, drops of standardised extracts of foods are placed on the arm. The skin is then pierced with a small lancet, which allows the allergen to come into contact with skin cells. Occasionally, your doctor may perform the test using a sample of the food thought to cause a reaction. Itching, redness and swelling usually indicates a positive reaction. This test is usually painless.
- A skin-prick test does have a small theoretical chance of causing anaphylaxis, so testing should only be carried out where there are facilities that can deal with an anaphylactic reaction. This would usually be at an allergy clinic or centre, a hospital or a larger GP surgery.

healthyliving88.com

ource: http://www.nhs.uk/Conditions/food-allergy/Pages/diagnosis.aspx

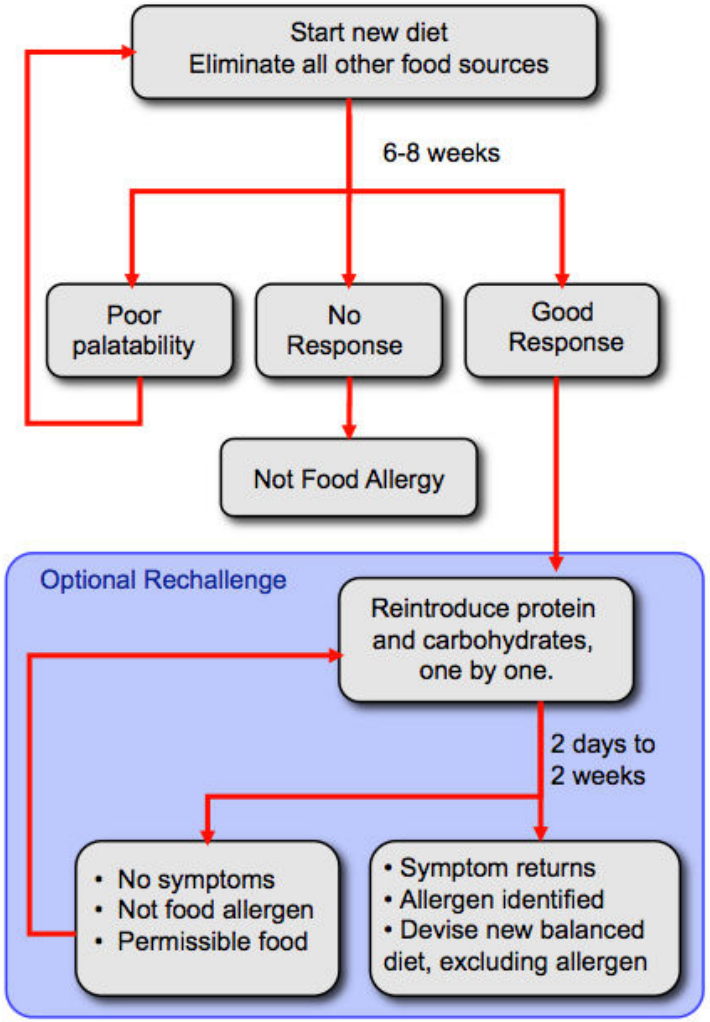
Food elimination diet

In a food elimination diet, the food that is thought to have caused the allergic reaction is withdrawn from your diet for two to six weeks. The food is then reintroduced into the diet.

If the symptoms go away when the food is withdrawn, but return once the food is introduced again, this normally means you have a food allergy or intolerance.

Before starting the diet, you should be given advice from a dietitian on issues such as:

- The food and drinks you need to avoid.
- How you should interpret food labels.
- If your child needs any alternative sources of nutrition.
- How long the diet should last.



Sources: communityvet.net
http://www.nhs.uk/Conditions/food-allergy/Pages/diag

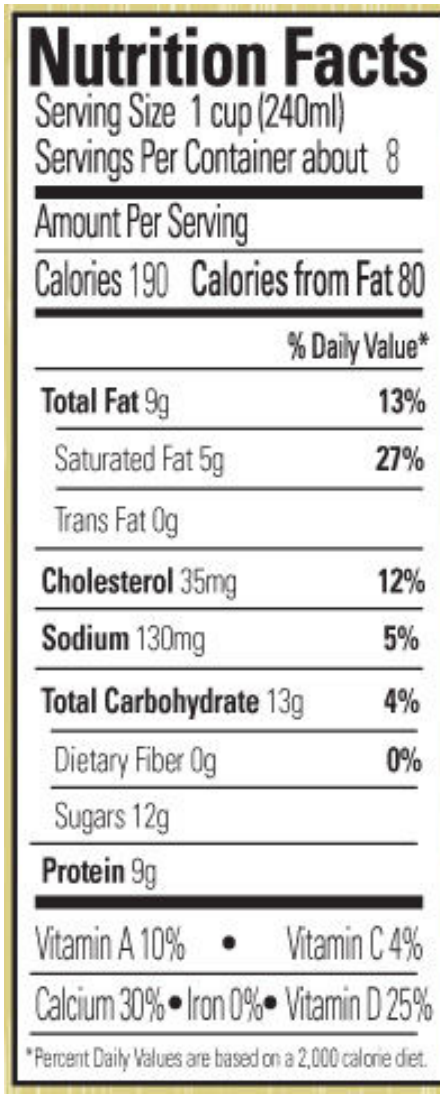
Alternative tests

- There are several shop-bought tests available that claim to detect allergies. They include:
  - Vega testing, which claims to detect allergies by measuring changes in your electromagnetic field.
  - Kinesiology testing, which claims to detect food allergies by studying your muscle responses.
  - Hair analysis, which claims to detect food allergies by taking a sample of your hair and running a series of tests on it.
  - Alternative blood tests (leukocytotoxic tests), which claim to detect food allergies by checking for the "swelling of white blood cells".
- Many alternative testing kits are expensive, the scientific principles they are alleged to be based on are unproven and independent reviews have found them to be unreliable. Therefore, they should be avoided.

Source: http://www.nhs.uk/Conditions/food-allergy/Pages/diagn

Milk allergy

- Cows' milk allergy - affects around 3-6% of (3-6 in every 100) infants and young children who usually start to have symptoms in their first few months. This causes many health problems and is frequently not diagnosed, or takes many months to be diagnosed.
- Most children outgrow milk allergy by five years of age so true milk allergy in older children and adults is extremely uncommon.
- Milk and dairy foods are an important part of our diet, providing many nutrients including proteins, minerals and vitamins essential for growth, bone and dental health.



Sources:http://www.allergyuk.org/milk-allergy/milk-allergy
www.imgneed.com

Food Allergy

Key facts about food allergy

- People suffering severe reactions need emergency expert help from a trained paramedic, usually with injectable adrenaline.
- In the UK, about ten people die every year from food-induced anaphylaxis.
- There are also about 1,500 asthma deaths, some of which might be triggered by food allergy.
- For those at greatest risk, the tiniest trace of food allergen can trigger severe symptoms and, in some cases, cause fatal or near-fatal symptoms.
- Many of those who die or suffer 'near miss' reactions had no idea that they were at risk. Those who are aware of the risk can find the day-to-day unpredictability of living with food allergy risks stressful.
- Teenagers and young adults seem to be at particular risk of severe reactions.
- Many people with a food allergy also have asthma, which can make food reactions more severe if it's not controlled by regular medication.

(Source: http://allergytraining.food.gov.uk/english/food-allergy-facts.asp

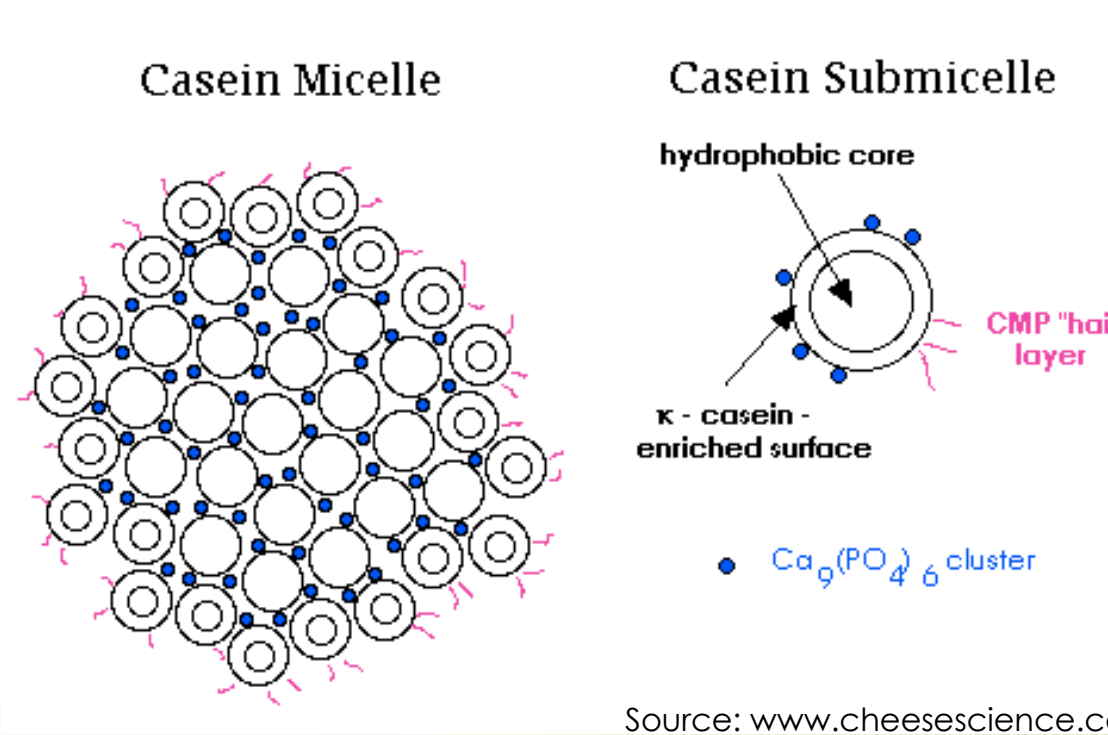
Cows' milk-free diet

- Milk
- Milk Powder
- Milk drinks
- All types of cheese
- Butter
- Margarine
- Yogurt
- Cream
- Ice cream

