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References
This booklet has been prepared by the Norwegian Asthma and Allergy Association’s (NAAF) chief advisor for food allergies Helle S. Grøttum and advisor Ellen Bugge, in collaboration with Ragnhild Halvorsen MD. We have drawn much inspiration from Australia’s guidelines and fact sheets for food service retailers, which have been prepared by the Victorian Government, Department of Human Services.

We owe a debt of gratitude to the Swedish project “Hurra – en allergisk gäst!” (Hurrah – an allergic guest!), which inspired NAAF to pursue a similar project in Norway. We also extend sincere thanks to the foundation ExtraStiftelsen Helse og Rehabilitering for funding the project. Millum (www.millum.no) and Wilberg AS (www.wilberg.no) have generously funded the English translation.

The booklet’s aim is to assist food business operators – restaurants, cafés, delicatessens, caterers, canteens, bakeries, mobile or fixed food kiosks and all other businesses that prepare and sell non-prepackaged foods to final consumers – in their preparations for implementing Regulation (EU) No. 1169/2011 On the Provision of Food Information to Consumers. The information in this booklet concerns informing customers about allergens. The idea underlying the new regulation is to make it easier for people who have food hypersensitivity to be able to eat out, and to enable them to avoid the foods their bodies cannot tolerate. For those who are the most allergic, certain ingredients, even in very small amounts, lead to severe allergic reactions – in the worst cases, they can be life-threatening. The only treatment for people with food allergies is to avoid eating foods that contain the ingredients to which they are allergic.

We hope this booklet is informative and meets the food service industry's need to prepare for implementing the new regulation on the proper handling of allergens.

Please consult the Norwegian Food Safety Authority's (Mattilsynets) webpage for more information on the new regulation. There you can find practical information on providing written information about allergens.

December 2014
New rules
As a consequence of European Union (EU) Regulation 1169/2011,* Norway will implement a new regulation on food information to consumers. This regulation will come into effect on 13 December 2014. The regulation is important for food business operators because it stipulates the kind of information that is required by law to be given to consumers about unpackaged food, that is, food served over a counter, in restaurants and cantinas or on airplanes, through catering services and so forth.

After 13 December 2014, it will be obligatory to inform customers about food ingredients that can cause hyper-sensitive reactions. The Norwegian Food Safety Authority (hereafter called Mattilsynet) states that this information must be given directly and in writing to consumers. Consumers should be able to read the information without needing to ask employees. The information can, for example, be printed on the menu or on a blackboard or poster. All food business employees must also know this information. Furthermore, procedures must be established which make it possible to document that all the food information is correct. This is best achieved through written documentation.

The idea underlying the new regulation is that consumers have the right to know about any ingredients to which they might react and which could possibly make them sick. According to the new regulation, there are 14 ingredients (allergens) which food business operators are required by law to inform customers explicitly about.

Such declarations are already required for prepacked food, and they will now also be required for non-prepacked food.

The responsibilities of customers and food business operators
Because people can become sick or have unpleasant health-related reactions when they eat food their bodies cannot tolerate, it is important for food business operators to accommodate for customers who have hypersensitive reactions. For people with food allergies, even small amounts of an ingredient which their bodies cannot tolerate can result in severe reactions – in the worst cases they can be life-threatening.

All customers have a responsibility to avoid the foods their bodies cannot tolerate, and to evaluate what is safe for them to eat. A customer must ask what ingredients are in the food he or she buys. At the same time, the food business operator is responsible for following the regulation and taking the guest seriously. The food business operator must be able to communicate what the food in fact contains and how it is made. In no way whatsoever should employees guess or guarantee that a food lacks a certain ingredient without being absolutely sure. The best practice is to explain how the food is prepared and to allow customers themselves to evaluate whether they believe it is safe to eat.

Good business
There is an increasing number of people with allergic-hypersensitive reactions to foods, and even more people who want to avoid certain foods for religious, ethical or health-related reasons. Food business operators must be proactive in accommodating the increasing needs of such customers. People with allergies or other types of hypersensitivity who feel they receive good information about the food they buy, and who have positive experiences, will become faithful customers and good ambassadors for your business.

* The European Union (EU) Regulation No. 1169/2011 on the Provision of Food Information to Consumers is translated to Norwegian as Matinformasjonsforskriften nr. 1169/2011, matinformasjon til forbrukere.
When children or adults react with hypersensitivity to food, this can be an allergic or a non-allergic reaction. An allergic reaction we call a food allergy, and a non-allergic reaction often involves intolerances or other types of hypersensitivity. In both cases, the human body reacts ‘abnormally’ to food ingredients which most people tolerate. There is no medication for preventing hypersensitive reactions. The treatment is simply to avoid which triggers the adverse symptoms and to alleviate the symptoms.

Food allergies
In the case of a food allergy, the body’s immune system reacts to proteins in the food and produces inflammation-promoting substances in the body. The proteins are experienced as ‘foreign’ or ‘dangerous’ invaders, and the body responds with allergic reactions. There is no cure for food allergies. If a person has a food allergy, he or she must avoid eating the allergy-causing foods. Even tiny amounts of an allergen can trigger life-threatening allergic reactions in some people. If a person has eaten something his or her body cannot tolerate, medicines such as antihistamines can reduce the allergic reactions, but this will not remove the allergy.

Non-allergic hypersensitive reactions to food
In the case of non-allergic hypersensitive reactions to food, the immune system is not normally involved; the body reacts because it has problems digesting a certain ingredient.

The most common diagnosable hypersensitive reactions in Norway are lactose intolerance and coeliac disease.