Sources: http://www.allergyuk.org/milk-allergy/milk-allergy; hardforum.com; www.healthcommunities.com; www.wikihow

Food labels that list any of the ingredients

- Casein
- Caseinates
- Hydrolysed casein
- Skimmed milk
- Skimmed milk powder
- Milk solids
- Non-fat milk
- Whey
- Whey syrup sweetener
- Milk sugar solids
- Lactose



Source: www.cheesescience.c

Source: http://www.allergyuk.org/milk-allergy/milk-allergy

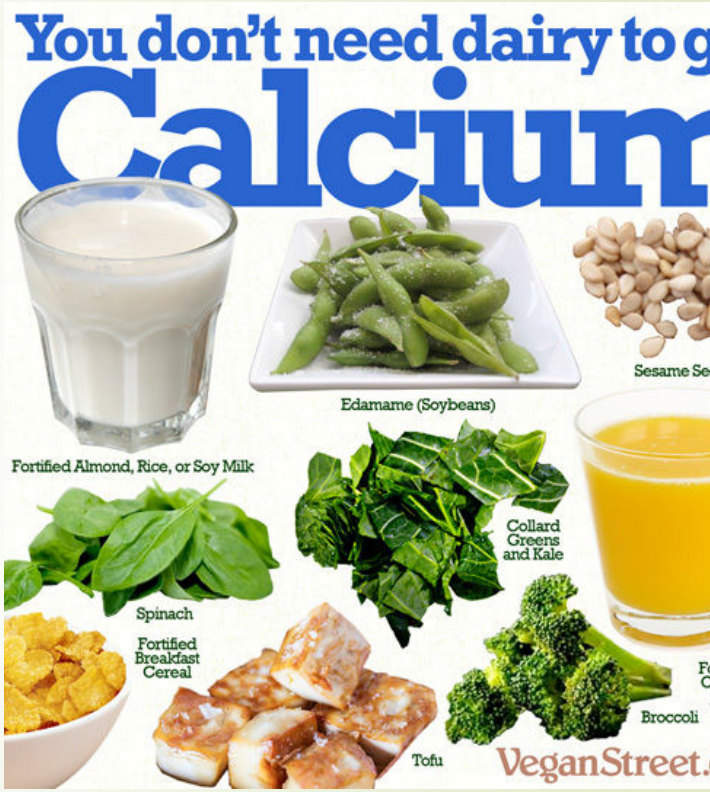
Examples of processed foods which may contain milk

- Baked goods, e.g. rolls
- Pancakes, batters
- Ready made meals
- Puddings and custards
- Cakes, biscuits, crackers
- Chocolate/confectionery
- Crisps
- Breakfast cereals
- Soups
- Baby foods
- Processed meats, e.g. sausages
- Pasta and pizzas
- Instant mashed potato
- Sauces and gravies

Source: http://www.allergyuk.org/milk-allergy/milk-allergy

Non-Dairy Sources of Calcium

Food	content per 100g of Food
Soya milk	13 mg (often has calcium added)
Chick peas (raw)	160 mg
Soya beans (raw)	240 mg
Tofu	510 mg
Red kidney beans	100 mg
Curley kale (boiled)	150 mg (absorbed as well as milk)
Okra (cooked / raw)	160mg / 220mg
Spring greens (cooked / raw)	75mg / 210mg
Watercress	170mg
Parsley	200mg
Apricots (Cooked)	92mg
Currants	53mg
Figs (dried)	250mg
Almonds	240mg
Brazil Nuts	78mg
Hazel Nuts	140mg
Treacle (black)	500mg
Tahini	680mg
Sesame seeds	670mg



Sources: http://www.allergyuk.org/milk-allergy/milk
plantbaseddietitian.com

Lactose Intolerance

- This is a relatively uncommon condition in Europeans, although it is present in very many African and Asian populations.
- This is **not an allergic condition** but an inability to digest lactose (milk sugar) because the body produces low levels of **lactase,** the enzyme responsible for digesting lactose.
- It can affect both children and adults, with the common symptoms being diarrhoea, bloating, discomfort. Lactose intolerance may occur temporarily following a bout of gastroenteritis, with diarrhoea being the main symptom.
- Lactose is present in cow's milk, goat's milk and sheep's milk in similar quantities. As with all intolerances, the only solution is avoidance of the offending food until one can once again tolerate it, which may be weeks, months or longer.
- There is a test available for the diagnosis of lactose intolerance, called a lactose challenge, and for small babies and children is especially advisable.

Source: http://www.allergyuk.org/milk-allergy/milk-allergy

Egg allergy

- Egg allergy is much more common in young children than in adults. Most children with egg allergy will outgrow it.
- Egg allergy can be:
  - to all forms of egg (well-cooked, loosely cooked and raw)
  - only to loosely cooked and raw egg
- Research has demonstrated that 70-80% of children with an egg allergy can eat plain cakes and biscuits containing egg.

(Source: http://www.allergyuk.org/egg-allergy/egg-allergy)

Source: chefin

Classification of egg containing foods I.

Well cooked egg	**Loosely cooked egg**	**Raw egg**
Plain Cakes	Homemade meringues	Mousse
Biscuits	Lemon curd	Fresh Mayonnaise
Dried egg pasta	Quiche	Some Ice creams, especially fresh and deluxe types
Prepared meat dishes and sausages containing egg	Scrambled egg	Some sorbets
	Boiled egg	Royal icing (both fresh & powdered royal icing sugar)
Egg glaze on pastry	Fried egg	Horseradish sauce
Sponge fingers		Tartare sauce
Quorn or similar microprotein products	Omelette	Raw egg in cake mix and other dishes awaiting cooking (Children of all ages can't resist tasting them!)

Source: http://www.allergyuk.org/egg-allergy/eg

Classification of egg containing foods II

Well cooked egg	Loosely cooked egg	Raw egg
Gravy granules (if they contain egg)	Poached egg	Some cheeses if they contain egg white lysozyme or other egg proteins.
Shop bought pre-cooked frozen Yorkshire puddings	Egg in batter	The fondant icing inside a Cadbury's cream egg
Manufactured meringues	Homemade products where egg is used to make breadcrumbs stick to fish/chicken etc	Chocolate bars containing egg i their filling eg Milky Way and Mar Bar
Manufactured (shop bought) pancakes and Scotch pancakes	Hollandaise sauce	
	Egg custard	
	Homemade pancakes and Yorkshire pudding – especially those that contain any 'sticky' batter inside	
	Bread & butter pudding	
	Fresh egg pasta	

Source: http://www.allergyuk.org/egg-allergy/eg

Labelling of egg

- Since November 2005, manufactured pre-packaged foods sold within the European Union have been required by law to ***clearly*** list egg in the ingredients panel where it is a component of the product, however tiny the amount.
- This means that if a product contains egg or any egg derivatives, the product will have to be labelled accordingly. Outside the EU, labelling may not be as clear, as different food allergy labelling laws apply.
- Since December 2014, packaged foods will also have to comply with this law and will therefore have to tell you if they contain egg. Depending on the severity of your allergic reaction to egg you may still choose to avoid these foods if cross contamination (transfer of allergens from other foods) is an issue for you.

Source: http://www.allergyuk.org/egg-allergy/egg-allergy

Egg Replacers

- **Whole egg replacers:**
  - Ener-G egg replacer (General Dietary)
  - Loprofin egg replacer (SHS)
  - No-egg replacer (Orgran)
- **Egg White replacer**
  - Loprofin egg white replacer (SHS)
  - Egg replacers are useful but it is also easy to make egg free cakes without them – look on the Allergy UK website for recipe information or call the Allergy UK Helpline for further information if you are not able to go online. Baking powder helps a recipe rise; pureed apple can be used as a binding agent.

Source: http://www.allergyuk.org/egg-allergy/egg-allergy

Egg allergy and medication

- Certain medicines may contain traces of egg and should therefore be avoided if you are allergic to egg. These are the **yellow fever vaccine** and the new **nasal spray influenza (flu) vaccine Fluenz®**. The traditional flu vaccine given by injection is safe for egg allergy sufferers.
- Many people ask if the MMR (measles, mumps and rubella) vaccine should be given to those with egg allergy. The MMR vaccine does not contain any egg protein and is considered to be safe but any concerns should be discussed with your GP.

Sources: http://www.allergyuk.
allergy/egg-allergy; www.mims

Soya (Soy) Allergy

- Soya is widely used in foods and is difficult to avoid. As many as 60% of manufactured foods contain soya. Soy comes from soybeans and immature soybeans are called edamame beans.
- Soya can be ingested as whole beans, soya flour, soya sauce or soya oil. Soya can also be used in foods as a texturiser (texturised vegetable protein), emulsifier (soya lecithin) or protein filler. Soya flour is widely used in foods including; breads, cakes, processed foods (ready meals, burgers and sausages) and baby foods.
- The level of avoidance required will depend on each individual case. Some people may need to avoid all these forms of soya, whereas others may be able to tolerate, for example, soy sauce and soya lecithin. In fact, most soy sauces contain very small amounts of soy, with most of the protein in the sauce being derived from fermented wheat.

Source: http://www.allergyuk.org/soya-and-soy-allergy/soya-soy-allergy

Source: levtil100

Soya lecithin and oil

- Soya-derived lecithin is an emulsifier – it is a lipid (fat) which stabilizes foods which contain water and fats, which do not normally mix (which is why you have to shake many salad dressings as they contain oil and water/vinegar which do not mix). For example, lecithin stops the cocoa and cocoa butter in chocolate bars from separating. In addition, lecithin improves the texture of many foods such as chocolate and spreads, and also helps preserves some foods. Since lecithin is a fat, soya lecithin contains very little soya protein, and most people with soya allergy can tolerate it.
- In the UK, the Food Standards Agency advises that refined soya oil (the main component of vegetable oil) should be safe for people with soya allergy, because the proteins that cause allergic reactions are removed during the refining process. However, cold-pressed soya oil, usually sold from delicatessen counters or health food shops, can contain soya protein and should be avoided.