If people are lactose intolerant, this means they are unable to digest and absorb lactose (the sugar in milk) because their gastrointestinal system lacks a sufficient amount of the enzyme lactase. Lactase splits lactose into glucose and galactose, which can then be absorbed by the small intestine. Un-split lactose cannot be absorbed and continues on through the digestive tract. This may result in symptoms such as diarrhea, gas, and in some cases nausea and vomiting. Amongst ethnic Norwegians, there are relatively few cases of lactose intolerance (about 2-3 percent), but the incidence rate increases markedly for people with genetic backgrounds from Asia, Africa and Southern Europe. Lactose intolerance is also more widespread amongst the Sami and the Finish. Lactose intolerance often emerges as a result of other digestive-tract illnesses (coeliac disease, allergy to cow’s milk and similar allergies) and after stomach-intestinal infections. In such cases, the intestines will once again be able to digest lactose after the intestinal illness is diagnosed and cured.

Coeliac disease (gluten intolerance) is an autoimmune disorder caused by a permanent intolerance to the gluten proteins in wheat (including spelt), barley and rye, and in oats that are cross-contaminated with glutinous grain. The lining (villi) of the small intestine is damaged when it comes into contact with gluten, thus reducing the intestine’s ability to absorb nutrients. Coeliac disease has often been discovered in children on account of malnutrition or stunted growth. Many sufferers also experience constipation, stomach-aches and diarrhea. Treatment involves a lifelong, strict elimination of all grain types that contain gluten. When gluten is removed from the diet, the small intestine’s lining is repaired and normal absorption of nutrients resumes. Research suggests that about 1-2 percent of the population have coeliac disease, even though far fewer people have been officially diagnosed.
Some substances in food can act as irritants, causing reactions even though no allergy is involved. Such reactions can arise through eating or simply touching a food. This has been known to happen with, for example, citrus fruit, tomatoes (also ketchup), kiwi fruit, strawberries and strongly spiced food.

Many reactions to food, however, are of a more diffuse nature: the intestines can react without anyone being able to point to any systematic deviation in what a person eats. This is the case with “irritable bowel syndrome”, which at least 10 percent of adults experience.

There is no treatment that can eliminate hypersensitive reactions to food; each person must discover his or her own level of tolerance for various foods. For example, people who are lactose intolerant can often tolerate a small amount of lactose (the sugar in milk) before their bodies react, but the amount will vary from person to person.

Allergic cross-reactions
In addition to the hypersensitive reactions mentioned above, there are such things as allergic cross-reactions to food. Cross-reactions can arise between different foods (e.g., between peanuts and chickpeas or garbanzo beans), or between pollen and foods (e.g., between birch pollen and apples). This is why someone who is allergic to birch pollen can have an allergic reaction when eating a food that contains proteins resembling those in birch pollen. A typical example is a person who has become allergic to birch pollen, who then eventually experiences symptoms in the mouth when eating nuts, apples and/or carrots.

Overview of allergic reactions

Allergic reactions to food can happen suddenly or emerge gradually. They can arise within a few minutes to several hours, or even arise a few days after eating a certain food. The reactions can be mild or serious and can affect several bodily organs simultaneously: the skin, eyes, mouth/stomach/intestines, respiratory system, cardiovascular system and blood circulation.

Serious, life-threatening allergic reactions – anaphylaxis:
- Problems breathing
- Swollen tongue
- Swelling or tightness in the throat
- Difficulty talking, harsh-sounding voice
- Wheezing or persistent cough
- Persistent vomiting or diarrhea
- Loss of consciousness and/or fainting
- Pale and limp (young children)

Mild to moderate allergic reactions:
- Tingling or scratchiness in the mouth
- Hives, welts, skin reactions and/or redness on the skin
- Swelling of the face, lips and eyes
- Sneezing/runny nose
- Eye symptoms
- Diarrhea, vomiting, constipation, abdominal pain, nausea

Severe, life-threatening allergic reactions require immediate treatment and emergency medical aid. They normally appear from 20 minutes to 2 hours after a person has eaten allergenic food. In some cases, anaphylaxis can also occur after moderate allergic reactions.

If a guest has a severe allergic reaction to food:
- Inject an EpiPen (adrenalin shot) in the guest’s thigh, if he or she has one on hand.
- Call 113 for medical assistance.
- Stay with the guest. Do not give a cold drink. Allow rest. Physical activity can make the reaction worse.
- Preserve the remains of the food the guest was eating, in order to document the ingredients. Freeze it in a new, clean plastic bag. If the guest’s doctor reports the event to the National Register of Severe Allergic Reactions to Food (Matallergiregisteret), you will be asked to supply a sample of the food for analysis.
- Save the original packaging of the ingredients used to make the dish. It may be that a recipe has been changed, and that the product has been re-labelled.
- Protect other guests by not serving dishes made with the same ingredients used in the dish that caused the serious allergic reaction, until the food business operator has gained clarity on what actually happened.
Allergic reactions to food are most common amongst children. About 4 – 8 percent of children under three years of age have one or more food allergies. Allergic incidences gradually decrease as children grow older, and remain stable in about 2 percent of adults.

One Nordic study found that while almost 28 percent of children under two years old in Sweden and Iceland suffered significant reactions such as breaking out in a rash, diarrhea, constipation, coughing and wheezing, only 2 percent of the children had allergic reactions documented by allergy tests. Provable allergies therefore constitute only a fraction of people’s hypersensitive reactions to food.

If we include all types of hypersensitive reactions to food, about 1/4th of all adults will say that they have had hypersensitive reactions to food products. For small children, the percentage is even higher: during the first two years of life, about 1/3rd of children have suffered hypersensitive reactions to one or more food products. 2/3rds of these reactions are caused by fruit, vegetables and milk, but for most people, the reactions subside after a short time.

Data from Matallergiregisteret, which was established by the Institute of Public Health (Folkehelseinstituttet) in 2000, show that it is most of all young adults and small children who experience severe allergic reactions to food. Children under five lack a fully developed immune system and therefore are in danger of reacting to food. Nevertheless, statistics indicate that it is most of all young adults between 25 and 35 who suffer unexpected allergic reactions. Most experienced the reaction when they ate somewhere other than at home. Young adults often eat out and probably do not take all the necessary precautions. When eating out, moreover, one loses control over the ingredients in food. Another explanation could be that Norwegians have become more continental in their eating habits. We eat an increasing amount of food that contains ‘foreign’ spices, ‘foreign’ fruits and vegetables – ingredients that are new to us, and to which our bodies can react.
In Norway, the most common allergic reactions are to milk, eggs, peanuts, tree nuts, wheat, soya, shellfish (crustaceans) and fish.

Allergic reactions to milk, eggs, wheat and soya often arise during the first two years of life, while allergic reactions to fish, shellfish, tree nuts and peanuts often arise later in childhood. The latter list contains the foods to which most adults are allergic. In fact, it is the enduring character of these food allergies that renders them the most common amongst adults.

As for plants; it is most of all the proteins in peanuts, tree nuts, soya and celery that can cause serious reactions, especially for people who have asthma in addition to a food allergy.

Regarding animals; fish and shellfish are the most common causes of severe, life-threatening allergic reactions in adults, while children are more prone to react severely to eggs and cow milk.

Data from the Matallergiregister show that most adults’ food-allergy reactions are to hazelnuts and peanuts. Nevertheless, pollen is usually the underlying allergy problem. According to Ellen Namork, a researcher at the Norwegian Institute of Public Health, 90 percent of allergic reactions stem from cross-reactions to pollen allergies. Data also show that kiwi fruit, lupine (a legume) and fenugreek are "new" ingredients to which people react in ready meals (already-prepared foods).

Ingredients that most commonly cause allergic reactions in Norway:

- Eggs
- Milk
- Fish
- Tree nuts
- Peanuts
- Wheat
- Shellfish (crustaceans)
- Soya

Ingredients to which people normally have allergic reactions:

- Peanuts
- Wheat
- Shellfish (crustaceans)
- Soya

Information booklet by NAAF
Labelling allergens in food

Labels on prepackaged foods and declarations for non-prepackaged foods must contain information that allows consumers to be able to avoid the things their bodies cannot tolerate. In order for people with allergies to find out whether a food contains ingredients they cannot eat, the 14 most common ingredients that provoke allergic reactions must always be declared when they are used in a food product or dish you sell. The list is the same in all European Union countries and in Norway, and it already applies for prepackaged foods sold to consumers. After 13 December 2014, when the new food-information regulation is implemented, this type of declaration of ingredients will also apply for non-packaged food.

The declaration of ingredients applies to the following allergens and products made with them:

- Cereals containing gluten (wheat, rye, barley, oats, spelt, kamut/Egyptian wheat or hybrids of these)
- Shellfish (crustaceans)
- Eggs
- Fish
- Peanuts
- Soya
- Milk (including lactose)
- Nuts (almond, hazelnut, walnut, cashew, pecan, Brazil nut, pistachio, macadamia/Australia nut) Nuts (almond, hazelnut, walnut, cashew, pecan, Brazil nut, pistachio, macadamia/Australia nut)
- Celery
- Mustard
- Sesame seeds
- Sulphur dioxide and sulphites in concentrations of 10 mg/kg or more, or 10 mg/l, referred to as SO2
- Lupin
- Molluscs

In the ingredients list for a food product, the allergens must be clearly declared. For example, it is not permissible simply to write “couscous” – the list must say “wheat”. All cereals containing gluten (they are listed in Appendix II of Matinformasjonsforordningen) must be declared by stipulating the grain sort, such as “wheat flour” and “rye flour”. (According to the new regulation, you are not required to write “contains gluten”, however, it is fine to do so in addition.) Similarly, nuts must be declared by stipulating the nut sort, e.g., cashew.

With the implementation of the new regulation, the required information on allergens on prepackaged food shall be highlighted in the ingredients list, either with a bold or italic typeface. A minimum requirement for the size of the typeface also comes into effect with the new regulation. The company that produces a food product can change the ingredients list without needing to change the packaging or the product’s appearance; the producer, however, must update the ingredients list. You, the food business operator, must therefore read the ingredients list and allergen information for the products you use every time you prepare food and receive a new shipment of a product.

Declaring traces of allergens

Certain products are marked “Can contain traces of”, after which are listed one or several ingredients. The reason for this type of declarations is that the product can be contaminated with allergenic ingredients during the production process. In some cases, it is impossible to avoid such contamination, and if the producing company, in the course of several tests, finds traces of allergenic ingredients – despite not having deliberately added them – it behoves the producer to mark the product “Can contain traces of”. The new food-information regulation does not regulate the use of precautionary allergy warnings, only of ingredients that have deliberately been added to foods.

Most people who are allergic to something can tolerate traces of it. Examples of “traces of nuts” can be a piece of a nut or protein residue. Each person who is allergic to something should consult with his or her doctor to clarify whether the allergy is so serious that even products marked “Can contain traces of” must be avoided.

14 fact sheets

In the following pages, we present a detailed overview of the 14 allergens you are required to label and declare. Each fact sheet includes:
- General information about hypersensitive reactions to food, and about accommodating the needs of people with food allergies.
- Information about the particular allergenic ingredient.
- Information about how the ingredient can be declared in an ingredients list on prepackaged food.
- Information about which foods are made with the allergenic ingredient, and which foods often contain the ingredient.

The fact sheets are only meant as guides; they do not give exhaustive lists of all the foods that can contain the 14 allergens. The fact sheets can be printed out separately, and can function as easy reference material for kitchen staff and others.
**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. **For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions.** There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

**When you have a guest with a food allergy or some other food hypersensitivity**
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it that people react to?**
For milk allergy, it is the proteins in the milk that people react to. Some people may react to only one of the proteins, but most of the time they react to several. If people are allergic to milk, they should not ingest any milk or products made with milk.

**Heat-treated food**
Most milk proteins are stable even when heated. This means they do not change after cooking or baking and can therefore still cause allergic reactions.