Source: http://www.allergyuk.org/soya-and-soy-allergy/soya-soy-allergy

Foods that contain soya

- Soya protein isolate
- Soya shortening
- Soya protein
- Soya albumin
- Soya bean
- Soy sauce
- Soya flavouring
- Soya flour
- Soya gum
- Soya lecithin (E322)
- Soya milk
- Soya nuts
- Soya oil
- Soya starch
- Soya infant formula
- Soya margarine
- Soya yoghurts and desserts
- Tempeh
- Tofu/Tofutti
- Natto
- Kinako (roasted soy flour)
- Kouridofu (frozen tofu)
- Nimame
- Edamame
- Okara
- Yuba

Source: http://www.allergyuk.org/soya-and-soy-allergy/soya-s

Terms that may indicate the presence of soya

- Vegetable broth
- Vegetable oil
- Vegetable protein
- Vegetable paste
- Textured vegetable protein (TVP)
- Hydrolysed Vegetable Protein (HVP)
- Hydrolysed Plant Proteins (HPP)

Source: http://www.allergyuk.org/soya-and-soy-allergy/soya-soy-allergy

Source: www.amaza

Source: www.barryfarm

Fish / Seafood Allergy

- The consumption of fish and seafood has increased significantly over the past few decades, partly because of concerns about the levels of dietary fat and cholesterol in our diet from meat. Fish and seafood is seen as a healthy alternative to meat, because it has much less saturated fat than meat and also has Omega-3 polyunsaturated fatty acids which can have health benefits.
- Allergy to fish affects about 1 in 200 people, while allergy to shellfish (for example, prawns and crabs) is more common, affecting about 1% in those populations with significant consumption of shellfish.
- Seafood allergy:
  - is more common in adults than children
  - is not as common as milk egg or peanut allergy
  - tends to be lifelong

Source: http://www.allergyuk.org/fish-and-seafood-allergy/fish-and-seafood-allergy

Symptoms of fish/seafood allergy

- Nausea, sickness, diarrhoea, abdominal cramps, wheezing, rhinitis, flushing, urticarial rashes and dramatic swelling. Fatal reactions have been reported.
- Although some people complain that they can have significant allergic reactions to just the smell of a food, this is actually fairly uncommon for most foods. Fish and seafood is one important exception. According to recent reports, 15% of people with seafood allergy can react to vapours and steam produced during cooking (especially grilling and on the barbeque). This is because fish and seafood release very small proteins called amines during the cooking process, which can cause allergic reactions in the airways and lungs.
- Surveys also indicate that after nuts, seafood is the next most common food causing severe allergic reactions (anaphylaxis). In a recent report of 167 children with seafood allergy, over one in five had experienced a previous anaphylactic reaction to the food.

Source: http://www.allergyuk.org/fish-and-seafood-allergy/fish-and-seafood-allergy

Types of seafood and fish classified

Phylum	Class	Common Name
Molluscs	Gastropods Bivalves Cephalopods	Snail, Abalone Clam, Mussel, Oyster Octopus, Squid, Scallop
Athropods	Crustacea	Crab, Lobster, Shrimp, Prawn, Crayfish
Chordates	Cartilagenous Bony Fish	Fish Ray, Shark Cod, Salmon, Tuna etc.

People who are allergic to one class of seafood can often tolerate those from another. For example, most people with an allergy to shellfish (crustacea) such as prawn are able to eat finned fish. Likewise, people allergic to tuna can often eat prawns. However, cross-reactivity within a class is common, so someone allergic to a fish like salmon must usually avoid all finned fish.

Cross-reactivity between finned fish and other seafood may be more common in children than in adults.

Source: http://www.allergyuk.org/fish-and-seafood-allergy/fish-and-seafoo

Foods which can contain fish or seafood

- Fish sauce including Worcester sauce (usually contains anchovies)
- Fish fingers, nuggets
- Sushi and sashimi
- Salads e.g. Caesar salad
- Oyster sauce
- Fish oils
- Pet food
- Seafood dips
- Prawn chips/crackers
- Pasta sauces contain crustacea (in USA)

Source: http://www.allergyuk.org/fish-and-seafood-allergy/fish-and-seafood-allergy

Fish oil and glucosamine supplements

- Fish oils are popular health supplements, with reports that they can be beneficial in neurological development, immune function and preventing cardiovascular disease and cancer.
- Glucosamine is a complementary medicine used to treat osteoarthritis, and is derived from the outer coatings of shellfish such as crustaceans. Sometimes chondroitin sulphate is added, usually derived from shark cartilage.
- While people allergic to fish and shellfish are sensitive to protein and oils or constituents of the shell of crustacean, these products are not routinely tested to ensure no protein contamination has occurred. It is therefore important to avoid these supplements. Sometimes, it is possible to perform a skin test to the fish oil, so discuss this with your health professional.

Source: http://www.allergyuk.org/fish-and-seafood-allergy/fish-and-seafood-allergy

Peanut and Tree Nut Allergy

- Allergy to peanut and tree nuts is the most common food allergy in adults and children. 4 out of 5 children with nut allergies will continue to have these allergies as an adult. In some people, the allergy may become less severe with age, but in 20%, it can become worse with time.
- Peanut allergy is becoming ever more commonplace, with recent studies showing that the rate of peanut allergy has doubled over a 5 year period both here in Europe and in the United States. Peanut allergy is estimated now to affect 1 in 50 young infants, and tree nut allergy also seems more common. The reason for this increase is not fully understood, but is in line with the general increase in all forms of allergy including asthma, eczema and hayfever.
- **The majority of allergic reactions to peanut and tree nuts are mild**. Hives (nettle rash), eczema and vomiting are the most common complaints in children. However, some allergic reactions to peanut or tree nuts can be severe, causing difficulty in breathing due to asthma or throat swelling, or a drop in blood pressure. This is known as anaphylaxis, and allergy to peanut or tree nuts is one of the most common triggers.

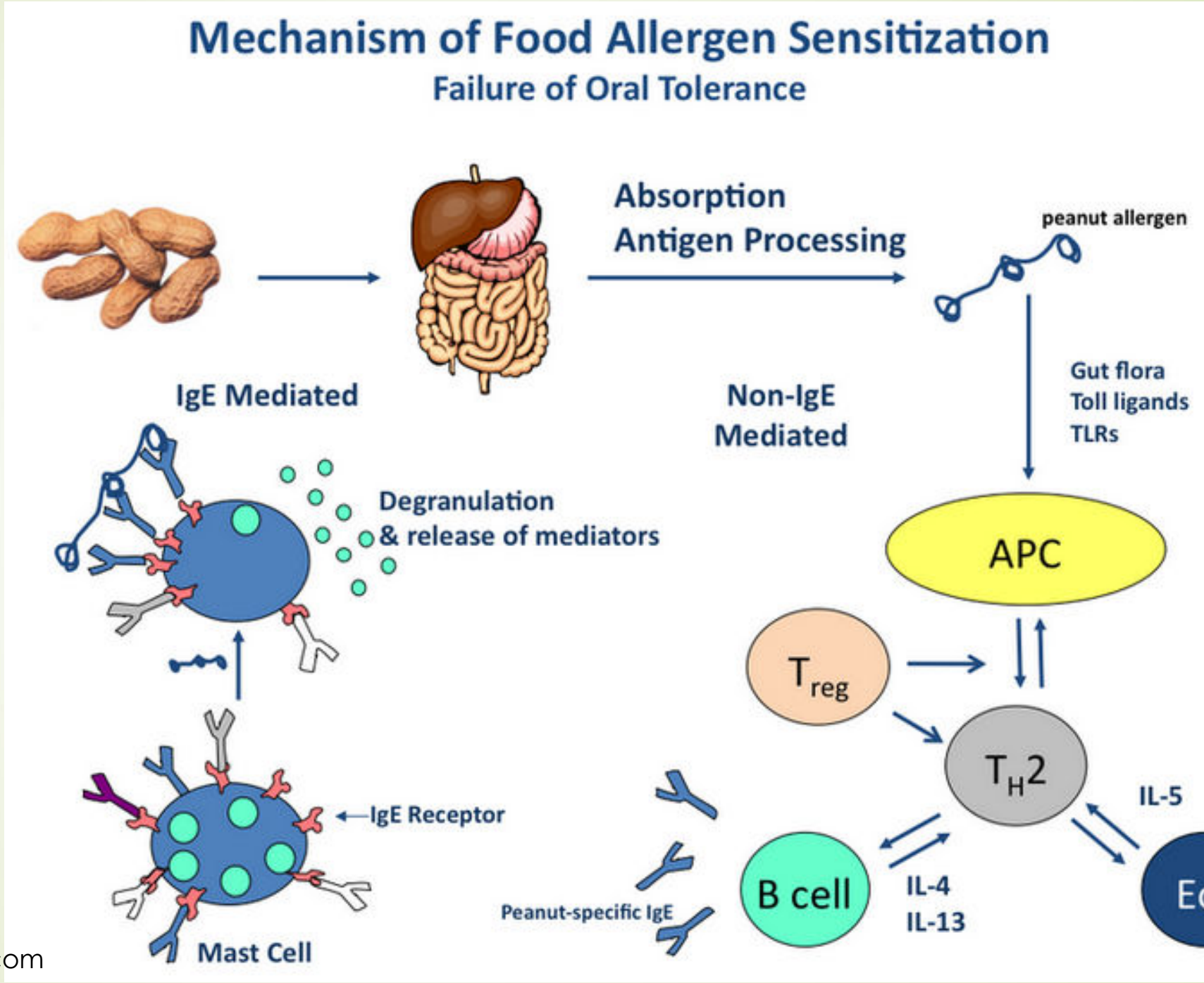
Source: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nu

Peanut

- Peanut (Arachis hypogaea) is a member of the legume (bean) family. Other members of this family include soya beans, lentils and garden peas. It is rare for a peanut allergic person to react to soya or other beans and legumes, but many peanut allergic people will also be allergic to other tree nuts, for example brazil or hazel nuts, which are genetically unrelated. Peanuts grow from the ground rather than on trees, and are sometimes referred to as **ground nuts**.

- Many commonly used foods contain peanut extracts, but although **hydrogenated vegetable oil** may occasionally have a peanut source, it is unlikely to cause an allergic reaction. **Hydrogenated vegetable protein** may rarely have a peanut source, and this may cause an allergic reaction in an extremely sensitive individual.