**Also important to note**
No E-numbers, for example the lactic acid E270, contain milk protein or lactose. Neither do lactase (an enzyme used to split lactose) or cocoa butter contain milk. Products made purely of rice, oats, soya milk and coconut milk do not contain milk protein.

Note that lactose-free products are not necessarily milk-free.
The list does not give a complete overview of all the products that are made with milk, or which can contain milk. The list is meant only as a guide.

<table>
<thead>
<tr>
<th>Milk and milk products can be labelled as follows:</th>
<th>Products made with milk or milk products:</th>
<th>Products that can contain milk:</th>
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<tr>
<td>Crème fraiche</td>
<td>Cottage cheese</td>
<td>Margarine</td>
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<tr>
<td>Crème</td>
<td>Ghee (clarified butter)</td>
<td>Sauces</td>
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<tr>
<td>Ice cream</td>
<td>Ice cream</td>
<td>Soups and dehydrated soup mixes</td>
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<tr>
<td>Casein(s) (a main group of proteins in cow milk that constitute about 80% of the proteins in milk)</td>
<td>Cream</td>
<td>Breads, cakes, crackers, cookies, biscuits</td>
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<tr>
<td>Kefir</td>
<td>Quark</td>
<td>Chocolate (including white and often dark chocolate)</td>
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<td>Soured milk</td>
<td>Milk shake</td>
<td>Marshmallows</td>
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<td>Buttermilk</td>
<td>Rice pudding</td>
<td>Chocolate powder</td>
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<td>Milk powder</td>
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<td>Potato chips and snack foods</td>
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<td>Milk solids</td>
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<td>Fruit purée</td>
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<td>Whey powder</td>
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<td>Liqueurs</td>
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<td>Ostepops, Cheez Doodles, Cheetos and the like</td>
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<td>Yogurt powder</td>
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<td>Yogurt powder</td>
<td>Vassle, Vassla/valle (Swedish/Danish products made with whey)</td>
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Fact sheet 1b: Milk and milk-products – lactose intolerance

Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. **For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions.** There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity

- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

What is it that people react to?

When people have lactose intolerance, this means they lack a sufficient amount of the enzyme lactase, which is necessary for digesting the milk sugar lactose. Often a little bit of lactose can be tolerated, but the amount will vary from person to person. Hard yellow cheeses are usually tolerated. Lactose intolerance is sufficiently treated with lactose-free or lactose-reduced foods. See www.melk.no/intoleranse for an overview of the lactose content in various dairy products.

**Also important to note**

No E-numbers, for example the lactic acid E270, contain milk protein or lactose. Neither do lactase (an enzyme used to split lactose) or cocoa butter contain milk. Products made purely of rice, oats, soya milk and coconut do not contain milk protein or lactose.

In each case of lactose intolerance, you must communicate with the customer to clarify which products he or she tolerates. If a customer asks whether you have lactose-free products, before you answer, be sure that the products on hand are truly lactose-free and not merely lactose-reduced. If the food business only has lactose-reduced products, inform the customer so that he or she can make an informed decision.
Products with a large amount of lactose:

- Milk
- Yogurt
- Cream
- Kesam
- Prim (a typical Norwegian spreadable cheese)
- Goat cheese
- Cottage cheese
- Whey powder (a common additive in food products, which contains more than 70 percent lactose)

Products with a small amount of lactose:

- Butter
- Margarine
- Well-aged, hard, yellow cheeses (e.g., Norvegia, Jarlsberg, Parmesan)

See [www.melk.no/intoleranse](http://www.melk.no/intoleranse) for an overview of the amount of lactose in various dairy products.
Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

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- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

What is it people react to?
People who have egg allergy can react to both the egg white and the egg yolk. For both the egg white and the egg yolk, only a very small amount can cause a severe, life-threatening reaction.

Heat treated food
Raw eggs cause the most powerful allergic reactions, but egg proteins are also active after cooking and frying. Some people tolerate eggs in food that is well cooked or fried, but not raw eggs.

Also important to note
It is estimated that 1/3rd of those who are allergic to eggs react to lysozyme. Lysozym is a preservative made from egg whites. This enzyme inhibits the growth of bacteria. It is only approved for use in ripened cheese.
The list does not give a complete overview of all the products that are made with eggs, or which could contain eggs. The list is meant only as a guide.

### Eggs and egg products can be labelled as follows:

- Eggs
- Egg white
- Egg yoke
- Albumen/albumin/ovalbumin
- Egg powder
- Lysozym (E1105)

### Products made from eggs or egg products:

- Scrambled eggs
- Omelette
- Soufflé
- Frittata
- Quiche
- Meringue
- Macaroon filling
- Mayonnaise
- Cream puffs, chocolate éclairs
- Mousse
- Parfait
- Puddings / deserts
- Vanilla cream, vanilla sauce, Bavarian cream
- Egg noodles
- Egg-based sauces (hollandaise, béarnaise)
- Coconut balls (kokosbollet)

### Products that can contain eggs:

- Cakes, muffins, donuts, crackers, cookies, biscuits, etc.
- Waffles, pancakes, rice cakes (rislapper)
- Cake mixes and the like
- Breadcrumbs
- Croutons
- Glazes on cakes
- Processed meat products, for example hamburgers and meatballs
- Pâtés
- Deep fried / breaded products, either for dessert or a main course
- Gratins
- Dehydrated soup mixes
- Rémoulade, mayonnaise
- Mustard
- Spaghetti, macaroni
- Fried rice (an Asian dish)
- Wine (if clarified with egg)
- Baked goods brushed with egg
- Ice cream
- Liqueurs
What is it people react to?
For peanut allergy, it is the proteins in peanuts that people react to. Even in small amounts, peanuts can cause severe, life-threatening anaphylactic reactions in very allergic people. Peanut oil often contains some peanut proteins, so should not be used when preparing food for people who have peanut allergy.

Heat treated food
Most peanut proteins are stable despite having been heated, and they are just as active after being baked or cooked. People with pollen allergy who also react to peanuts often tolerate cooked peanuts, for example in cakes.

Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.
The list does not give a complete overview of all the products that are made with eggs, or which could contain eggs. The list is meant only as a guide.

<table>
<thead>
<tr>
<th>Peanuts and peanut products can be labelled as follows:</th>
<th>Products made with peanuts or peanut products:</th>
<th>Products that can contain peanuts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanuts</td>
<td>Peanut butter</td>
<td>Chocolate</td>
</tr>
<tr>
<td>Ground nuts</td>
<td>Peanut sauce</td>
<td>Crackers, cookies, biscuits, cakes and the like</td>
</tr>
<tr>
<td>Peanut oil</td>
<td>Peanut sprinkles (often on cakes, salads, Asiatic dishes and the like)</td>
<td>Ice cream</td>
</tr>
<tr>
<td></td>
<td>Peanut-based energy bars (bars for dieters, granola bars and the like)</td>
<td>Diverse prepared deserts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asiatic and oriental dishes, spring rolls, noodles, curry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Salad dressings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sauces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certain types of pesto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nougat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breakfast cereals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Granola bars, bars for dieters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kebabs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spaghetti sauce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turkish delight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Snacks and potato chips (fried in peanut oil)</td>
</tr>
</tbody>
</table>
The term “nuts” denotes hazelnuts, walnuts, cashews, pecans, pistachios, almonds and macadamia Australia nuts. Nuts are often called tree nuts in order to distinguish them from peanuts. (Peanuts are legumes and do not grow on trees. They come from a different genus than most nuts.) Almonds are in the botanical group called “stone fruit”, and it is less common to react allergically to them.

Coconuts are also stone fruit and are not closely related to tree nuts. It is uncommon to react allergically to coconuts. The spice called nutmeg is not a nut but a seed, and the spice called mace comes from the capsule around the nutmeg seed. People with a nut allergy will usually tolerate nutmeg and mace.

What is it people react to?
People with a nut allergy react to the proteins in nuts. Even small amounts of a nut can cause severe, life-threatening anaphylactic reactions in very allergic people. Oils pressed from nuts (walnut oil, hazelnut oil, for example) should, in principle, be so highly refined that they contain no proteins. Nevertheless, because analysts have found some oils to be impure, these oils should be avoided by highly allergic people.

Heat treated food
Most nut proteins are stable despite having been heated, and they are just as active after being baked or cooked. People with pollen allergies who react to nuts often tolerate cooked nuts, for example in cakes.

Also important to note
People who have severe, life-threatening allergic reactions to nuts should never buy candy from open bins because the risk of nut contamination from other candy is too great.
The list does not give a complete overview of all the products that are made with nuts, or which could contain nuts. The list is meant only as a guide.

<table>
<thead>
<tr>
<th>Nuts and nut products can be labelled as follows:</th>
<th>Products made from nuts or nut products:</th>
<th>Products that can contain nuts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree nuts</td>
<td>Marzipan (chiefly almonds)</td>
<td>Breakfast cereals (granola, müsli)</td>
</tr>
<tr>
<td>Hazelnuts (filberts)</td>
<td>Macaroons (almonds)</td>
<td>Salads</td>
</tr>
<tr>
<td>Walnuts</td>
<td>Macaroon filling (almonds)</td>
<td>Stews</td>
</tr>
<tr>
<td>Cashew nuts</td>
<td>Nougat (hazelnuts)</td>
<td>Cakes, crackers, cookies, biscuits, etc.</td>
</tr>
<tr>
<td>Pecan nuts</td>
<td><strong>Kransekake</strong> (a Norwegian wreath-cake)</td>
<td>Chocolates, chocolate spreads</td>
</tr>
<tr>
<td>Brazil nuts</td>
<td></td>
<td>(Nutella, etc.)</td>
</tr>
<tr>
<td>Pistachio nuts</td>
<td></td>
<td>Ice cream</td>
</tr>
<tr>
<td>Almonds</td>
<td></td>
<td>Deserts</td>
</tr>
<tr>
<td>Macadamia nut/Australia nut</td>
<td></td>
<td>Breads</td>
</tr>
<tr>
<td>Almond sprinkles</td>
<td></td>
<td>Salad dressings</td>
</tr>
<tr>
<td>Nut mix</td>
<td></td>
<td>Pesto (may contain pistachios)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asiatic and oriental dishes, including sauces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Natural’ flavourings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nougat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Müsli bars, energy bars, diet bars</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kebab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spaghetti sauce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turkish delight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vegetable oils (primarily cold-pressed)</td>
</tr>
</tbody>
</table>
Fact sheet 5: Soya and soya products

Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

What is it that people react to?
People with a soya allergy react to various proteins in soya beans.

Soya oil and soya lecithin are considered safe for people with a soya allergy. In the production process for soya oil, the proteins that cause allergic reactions are removed. In other countries, researchers have analysed soya oils and concluded that no soya proteins can be found in any of them. Some of the largest producers in Norway do routine testing to ensure that no soya proteins remain in the oil. Soya lecithin, which is extracted from soya oil through a distillation process, is primarily used as an emulsifier to hinder water and fat from separating in foods. Soya lecithin can contain traces of soya proteins due to contamination during the production process. Such contamination, however, involves very small amounts, and since soya lecithin is used in small amounts in a dish served to a customer, it is uncommon to discourage people with a soya allergy from eating foods containing soya lecithin.

Also important to note
Soya allergy is not all that common, even though it often is evidenced in tests (often due to cross-allergies).
The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.