Sources: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nut-allergy
www.canieatthere.co.uk



ce: www.discoverymedicine.com

Tree nuts

- Tree nuts are actually a type of seed from plants, and come from a wide variety of different botanical families such as Rosaceae (almonds), Anacardiaceae (cashews), Proteaceae (macadamia nuts) or Lecythidaceae (Brazil nuts).
- The distinction between tree nut and seed is not always clear. We often think of seeds as small seeds - like sesame seed, sunflower seed, poppy seed or pumpkin seed. In fact, coconut (including the husk and inner white flesh that we eat) is also a seed. This may explain why coconut is considered to be a tree nut in USA but a seed elsewhere.

Sources: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nut-allergy; www.healthandlovep

How to Read a Label for a Tree Nut-Free Diet

All FDA-regulated manufactured food products that contain a tree nut as an ingredient are required by U.S. law to list the specific tree nut on the product label.

Avoid foods that contain nuts or any of these ingredients:

almond
artificial nuts
beechnut
Brazil nut
butternut
cashew
chestnut
chinquapin
coconut
filbert/hazelnut
gianduja *(a chocolate-nut mixture)*
ginkgo nut
hickory nut
litchi/lichee/lychee nut
macadamia nut
marzipan/almond paste
Nangai nut
natural nut extract *(e.g., almond, walnut)*
nut butters *(e.g., cashew butter)*
nut meal
nut meat
nut paste *(e.g., almond paste)*
nut pieces
pecan
pesto
pili nut
pine nut *(also referred to as Indian, pignoli, pigñolia, pignon, piñon, and pinyon nut)*
pistachio
praline
shea nut
walnut

Tree nuts are sometimes found in the following:

black walnut hull extract *(flavoring)*
natural nut extract
nut distillates/alcoholic extracts
nut oils *(e.g., walnut oil, almond oil)*
walnut hull extract *(flavoring)*

Keep the following in mind:

- Mortadella may contain pistachios.
- There is no evidence that coconut oil and sh nut oil/butter are allergenic.
- Many experts advise patients allergic to tree nuts to avoid peanuts as well.
- Talk to your doctor if you find other nuts no listed here.

Source: https://www.foodallergy.org/document.do

Cross reactions to different nuts

- Cross reactivity is a term used to describe when the protein allergen to which a person is sensitive is present in several foods, resulting in that person being allergic to those different foods.
- Some people react only to one type of nut, for example peanut. Others are known to react to different types of nuts. Even though peanut and tree nuts may look and taste similar, the proteins present in peanuts are scientifically very different to those in tree nuts. That means that one can be allergic to peanut only, a tree nut only, several tree nuts or any combination of peanut and a few tree nuts. Studies have shown that children allergic to peanut are more at risk of other food allergies, including to tree nuts.
- While certain cross reactivities are common (for example, cashew nut and pistachio), in general cross reactivity is difficult to understand and harder to predict.
- Most people with peanut or tree nut allergies are able to eat seeds without problem. Both coconut and pine nuts are seeds rather than nuts, and the majority of nut-allergic people can eat them.

Source: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nu

Peanut oil (arachis oil) and other nut oils

- The allergic component of the peanut is the protein, which the body identifies as an alien substance and thus overreacts to. On the other hand, oils contain fats rather than proteins.
- Researchers have concluded that **refined peanut oil will not cause allergic reactions for the overwhelming majority of peanut allergic individuals**, and if anyone does suffer a reaction it is likely to be mild. Refined peanut oil appears to carry a low or no risk.
- **Unrefined (crude) peanut oil should be avoided by peanut allergic people,** as the process by which the oil is made means that low levels of protein can contaminate the oil. Most other nut oils are unrefined and should therefore be avoided by people allergic to tree nuts.
- Some skin preparations may contain arachis (peanut oil). While some researchers have investigated whether there is a link between the use of these creams and the development of peanut allergy in some children, there is no actual evidence that this occurs.

Source: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nu

Foods to avoid

- **Oils -** Blended Oils, Unrefined / Gourmet Peanut, Arachis and Groundnut oils.
- **Biscuits -** All Biscuits, Almonds, Coconut biscuits, Macaroons, or Nut Oils.
- **Preserves -** Peanut Butter, Chestnut Puree, Chocolate and Hazel Spread, Praline Spread, Sweet Mincemeat.
- **Cakes -** Christmas Cake, Fruit Cake, Stollen, Marzipan containing cakes, Carrot Cake, Passion Cake, Cakes bought in Delicatessen, Cakes containing vegetabl oil.
- **Cereals -** Crunchy Nut Cornflakes, Fruit & Fibre, Muesli, Shreddies, Fruitful, etc.,
- **Dips & Sauces -** Pesto Sauce, Waldorf Salad.
- **Vegetarian Food -** Nut Loaf, Vegeburgers, Sausages. (Some products may be C Check Labels).
- **Desserts -** Nut Yoghurt, Nut Ice-creams, Cakes, Puddings containing nuts.
- **Sweets -** Nuts, Nougat, Nut Brittle, Halva, Snickers, Topic, Fruit & Nut, Bounty, Toblerone, Liquorice Allsorts, Pralines, Florentines. Always Check Labels.
- **Others -** Some Chinese Foods e.g. Satay.
  It is also advisable to avoid Creams and Shampoos containing nut extracts.

Source: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nu

Foods allowed

- **Oils -** Sunflower Oil, Olive Oil, Safflower Oil
- **Biscuits -** Home made biscuits made with known source of oil.
- **Preserves -** Jam, Marmalade, Honey.
- **Cakes -** Home made cakes containing known ingredients. Cakes guaranteed to be Nut free by manufacturers.
- **Cereals -** Weetabix, Shredded Wheat,Wheat, Cornflakes, Rice, Krispies etc.


Source: www.telegraph.co.uk

Source: http://www.allergyuk.org/peanut-and-tree-nut-allergy/peanut-and-tree-nu

Allergy to sesame and Other Seeds

- The most common type of allergy to seed is due to sesame. Many people allergic to sesame are also allergic to peanut and tree nuts.
- **Sesame Seeds** are extremely potent allergens capable of causing severe allergic reactions (anaphylaxis) in susceptible individuals. Increasing consumption of sesame might explain why more and more children in the UK are developing this once rare allergy. Sesame is becoming more common in the diet today and is used extensively in everyday foods, especially on bread products. Products that are not intended to contain sesame may have traces of the allergen due to manufacturing or marketing practices.
- **Hummus, Tahini and Halvah** are three very popular sesame products which are sometimes added to other foods. Other common sources of sesame include: bakery products, biscuits, crackers, breadsticks, rice cakes, bagels, pies and muesli. Some pre-packed delicatessen and processed foods contain sesame, for example: noodles, dips, soups, sausages, samosas, processed meats, vegeburgers, chutneys, salad dressings, mixed spices, spreads and confection bars. It is an unexpected ingredient in some herbals drinks, for example Aqua Libra. Unwrapped bread products and patisserie counters may be contaminated with sesame seeds.

Source: http://www.allergyuk.org/sesame-and-other-seeds/sesame-and-oth

Sesame oil

- **Sesame Oil** is used unrefined in food products and as a result it contains allergens and is hazardous to those allergic to sesame seed. It resists rancidity and is extremely popular with Oriental Chefs. Sesame oil (sesamum indicum) is also used in pharmaceutical products and cosmetics. Some allergy tested cosmetics contain sesame. Although refined sesame oil is used in these products, hypersensitive reactions (urticaria) have been reported.

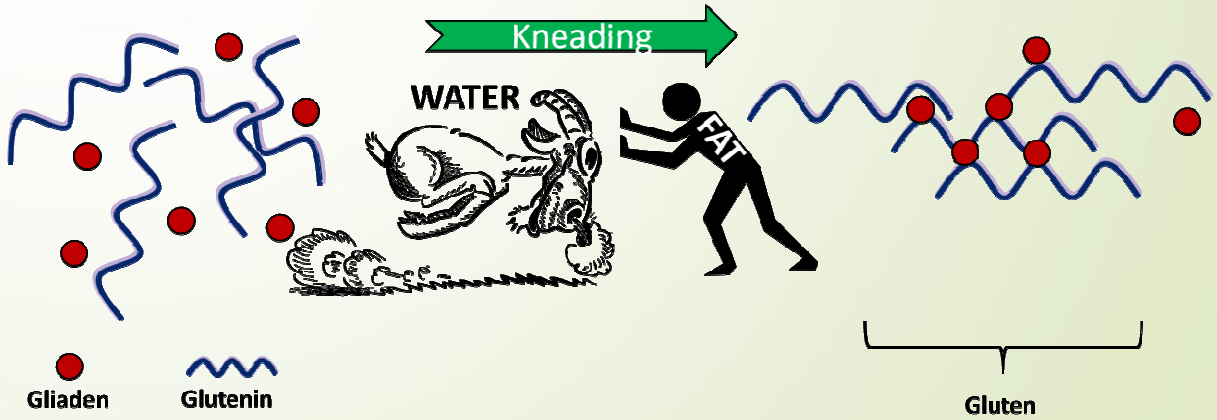
Sources: http://www.allergyuk.org/sesame-and-other-seeds/sesame-and-other-seeds
www.swansonvitamins.com

Allergy to Wheat and other Grains

- Many people report reactions to wheat, but not all reactions are true allergy. The most common reactions are:
  - Immediate type allergy to wheat
  - Delayed allergy reactions to wheat,
  - Delayed type allergy to gluten, known as Coeliac Disease
  - Intolerance to wheat