<table>
<thead>
<tr>
<th>Soya and soya products can be labelled as follows:</th>
<th>Products made with soya or soya products:</th>
<th>Products that can contain soya:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soya</td>
<td>Edamame</td>
<td>Chocolates and deserts</td>
</tr>
<tr>
<td>Soya flour</td>
<td>Soya flour</td>
<td>Breads, baked goods, crackers, cookies, sweet biscuits</td>
</tr>
<tr>
<td>Soya protein</td>
<td>Soya milk</td>
<td>Breakfast cereals</td>
</tr>
<tr>
<td>Soya milk</td>
<td>Soya yogurt</td>
<td>Breaded/fried fish or meat</td>
</tr>
<tr>
<td>Soya oil/soya bean oil*</td>
<td>Soya cheese and the like</td>
<td>Sausages</td>
</tr>
<tr>
<td>Soya lecithin/Soya lecithin E233</td>
<td>Tofu</td>
<td>Processed meat products, including pâtés</td>
</tr>
<tr>
<td>Tofu</td>
<td>Teriyaki</td>
<td>Vegetarian products, such as pâtés, hamburgers and the like</td>
</tr>
<tr>
<td>Fermented soya products:</td>
<td>Fermented soya products:</td>
<td>Pizza</td>
</tr>
<tr>
<td>- Misto</td>
<td>- Misto</td>
<td>Bread crumbs</td>
</tr>
<tr>
<td>- Soya sauce</td>
<td>- Soya sauce</td>
<td>Bouillon</td>
</tr>
<tr>
<td>- Soya protein isolate</td>
<td>- Soya protein isolate</td>
<td>Sauces</td>
</tr>
<tr>
<td>- Tamari</td>
<td>- Tamari</td>
<td>Soups</td>
</tr>
<tr>
<td>- Tempeh</td>
<td>- Tempeh</td>
<td>Mayonnaise</td>
</tr>
<tr>
<td>* Fully refined soybean oil and fat are permanently exempted from allergen labelling.</td>
<td></td>
<td>Peanut butter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marzipan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Margarine</td>
</tr>
</tbody>
</table>
Fact sheet 6: Gluten and gluten products

**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts “abnormally” to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it that people react to?**
Gluten is a composite or group of proteins found in a number of grain types. Some children and adults become sick from eating wheat and other glutinous grains. This can be due to coeliac disease, other intolerances to gluten, or a wheat allergy. The treatment is the same for all these ailments: a gluten-free diet. This is because people who have an allergic reaction to wheat often react to the proteins in gluten. Since gluten is present in many grain products, such people must only eat gluten-free flour. This entails eliminating all grain types that contain gluten protein: wheat, rye, barley, spelt, and oats that are contaminated by wheat.

People who are exposed to large amounts of wheat dust, for example bakers, can develop bakers’ allergy. Most of the time their reactions are triggered by inhaling wheat dust, but they tolerate eating wheat in bread and other food. Loose grains of wheat flour on the surface of crispbread (knekkebrød) and other baked goods can cause irritation. Some people, simply by handling wheat flour, will experience a worsening of eczema (dermatitis) and itchiness, as well as a runny nose and watery eyes.

**Also important to note**
Oats are a distant cousin of wheat and are tolerated by most people who suffer from coeliac disease and wheat allergy. Normal oats, however, can be contaminated by wheat during the production process. We therefore do not advise their use. Gluten-free oats are available in most grocery stores.

In 2012 a new regulation for labelling gluten-free products was implemented:
- Ingredients that contain <20 mg/kilo (parts per million = ppm) gluten are to be understood as gluten-free, and shall be labelled accordingly.
- Ingredients that contain between 20 and 100 ppm gluten shall be labelled “very low gluten” and are suitable for use by those who are restricted to a gluten-free diet.
- Oats that are labelled “gluten free” can be used in a gluten-free diet. The terminology “traces of gluten” will disappear from the labelling regulation. All E-numbers are gluten-free.
Gluten and gluten products made with gluten can be labelled as follows:

- Bulgur
- Barley/-kernels/-flower/-rice
- Cornflakes*
- Couscous
- Dinkel wheat (spelt)
- Durum wheat
- Whole-wheat flour (*helkornmel and *fulkornsmel)
- Graham flour
- Bulgar (made with 50% ground barley, called *grynmel)
- Oat/-kernels/-flour (unpurified)
- Oat bran
- Wheat/-flour/-flakes/-rice
- Wheat seeds
- Wheat gluten
- Wheat germ (*hvete kim)
- Wheat germ extract
- Wheat kernels
- Wheat bran (*hvetekli)
- Wheat protein
- Wheat sprouts/-powder
- Kamut (a type of wheat)
- Zwieback, melba toast (*kavring)
- Germ (*kim)
- Bran
- Kofu (seitan, “gluten-meat”)
- Grain
- Dietary fibre
- Kruskakli (Norwegian name for wheat bran)
- Manitoba (a type of wheat)
- Protein hydrolysate (from glutinous grain)
- Puffed oats**
- Puffed wheat
- Rye/-flour/-grain/-flakes
- Rye bran
- Semolina (Durum wheat middlings)
- Semulegryn (Durum wheat-based middlings)
- Spelt
- Spelt wheat
- Flour for dusting or strewing (*strømel)
- Rye-wheat or triticale (rye-wheat hybrid)

Products made with gluten or glutinous grain:

- Bread
- Crispbread (*knekkebrød)
- Flatbread
- Buns, rolls and other goods baked with yeast
- Crackers, cookies, sweet biscuits
- Cakes
- Pancakes
- Waffles
- Breakfast cereals
- Pasta
- Foods containing malt
- Egg-noodles
- Bread crumbs (*strøbrød, *kavring)

Products that can contain gluten:

- Spices
- Sauces
- Soups
- Sandwich fillings and open-face sandwich toppings
- Breaded and grilled dinner foods
- Candy, sweets
- Snacks (pretzels and the like)
- Lomper (Norwegian potato wraps)
- Processed meat products and fish products
- Soya sauce
- Crispy-fried onions
- Noodles
- Malt/-syrup/-extract***
- Filled chocolates, filled candy drops, liquorice and marzipan
- Candy from open bins
- Puddings and Bavarian cream (Bavarois)
- Dressings (for salad, etc.) and marinades
- Filo pastry dough
- Beer
- Breading
- Crisp-fried onions, onion rings

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* Cornflakes contain malt (cereal grains that have germinated by being soaked in water). Nevertheless, many types of cornflakes contain very little gluten. Check with the producer or use gluten-free cornflakes.

** Puffed oats can be contaminated by other types of grain during cultivation and processing.

*** Malt extract contains little gluten (>40 parts per million = ppm), but producers are unable to measure the gluten content precisely and it varies considerably. Malt extract can therefore contain more than the prescribed limit (>100 ppm gluten).
What is it people react to?
In the case of fish allergy, it is the proteins in fish that people react to. For people who are very allergic, even very small amounts of fish can cause severe, life-threatening anaphylactic reactions. Those who are most hypersensitive can also react to the steam from cooking. In such cases, fish should not be prepared at all.

Approximately half of all people who are allergic to fish react to all types of fish. Others tolerate certain types of fish, for instance salmon, trout, mackerel and fresh-water fish, or they tolerate white fish but not red fish.

Several types of fish (anchovies, deep-water fish, salmon, herring, tuna) contain histamines that can cause itching and stomach aches, yet without an allergy being involved.

Heat treated food
The allergens in fish are stable despite being heated, and are therefore still active after cooking.

Also important to note
Norwegian cod liver oil should not contain fish protein, and is recommended for use by people with fish allergies.

Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.
Fish and fish products can be labelled as follows:

<table>
<thead>
<tr>
<th>Fish</th>
<th>Products made of fish or fish products:</th>
<th>Products that can contain fish:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>Frozen fish sticks</td>
<td>Crab sticks (surimi, which is made from cod, is used in seafood with a crab flavour)</td>
</tr>
<tr>
<td>Caviar</td>
<td>Fish balls</td>
<td>Crab salad (surimi)</td>
</tr>
<tr>
<td>Roe</td>
<td>Fish pâté</td>
<td>Shrimp chips</td>
</tr>
<tr>
<td>Cod liver</td>
<td>Fish grating</td>
<td>Fish snacks</td>
</tr>
<tr>
<td>Salt-water fish</td>
<td>Fish pudding</td>
<td>Calamari rings</td>
</tr>
<tr>
<td>Fresh-water fish</td>
<td>Fish cakes</td>
<td>Dips/sauces with seafood</td>
</tr>
<tr>
<td>Dried fish</td>
<td>Fish burgers</td>
<td>Asiatic food</td>
</tr>
<tr>
<td>Rock fish</td>
<td>Fish sauce</td>
<td>Chinese dim sum</td>
</tr>
<tr>
<td>Fish liver</td>
<td>Fish bouillon or broth</td>
<td>Marinated dishes</td>
</tr>
<tr>
<td>Specific fish names: Cod, salmon, haddock, trout, pollock, perch, flounder, plaice, pike, halibut, brown trout or sea trout, tuna, anchovies, herring, mackerel, bluefin tuna, sardine, swordfish, hake, whiting, rock fish, small halibut, skrei, sculpin, turbot, blue halibut, bream, monkfish, carp, roach, capelin, rainbow trout, Arctic char, rakfish, white fish and the like.</td>
<td>Sushi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish grating</td>
<td>Sashimi</td>
</tr>
<tr>
<td></td>
<td>Fish pudding</td>
<td>Caviar and other fish spreads</td>
</tr>
<tr>
<td></td>
<td>Fish cakes</td>
<td>Fish flour</td>
</tr>
<tr>
<td></td>
<td>Fish sauce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish bouillon or broth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sushi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sashimi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Caviar and other fish spreads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish flour</td>
<td></td>
</tr>
</tbody>
</table>

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. **For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions.** There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

**When you have a guest with a food allergy or some other food hypersensitivity**
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it people react to?**

In the case of shellfish (crustacean) allergy, it is the proteins in shellfish that people react to. Some people can have allergic reactions to the shell itself, not the edible part. The most hypersensitive people can also react to the steam when shellfish are cooking.

Shellfish can cause itching, even if a person is not allergic to shellfish. The toxins in shellfish can cause some people to react with nausea and vomiting.

**Heat treated food**

The allergens in shellfish are stable despite being heated, thus they are active after frying and cooking.
Shellfish and shellfish products can be labelled as follows:

- Shrimp and prawns (reker)
- Crab
- King crab
- Red king crab
- Russian crab
- Krill
- Lobster
- Cray fish
- Scampi

Products made with shellfish or shellfish products:

- Raw and cooked variants of specific shellfish
- Crab sticks
- Shellfish in brine
- Cray fish in brine

Products that can contain shellfish:

- Shrimp chips (Asiatic)
- Glukosamin medicine for arthritis, made with shrimp shells
- Red food colouring astaxanthin from shrimp or crab shells
- Seafood spices
- Seafood sauces
- Seafood salads
- Seafood marinades
- Seafood soups

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

What is it people react to?
Normally people react to ingesting the proteins from molluscs, but there have also been reports of allergic reactions due to inhaling steam or handling molluscs during their preparation.

Heat treated food
The allergens in molluscs are stable despite being heated. This means that the proteins do not change their structure through being heated, and they will cause allergic reactions regardless of whether they are cooked, fried or raw.
Molluscs and mollusc products can be labelled as follows:

- Abalone
- Blue mussels
- Scallops
- Oysters
- Cockle clams
- Sea urchins
- Cephalopods, ink fish
- Squid (ommastrephidae, todarodes pacificus, flying squid)
- Calamari (squid, octopus)
- Snails
- Sea snails

Products made with molluscs or mollusc products:

- All variants of cooked, fried, deep fried and marinated molluscs

Products that can contain molluscs:

- Fish soup
- Seafood spices
- Seafood sauces, e.g., oyster sauce
- Seafood marinades
- Seafood soups and stews (bouillabaisse, e.g.)