Immediate type allergy to wheat

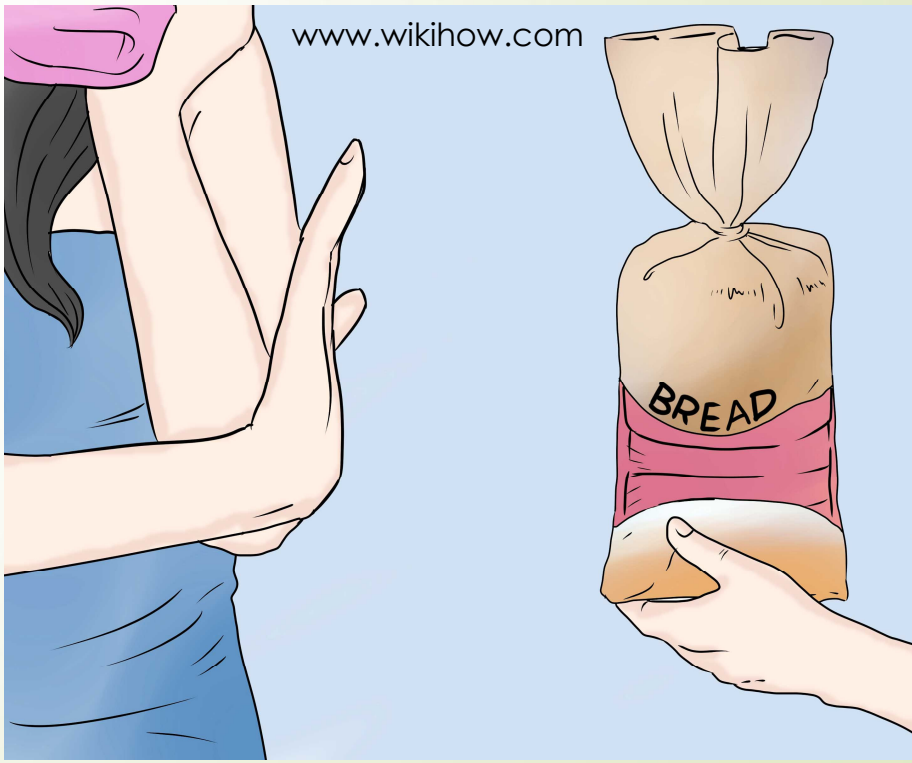
- True, immediate-type, wheat allergy is caused by an IgE reaction to one or more of the proteins found in the wheat grain. Wheat contains four types of protein:
  - Globulins
  - Albumins
  - Glutenins
  - Gliadins



Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-other-grains; sustainable-n

Allergic reactions and symptoms I.

- Allergic reactions to wheat and other cereals are most common in infants and usually resolve within the first few years of life.
- Symptoms of wheat allergy (IgE mediated) may include rhinitis, asthma ,urticaria, angiodema and conjunctivitis. Patients may also develop loose faeces, abdominal pain and worsening of eczema (which tend to occur within a few of hours of eating wheat or other cereals to which an individual is allergic to).



Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Allergic reactions and symptoms II.

- Some people only get symptoms to wheat after exercise. These reactions are often quite severe in nature. This is known as exercise-induced anaphylaxis to wheat. Symptoms, typically asthma-like, have also been reported in people working in bakeries, due to inhaling flour.
- Wheat and cereal allergy is occasionally seen for the first time in adults. Many suffer from allergic rhinitis to grass pollen (hay fever) as well.

Source: healthfoxx.com

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

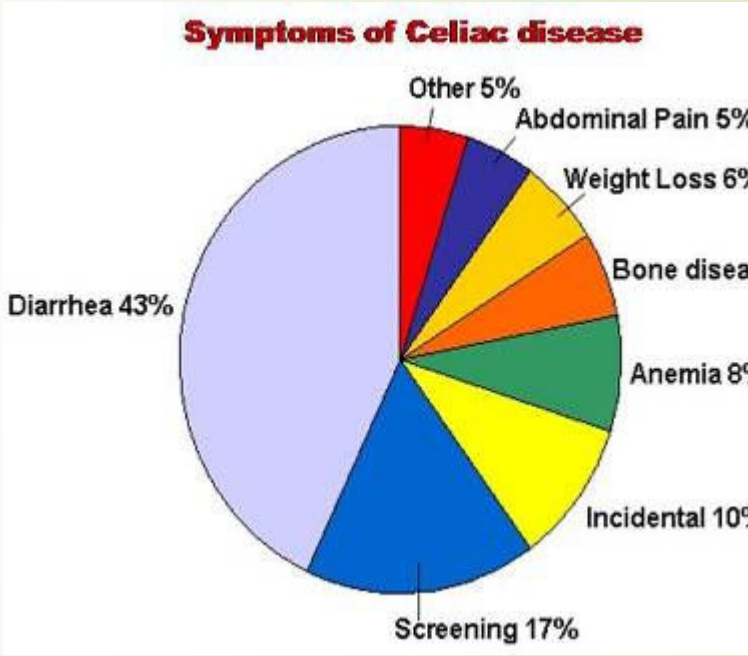
Coeliac Disease

- Coeliac disease is a lifelong intolerance to gliaden, part of the gluten proteins that are founds in the grain of wheat, rye and barley. Gluten gives elasticity to baked goods and the ‘chewy' texture of many breads and products.
- People with coeliac disease have antibodies to gliadin which cause an immune reaction resulting in damage to the small intestine. The antibodies which are involved are a different class to the IgE antibody that causes classical food allergy.
- There are a number of blood tests which can be used to help diagnose Coeliac disease. Skin tests cannot be used to look for the antibody in Coeliac disease.
- Strict adherence to a gluten-free diet brings complete resolution of symptoms.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

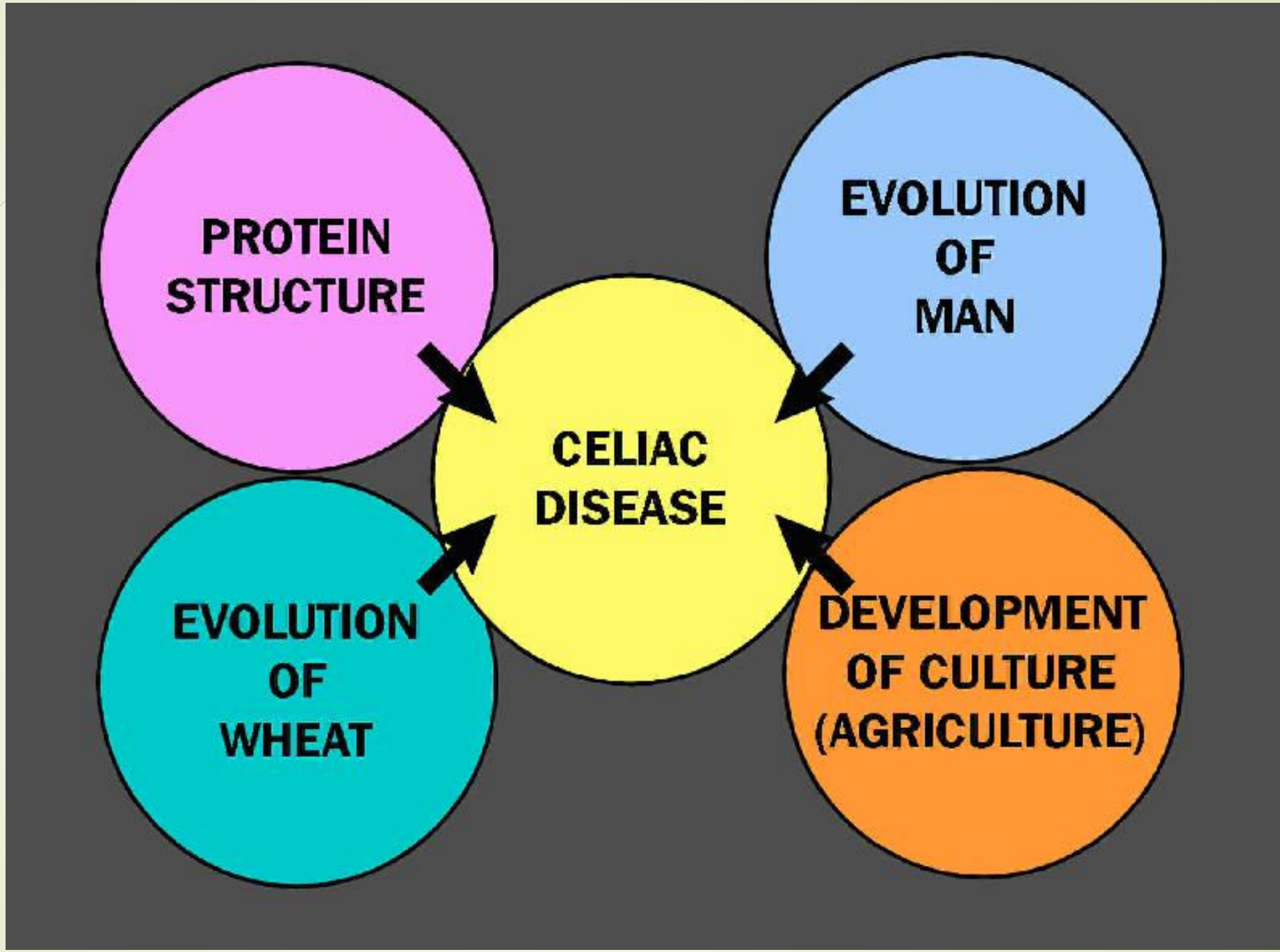
Symptoms of Coeliac Disease

- stomach pain, abdominal cramps, nausea and bloating
- altered bowel habit: often diarrhoea but sometimes constipation
- low energy and tiredness
- mouth ulcers
- a severe type of skin rash, called dermatitis herpetiformis
- poor weight gain in children; weight loss in some adults
- joint and bone pain, with or without osteoporosis
- infertility and repeated miscarriages
- nerve symptoms (such as pins-and-needles) which are thought to be due to the inflammation causing vitamin deficiencies



Source: www.knowabouthealth.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth



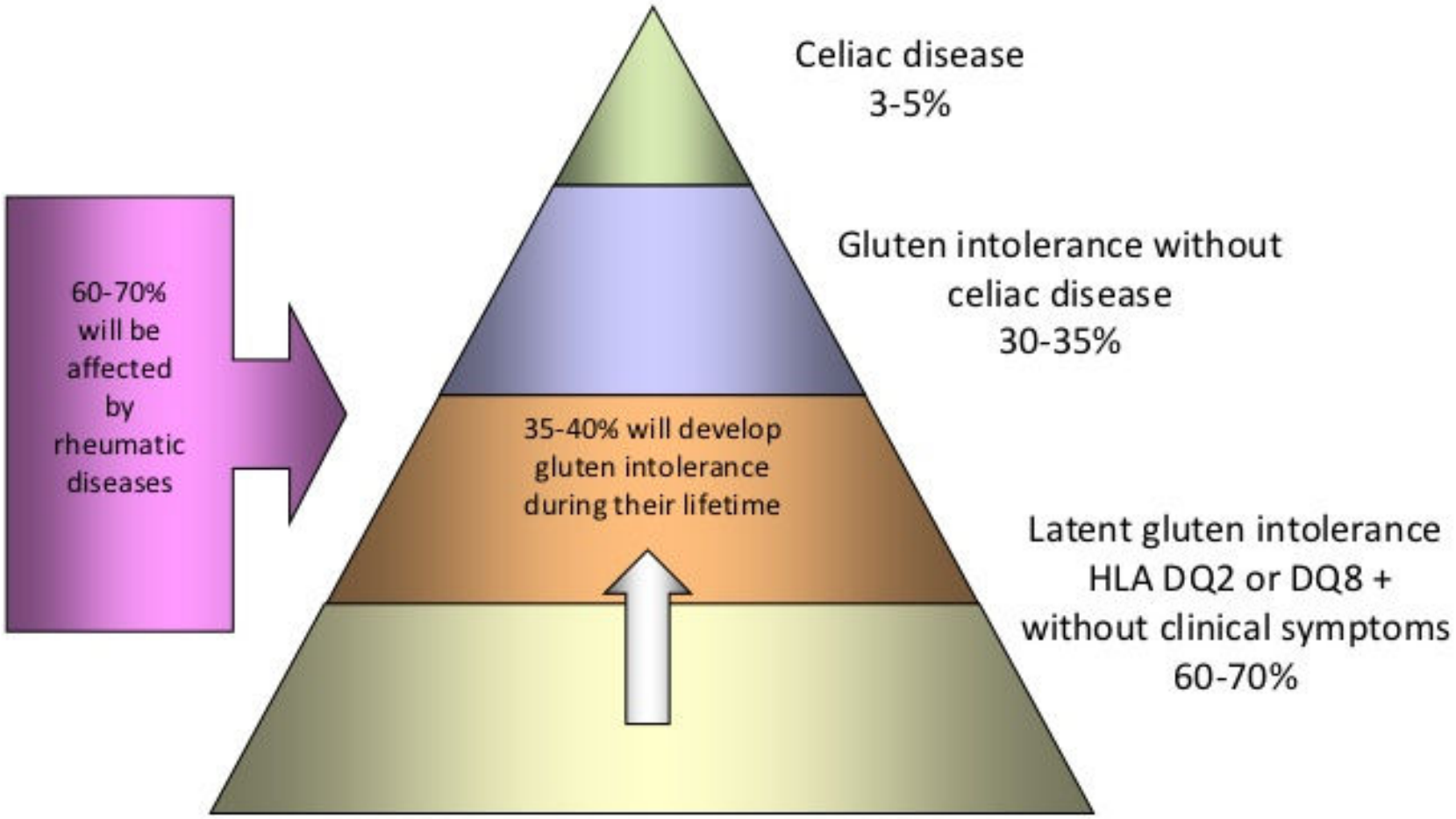
: wheat.pw.usda.gov

Wheat (gluten) intolerance

- Wheat intolerance differs from coeliac disease in that it is a poorly defined set of symptoms which vary considerably from one affected person to another. Symptoms tend to include abdominal discomfort, nausea, tiredness, bloating and altered bowel habit. It is not caused by an immune reaction, and while the symptoms can be very unpleasant, it cannot cause life-threatening reactions or consequences unlike true wheat allergies.
- People with wheat intolerance will still experience adverse symptoms from gluten free products, as the remaining part of the wheat will be affecting them. They may, or may not, be able to eat rye, barley and oats, that are part of the wheat family and, as with many other food intolerances, may be able to reintroduce wheat back into the diet after a period of elimination.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Spectrum of Gluten Intolerance



Source: www.slides

Foods containing, or possibly containing, wheat I.

- **Bread and baked foods -** All loaves, including pumpernickel, and rolls unless specifically stated; many "rye" and "corn" loaves contain some wheat; pitta, crumpets, muffins, tortillas, and tacos (should be corn but mostly wheat in UK), doughnuts, cakes, cookies, biscuits, crackers, croutons, packet snacks, rusks, waffles, pancakes, crepes, pizzas, pretzels, breadsticks, communion wafers, pasta, pastry, Yorkshire pudding, suet pudding, and many other puddings.
- **Cereals -** Most cereals will contain some wheat. The exceptions are porridge oats, corn flakes, rice krispies and granola. NB. always read the labels.
- **Flour and pasta -** All of these will contain some wheat unless stated to be wheat free or buckwheat, which is not from the wheat family.
- **Meat and Fish -** Burgers, rissoles, salami, sausages, corned beef, luncheon meat, liver-sausage, continental sausages, pates, meat and fish pastes and spreads, ham, fish and scotch eggs coated with breadcrumbs.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Foods containing, or possibly containing, wheat II.

- **Vegetable products -** Vegetable pates and spreads, vegetables coated in breadcrumbs, e.g. onion rings, vegetables tempura, tinned beans, (also tinned spaghetti, often grouped with vegetables), soups and tinned and packet snack or ready prepared foods.
- **Sauces and condiments -** Gravy, packet and jar and bottled sauces, casserole and "ready-meal" mixes, stock cubes and granules, ready prepared and powdered mustard, stuffing, baking powder, monosodium glutamate, some spice mixes (check label).
- **Desserts -** Most puddings, pastry, yogurts containing cereal, ice cream, pancakes, cheesecakes and others with a biscuit base.
- **Beverages -** Malted milk, chocolate, Ovaltine and other powered drinks. Beer, ale, stout, larger, Pils lager, whisky, malt whisky, gin, most spirits, many wines.
- **Confectionery -** Liquorice, chocolate, chocolate bars and most wrapped bars. Other sweets (check labels).
- **Medication -** Many prescribed and over the counter drugs contain wheat. Check with your pharmacist. Do not stop prescribed medication without discussing with your doctor.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Foods containing, or possibly containing, wheat III.

- Sometimes, a food label may not specify wheat but another form of wheat product:
  - Durum wheat, spelt (triticum spelta), kamut (triticum poloncium)
  - Couscous
  - Bran, wheat bran, wheat germ, wheat gluten
  - Farina
  - Rusk
  - Semolina, durum wheat semolina
  - Flour, wholewheat flour, wheat flour, wheat starch
  - Starch, modified starch, hydrolised starch, food starch, edible starch
  - Vegetable starch, vegetable gum, vegetable protein
  - Cereal filler, cereal binder, cereal protein.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Alternatives to wheat

- **Cereal & grain -** Maize (corn), maize(corn) flour, potato, potato flour, rice, rice flour, Soya beans, Soya flour, millet, buckwheat, sago, tapioca, quinoa, sorghum, arrowroot, gram (chickpea) flour, lentil flour. Chickpeas, beans and lentils are good fillers and can be added to soup. Wheat-free pasta is available in large supermarkets and health food stores.
- **Baking powder -** Bicarbonate of soda, cream of tartar.
- **Meat & fish -** All fresh and frozen meats and fish without coatings.
- **Dairy & Eggs -** Milk, cream, butter, margarine, eggs and unprocessed cheese.
- **Desserts -** Rice, sago or tapioca puddings, jellies, sorbets, gelatine or vegegel based desserts.
- **Seasonings, sauces & condiments -** Pure spices, salt, freshly ground pepper, French mustard. Home-made mayonnaise and dressings. Sauces prepared with cornflour or other alternative flour.

Source: http://www.allergyuk.org/allergy-to-wheat-and-other-grains/allergy-to-wheat-and-oth

Allergy to Fruit and Vegetables

- Relatively uncommon, compared to other food allergies.
- Symptoms usually develop within minutes of the exposure, but occasionally can tak up to 1-2 hours. The most common groups of fruits or vegetables causing reactions are:
  - Members of the rosaceae family: apple, pear, cherry, peach, and plum
  - Members of the cucurbitaceae family: cucumber, melon, watermelon, zucchini, pumpkin
  - Kiwi fruit is also a common cause of allergic reactions, and may result in more severe reactions than other fruits. Some people with allergy to kiwi fruit also react to banana, avocado and latex, due to cross-reactivity in the protein which causes the allergy.
- Many fruit allergies are due to proteins called **profilins**, which are often found in trees, grass and weed pollens as well as many fruits and vegetables. Around one third of pollen allergies are due to profilins, and people with hayfever to profilins ma find that they experience symptoms after eating melon, watermelon, citrus fruits, tomato, and banana.
- Fruit and vegetable allergy is generally more common in older children and young adults. Although there is limited research into this type of allergy, most people with a fruit or vegetable allergy tend to continue to be allergic as they grow older. The on exception is **potato** allergy in young children, which tends to resolve with time.

Source: http://www.allergyuk.org/allergy-to-fruit-and-vegetables/allergy-to-fruit-and-ve

Oral allergy syndrome

- Also known as Pollen Food Syndrome (PFS)
- Some people experience itchiness in their mouth and throat (sometimes with mild swelling) immediately after eating fresh fruit or vegetables. This is known as oral allergy syndrome.
- Oral allergy syndrome is not a true food allergy. It is caused by allergy antibodies mistaking certain proteins in fresh fruits, nuts or vegetables for pollen.
- Oral allergy syndrome generally does not cause severe symptoms, and it is possible to deactivate the allergens by thoroughly cooking any fruit and vegetables.

Source: http://www.nhs.uk/conditions/food-allergy/Pages/Intro1.aspx

Avoidance of oral allergy

- Usually, you will only need to avoid raw foods; as cooking destroys the allergens you need not worry about eating well-cooked foods that cause reactions when raw.
- Some people find that different varieties of fruits or vegetables can be tolerated, so it is worth checking to see whether you can tolerate one type of apple, even if another type causes symptoms.
- However, if you have had severe reactions such as breathing difficulties or shock, you should avoid the foods in any form. Similarly, if you have another type of plant food allergy, such as an allergy to nuts or to lipid transfer proteins, you also need to avoid any form of the food that has provoked symptoms.

ces: http://www.allergyuk.org/oral-allergy-syndrome/oral-allergy-syndrome; preachersinstitute.com

Cross-Reactivity of Pollen and Food Allergens

- A severe allergy to pollen can indicate that an individual may be susceptible to developing the oral allergy syndrome or anaphylaxis when eating certain foods. Such reactions are due to profilins, homologous proteins found both in pollens and plants and fruits. Oral allergy syndrome also has been reported following ingestion of crustaceans by individuals who are sensitive to house dust mites.
- **Typical cross reactivity associations include**:

Inhalant Allergen	**Food Allergens**
Birch pollen	Apple, raw potato, carrot, c hazelnut, pear, peach, plun cherry
Mugwort pollen	Celery, apple, peanut, kiwi carrot, parsley, spices (fenn coriander, aniseed, cumin)
Ragweed pollen	Melons, e.g., watermelon, cantaloupe, and honeydev bananas
Latex	Avocado, kiwi fruit, chestnu papaya, banana
Chironomidae	Crustaceans (shellfish)

Source: http://www.worldallergy.org/professional/allergic_diseases_center/foo

Alcohol Allergy

- True allergy to alcohol, involving the allergy-producing IgE antibody, is extremely rare, although a few cases of skin rash reactions have been recorded. In people with true alcohol allergy, as little as 1ml of pure alcohol (equivalent to 10ml of wine or a mouthful of beer) is enough to provoke severe rashes, difficulty breathing, stomach cramps or collapse.
- **It is important to remember that alcohol can increase the likelihood of severe allergic reactions (anaphylaxis) to other foods.** Alcohol can exacerbate underlying conditions such as asthma, urticaria and rhinitis. Allergic people may get wheezy, headaches and skin flushes.
- An intolerance may arise when the body is lacking an enzyme that is needed to properly digest and eliminate a food or substance (or in this case, the alcohol itself). If the alcohol molecule cannot be effectively dealt with by the body, it can cause unusual symptoms to occur.
- Alcohol also increases the permeability of the gut, which allows more food molecules into the body. This may explain the reactions of mildly food sensitive individuals who may not react to the food alone but only when it is combined with alcohol.

Source: http://www.allergyuk.org/alcohol-allergy/reactions-to

Major causes of alcohol allergy

- **Histamine -** This is present in many alcoholic drinks, particularly red wines and ca cause headache, flushing, nasal symptoms, gut symptoms or asthma. Some peo are particularly intolerant of histamine because of a deficiency in the breakdow and elimination of histamine from the body.
- **Yeasts -** Yeasts are a possible cause of a true allergic reaction to alcoholic drink However studies show that there are only low levels of yeast allergens present in alcoholic drinks.
- **Sulphites/Sulphur Dioxide -** Sulphur dioxide is particularly common in home brew beers and wines as sodium metabisulphite. This is used in the cleansing of equipment and remains in very high levels and resulting brew. Around 1 in 10 asthmatics are sensitive to sulphites and may have a wheezy reaction to alcoho drinks. Rashes and anaphylactic reactions are rare.
- **Additives -** e.g. tartrazine, sodium benzoate - can trigger urticaria and asthma.
- **Plant-Derived Allergens -** The **fruit** (grapes, apples, juniper berries, coconuts, and oranges), flavours (hops) or grain (malt) from which the drink is made can also b the cause of a true allergic reaction, although fruit and other plant-derived allergens are mostly destroyed by processing. One unusual potential source of trouble is **fungal spores** (mould) from the corks of wine bottles. Sensitivity to this fungus is rare.

Source: http://www.allergyuk.org/alcohol-allergy/reactions-to

In the factory

How to manufacture safe food for everyone

Source: moshimonsters.wikia.com

Staff

- All staff (including temporary staff and contractors) involved in handling ingredients, equipment, utensils, packaging and products should be aware of food allergens and the consequences of them being eaten by anyone with a food allergy. All staff should be trained in avoiding cross-contamination of foods by the major food allergens.
- Appropriate procedures on the control of allergens should be available and/or visible in the reception and production areas so that staff and visitors are aware of them.
- Such procedures should include information on:
  - potential allergen cross-contamination situations
  - handwashing
  - clothing requirements
  - rework
  - waste control
  - cleaning procedures
  - dedicated equipment

Source: http://allergytraining.food.gov.uk/english/in-the-factory/s

Pay attention I.

- **Potential allergen cross-contamination situations -** All staff (including temporary staff and contractors) involved in handling ingredients, equipment, utensils, packaging and products should be aware of food allergens and the consequences of their ingestion by sensitive individual They should be trained in avoiding cross-contamination of foods by the major food allergens.
- **Handwashing -** Posters encouraging staff to wash their hands after working with allergenic materials should be placed in areas where allergenic products are manufactured. Text could include: 'Always wash your hands thoroughly after coming into contact with allergenic products to avoid cross-contamination'.

Source: articles.chicagotribune.co

Source: http://allergytraining.food.gov.uk/english/in-the-factory/s

Pay attention II.

- **Clothing requirements -** To ensure that cross-contamination does not occur staff working in the area manufacturing allergenic ingredients must wear the correct uniform.
- **Cleaning procedures -** Very small amounts of some allergens, such as nuts, milk or eggs, can cause adverse reactions, including potentially fatal anaphylactic shock. Therefore, thorough cleaning that is effective in reducing the risks of allergen cross-contamination should be used. Particular food materials (for example powders) present significant cleaning problems, and any relevant industry guidance where this has been developed, should be followed. Adequate procedures must be in place for cleaning both production and packaging machinery. Where adequate cleaning is not possible the risk of allergen cross-contamination should be assessed and advisory labelling used, if appropriate.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/s

Pay attention III.

- **Rework -** Rework is the material left over from production, which is often reused to make the same or similar product.
- **Waste control -** Care should be taken when disposing of allergenic ingredients/products. Allergens should be sealed in containers and removed from the manufacturing area to avoid being mixed with non-allergenic ingredients/products.
- **Dedicated equipment -** Some manufacturers might choose to dedicate a production line or equipment to products that are free from particular allergens e.g. nut or wheat free. These production lines could still be used to make a number of different products as long as they do not contain that particular allergen.
  - Dedicated equipment could include balances, sieves, packing machines, storage bins or storage areas.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/s

Ingredients I.

- **Ordering from suppliers**
  - Food businesses should establish an appropriate and proportionate policy for assessing the allergen status of ingredients that they use in their own manufacturing processes and premises, and for assessing ingredients used by their suppliers or co-packers, if appropriate.
  - Manufacturers should ensure that materials are ordered against a clear specification and that they ask appropriate questions of their suppliers.
- **Allergens found in raw materials**
  - Manufacturers need to be aware of the presence of the major allergens in all raw materials, particularly the potential for allergen cross-contamination from manufacturing and handling activities on the raw material suppliers' sites, as well as earlier in the food chain during harvesting and transport.
  - This may be through audits or from information provided by suppliers.
  - Raw material suppliers (and their agents) should be aware of the hazards arising from contamination by allergens and conform to the manufacturers purchase specification.
  - However, commodity raw material suppliers should only use allergen warning statements on products such as spices and grains, based on an assessment of the risk of cross-contamination.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/ingredie

Ingredients II.

- **Clear labelling**
  - Ingredients should be fully described in specifications. For example, avoid the use of generic terms such as 'vegetable' oils and fats by using specified terms such as corn or rapeseed oil, especially where those allergens are listed in Annex II of EU Regulation No 1169/2011.
- **Pre-packed foods**
  - When listing the ingredients, food business operators must emphasise the name of the substance/product in the ingredient list only.
  - The new rules will mean that an allergen warning statement such as 'contains x...' statement to repeat allergen ingredients information can no longer be provided. Information about allergenic ingredients will be located in a single place i.e. in the ingredients list. The use of an allergen statement to signpost and explain how allergen information is emphasised within the ingredients list is permitted. For example: *Allergy Advice: For allergens, see ingredients in bold or Allergy Advice: For allergens including cereals containing gluten, see ingredients in* ***bold***.
  - The use of precautionary allergen statements such as 'may contain...' to indicate the possible presence of an allergen due to cross-contamination has not been affected by the EU FIC and its use will be permitted.
- **Sieving**
  - If allergenic ingredients are sieved, then the sieving unit should either be dedicated or thoroughly cleaned after sieving allergenic ingredients.
  - If possible, allergenic ingredients should be sieved after all other raw ingredients have been sieved for the day.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/ingredie

Packaging I.

- **Design of packaging**
  - When designing packaging do consider visibility, clarity and legibility, contrast of text and accuracy (for example the needs of consumers with visual deficiencies such as colour blindness).
- **Dedicated packaging**
  - Incorrect packaging and/or labelling is a significant cause of allergen related product recalls. Therefore, where possible, consideration should be given to the provision of dedicated packing lines to reduce the risk of mislabelling. By law, food businesses must notify the Agency (and the local authority where the business is based) if they need to withdraw products from the market, which don't comply with food safety requirements. Businesses and local authorities can use online form to notify the Agency.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/packag

Packaging II.

- **Bar code scanners**
  - If it is not possible to have dedicated packaging lines for allergenic products, then procedures for checking that the correct labels are applied to products should be implemented and audited regularly so that accurate information is provided to allergic consumers. Checks should be in place between processing and packing to ensure the correct packaging is used, for example by using bar code scanners to trace the product through the production process.
- **Remove packaging after each run**
  - There should be systems to ensure packaging is removed at the end of a run, including any packaging that may be in the wrapping machine. This will help to avoid packaging mix-ups when the product to be packed is changed and, therefore, reduce the number of instances in which misleading information is passed to the consumer.
- **Multipack products**
  - It is important to ensure that the correct outer packaging is used for multipack products and that allergen information appears on, or is visible through, both the inner and outer wrappers.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/packag

Cleaning I.

- **General cleaning**
  - Very small amounts of some allergens, such as nuts, can cause adverse reactions, including potentially fatal anaphylactic shock. Therefore, thorough cleaning that is effective in reducing the risks of allergen cross-contamination should be used.
  - Particular food materials (for example powders) present significant cleaning problems and any relevant industry guidance, where this has been developed, should be followed. Adequate procedures must be in place for cleaning both production and packaging machinery. Where adequate cleaning is not possible, then the risk of allergen cross-contamination should be assessed and advisory labelling used, if appropriate.
  - Where adherence to a cleaning regime is part of a separation system, it should be validated as 'fit for purpose' and compliance should be monitored.
- **Swab testing**
  - Cleaning practices that are satisfactory for hygiene purposes may not be adequate for removing some allergens and their validity for such a purpose should be assessed (for example via residue/environmental swab testing). Equipment may need to be dismantled and manually cleaned to ensure hard to clean areas are free from allergen residues.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/clear

Cleaning II.

- **Compressed air cleaning**
  - Care is needed to ensure that the cleaning of one line does not contaminate another (using compressed air cleaning, for example), or an area that has already been cleaned (by cleaning dry mix areas from the top down).
- **On the spot cleaning for spillages**
  - Any spillages that occur during production, storage and transportation should be cleaned up immediately to ensure that there is no subsequent allergen cross-contamination. Where known allergen contamination has occurred, the contaminated material should be labelled and physically moved away from the non-contaminated ingredients and work-in-progress.
- **Dismantling equipment**
  - Equipment might need to be dismantled and manually cleaned to ensure hard to reach areas are free from allergen residues. At this point, consideration should be given to maintenance activities, such as the use of dedicated tools or adequate cleaning procedures where tools are not dedicated.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/clear

Storage

- **Storage area**
  - Steps should be taken to ensure that non-allergenic ingredients do not come into contact with allergens in subsequent handling and storage. Allergenic raw materials should be stored in clearly identified areas (for example using colour-coded boxes or the demarcation of storage areas using painted lines on the floor).
- **Storage containers**
  - Where allergenic raw materials are de-bagged or de-boxed, they should, if possible, be placed in dedicated lidded and labelled containers and made easily identifiable. Such containers should not be used for storage of any other raw materials.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/storage-interac

Allergen control systems

- Allergen control systems should be monitored and reviewed to provide assurance that they are working correctly. This is done most effectively by an audit or 'health check' of the system. In addition to routine checks on manufacturing operations, an overall 'health check' can find any weaknesses in the system and then corrective actions can be taken. A key benefit of auditing the system is to provide evidence of due diligence in managing allergens.
- The 'health check' should, as a minimum, include:
  - review and verification of the hazard analysis and hazard management system
  - product and ingredient specifications
  - operating procedures
  - cleaning procedures
  - training records – demonstration of competence
  - analysis of customer complaints
  - good Manufacturing Practices

Source: http://allergytraining.food.gov.uk/english/in-the-factory/monitoring-re

Product and ingredient specifications

- Manufacturers need to be aware of the presence of the **major allergens** in all raw materials, particularly the potential for allergen cross-contamination from manufacturing and handling activities on the raw material suppliers sites, as well as earlier in the food chain during harvesting and transport. This might be through audits or from information provided by suppliers.
- Manufacturers should ensure that materials are ordered against a **clear specification** and that they ask appropriate questions of their suppliers. Raw material suppliers (and their agents) should be aware of the hazards arising from contamination by allergens and conform to the manufacturers purchase specification. However, commodity raw material suppliers should only use allergen warning statements on products such as spices and grains, based on an assessment of the risk of cross-contamination. Scientific work currently underway to establish meaningful allergen thresholds and develop appropriat testing methodologies will help in making such assessments.
- Ingredients should be fully described in specifications, for example, avoid the use of generic terms such as vegetable oils and fats, by using specified terms such as peanut or rapeseed oil, especially where those allergens are listed in EU Food Information for Consumers Regulation (EU FIC) No.1169/20111.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/monitoring-re

More monitoring and review

- **Training records**
  - Manufacturers should ensure that their employees receive relevant and structured ongoing training so they remain aware of food allergens and their consequences (see staff). Such training should explain the facts as well as highlighting the company's good manufacturing practice principles and effective food safety system. Manufacturers should keep certificates of registration, qualifications and documents to record training completed by their employees.
- **Analysis of customer complaints**
  - Customer complaints should be investigated and changes made where necessary. Manufacturers should keep a record of these customer complaints and show what action was taken as a result.
- **Good manufacturing practices**
  - Most food producers already employ good manufacturing practices (GMP) to ensure that they are able to produce food safely. GMP requires appropriate manufacturing operations, effective food safety systems (using HACCP-based principles), and quality assurance systems, as well as a commitment and discipline to ensure products meet food safety, quality and legal requirements.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/monitoring-re

Separating allergen-containing product

- Where it is not possible to have dedicated production facilities, there are a number of ways of separating the production of allergen-containing products from those that do not contain the allergen.
- These can include:
  - using different areas of the factory
  - using physical barriers between the production lines
  - using dedicated equipment
  - minimising unnecessary movement of materials
  - appropriate scheduling of production runs, including appropriate cleani of equipment between production runs
  - controlling rework, ensuring that residual material containing an allergen not reworked into an allergen-free product
  - separating the air supply, where this is practical

Source: http://allergytraining.food.gov.uk/english/in-the-factory/produc

About production I.

- **Dedicated equipment**
  - Consideration should be given to the dedication of equipment in production facilities. For example, weighing equipment, scoops and utensils should be dedicated and the weighed product should be placed in dedicated, lidded and labelled containers.
  - Consideration should also be given to colour coding equipment, although this may not be practical where a number of allergens are being handled and colour coding is used already for the identification of cooked or raw ingredients or vegetarian products.

forum.bodybuilding.c

Source: http://allergytraining.food.gov.uk/english/in-the-factory/produc

About production II.

- **Avoiding cross-contamination**
  - If it is not possible to dedicate areas or equipment, it is important to avoid cross-contamination between these and other operations, including controlling the movement of equipment and personnel.
  - Physical separation should be considered for 'high risk' products (such as milk in bab foods) and the implications of changes to the factory layout should be assessed.
  - Consideration should also be given to the ease of cleaning equipment. Avoiding the crossover of production lines and allowing adequate space for effective cleaning w help minimise the risk of allergen cross-contamination.
- **Air supply**
  - It is recommended that, wherever practically possible, consideration should be give to the implications of a common air supply (for example, milk powder used elsewhe in a factory may enter the air supply and then be deposited on the surface of dairy-free desserts).
  - Where factories produce nut products and nut-free products, dedicated air conditioning/extraction fan systems could be used to contain nut dust, or positive pressure could be used in nut-free rooms to prevent nut traces entering the room in the air.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/produc

About production III.

- **Manufacturing schedules**
  - When scheduling the manufacture of allergenic products, there should be a consideration of whether it is possible for products not containing the allergenic food to be manufactured first, with products containing the allergenic ingredients made at the end of a production run.
  - Additionally, long runs of allergenic products should be undertaken wherever possible to minimise changeovers, and these should be followed by a major clean down.
- **Rework**
  - Rework that contains allergenic ingredients should be reworked only into products that contain that allergen (for example chocolate that contains nuts or nut fillings should only be reworked into other nut-containing chocolates).
  - Rework should be clearly identified in order for it to be tracked in the manufacturing process. Oils used for cooking allergenic foods (for example nuts, shellfish and fish) should not be used subsequently for cooking products not containing the allergen.

Source: http://allergytraining.food.gov.uk/english/in-the-factory/produc

On the label

Source: allergiclivi

- Very small amounts of some allergens, such as nuts, can cause adverse reactions in people with food allergies, including potentially fatal anaphylactic shock. It is therefore important that food products are clearly labelled and adhere to industry guidelines to ensure that consumers can make informed decisions when purchasing foods that might contain allergenic ingredients.
- **Ingredient lists**
  - The new EU FIC requirements mean allergenic ingredients need to be clearly emphasise within the ingredient list. Ingredients are listed in descending order of their weight, with th largest ingredient first. If an ingredient is mentioned in the name (such as chicken in chicken pie), is depicted on the label, or is usually associated with the food (as lamb is with shepherd's pie), the amount contained in the food will be given as a percentage.
  - Where an ingredient is made up of other ingredients (compound ingredients), with a fe exceptions, these must also be declared in the ingredients list.

Source: http://allergytraining.food.gov.uk/english/on-th

'Gluten free' or 'very low gluten' claims

- About 1% of people in the UK are intolerant to gluten – this condition is also known c coeliac disease. People with coeliac disease need to avoid foods that contain glut to prevent potentially serious health effects. This means labelling claims about glute foods are very important. Foods that contain gluten include wheat, rye and barley.
- The European Commission compositional and labelling standards (Commission Regulation (EC) No. 41/2009) establish levels of gluten for foods that makes a claim be either 'gluten-free' or 'very low gluten'. These levels are:
  - 'gluten-free' – 20 parts or less of gluten per million.
  - 'very low gluten' – 100 parts or less of gluten per million. However, only foods with cereal ingredients that have been specially processed to remove the gluten may make a 'very lo gluten' claim.
- Manufacturers can only use the phrase 'gluten-free' if they can demonstrate that, when tested, their product is 20 parts or less of gluten per million. They will also be required to demonstrate that any products claiming to be 'very low gluten' comply the legislation.
- Manufacturers producing foods with no deliberate gluten containing ingredients, b due to the high risk of gluten cross-contamination, will be unable to label foods as 'gluten-free' or 'very low gluten'. However, if steps have been taken to control glute cross-contamination, these manufacturers may be able to indicate which foods do contain gluten-containing ingredients. This allows people with coeliac disease to m informed choices about the food they eat based on their individual levels of sensitiv

Source: http://allergytraining.food.gov.uk/english/on-th

Dining tips and strategies

- Select a restaurant or food service establishment carefully. Do a little research about the type of food a restaurant offers before going there.
- Speak up! In addition to telling your server, always ask questions and inform the manager or chef of your allergy.
- Order simply prepared foods; avoid sauces and dishes with mystery ingredients.
- If a mistake is made with your order, keep the incorrectly prepared dish at your table to ensure that kitchen staff prepare a new meal rather than simply removing the food allergen.
- Thank the restaurant staff members for the attention they gave to your food allergy concerns, especially if they go out of their way to help you.
- Always carry your medicine!

Source: https://www.foodallergy.org/document.do