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
**Fact sheet 10: Celery and celery products**

**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

**When you have a guest with a food allergy or some other food hypersensitivity**
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it people react to?**
When people react to celery, it is normally due to an allergic reaction to the proteins.

**Heat treated food**
For celery allergy, there are mainly three different proteins that are identified: one of these is stable despite being heated, but the other two proteins are sensitive to heat to varying degrees. In other words, some people who are allergic to celery can tolerate cooked varieties, but it is highly individual.

**Also important to note**
Celery allergy is one of the most common pollen-related food allergies in certain European countries, for example in Switzerland, France and Germany.
### Celery and celery products can be labelled as follows:
- Celeriac (knob celery)
- Celery root
- Leaf celery
- Stalk celery
- Branch celery
- Celery spice
- Celery extract

### Products made of celery or celery products:
- Celery spice
- Celery gratin

### Products that can contain celery:
- Spices
- Spice mixes
- Salt with celery and herbs
- Herb mixes
- Bouillon
- Cakes
- Soups
- Sauces, including tomato sauce
- Mustard
- Mayonnaise
- Salad dressing
- Minced meats, meat puddings
- Pies
- Stews
- Gratinated dishes
- Sausages, wiener, hot dogs
- Processed meat and fish products
- Potato products (gratinated potatoes, mashed potatoes)
- Canned food

*The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.*
**Fact sheet 11: Mustard and mustard products**

**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

**When you have a guest with a food allergy or some other food hypersensitivity**

- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it people react to?**

For people with mustard allergy, it is mostly the proteins in mustard they react to. But in addition to proteins, mustard contains several other substances that can cause irritation or provoke other food-hypersensitive reactions.

**Also important to note**

Mustard allergy is rare in Norway, but is more prevalent in France and Spain.
Mustard and mustard products can be labelled as follows:
- Mustard
- Mustard seeds
- Mustard sauce
- Prepared mustard (Dijon, Coleman’s, etc.)

Products made of mustard or mustard products:
- Prepared mustard
- Hotdog mustard
- Mustard sauce

Products that can contain mustard:
- Mayonnaise
- Aioli
- Pâtés
- Hotdogs, sausages, wieners
- Salad dressings
- Creamed pasta salad
- Marinades
- Béarnaise sauce
- Hollandaise sauce
- Processed meat products, particularly fast foods
- Gravlax (raw, cured salmon) sauce
- Ketchup
- Curry powder
- Curry dishes
- Pickles

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

What is it people react to?
People who are hypersensitive to sesame seeds usually have an allergic reaction to the proteins in the seeds.

Heat treated food
The proteins in sesame seeds change little through cooking, baking or frying. Therefore, the proteins in sesame seeds are just as active after being baked or cooked.

Also important to note
In Israel, a Middle Eastern country where food allergies are heavily researched, sesame allergy is one of the most common.
Sesame seeds and sesame products can be labelled as follows:

<table>
<thead>
<tr>
<th>Sesame</th>
<th>Tahini</th>
<th>Products that can contain sesame seeds:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sesame seeds</td>
<td>Hummus</td>
<td>All baked goods</td>
</tr>
<tr>
<td>Sesame flour</td>
<td>Sesame oil</td>
<td>Hamburger buns</td>
</tr>
</tbody>
</table>

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
Sulphites are used to preserve the taste and colour of food. They inhibit bacterial growth, prevent browning reactions, and contribute to increasing the shelf-life of food. Sulphites release sulphur dioxide (SO2), which is the active component in the preservation of food and medicines.

Sulphites can occur naturally in low doses in onions and cabbage, and as a consequence of fermentation in beer and wine.

What is it people react to?
Reactions to sulphites are not allergic reactions. Sulphites can provoke asthma attacks in both children and adults. We do not completely know how, but when the food in the stomach releases sulphur dioxide, it in turn is inhaled and affects the respiratory system. It may be a matter of a specific chemical hypersensitivity with a defect in a sulphite-deoxygenase enzyme. Hives can also occur. The higher the concentration of sulphites in food, the greater is the probability of a reaction.

Heat treated food
Sulphites are volatile and evaporate during storage and when heated.

Hypersensitive reactions to food can be either allergic reactions or non-allergic reactions. In both cases the body reacts 'abnormally' to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

When you have a guest with a food allergy or some other food hypersensitivity
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.
Sulphites and sulphite products can be labelled as follows:

- E220 sulphur dioxide
- E221 sodium sulphite (natrium)
- E222 sodium hydrogen sulphite
- E223 sodium metabisulphite
- E224 potassium metabisulphite
- E226 calcium sulphite
- E227 calcium hydrogen sulphite
- E228 potassium hydrogen sulphite

If the sulphite additives release more than 10 mg SO₂ per kg of food product (10 ppm), this must be clearly declared in writing.

Products that often contain a large amount of sulphites:

- Very high levels
- Dried fruit (e.g., apricots) and vegetables (e.g., tomatoes)
- Lemon juice and lime juice (not frozen)
- Wine (mostly white wine)
- Syrup
- Sauerkraut juice
- Grape juice

A high level
- Dried potato products (instant mashed potato)
- Wine vinegar
- Sauerkraut
- Pickled onions
- Candied fruit
- Corn starch
- Maple syrup
- Pectin
- Jam
- Jelly

Products that can contain sulphites:

- Moderate levels
- Seafood and shell fish
- Sauerkraut
- Pickled foods
- Corn syrup
- Some processed potato products, for example gratinated potatoes, frozen ready meals
- Crackers, sweet biscuits, cookies
- Breads
- Cakes
- Pizza dough
- Gelatine
- Coconut

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
Fact sheet 14: Lupin and lupin products

**Hypersensitive reactions to food** can be either allergic reactions or non-allergic reactions. In both cases the body reacts ‘abnormally’ to ingredients that most people tolerate. The reactions can happen immediately or emerge gradually. They can arise within a few minutes, a few hours or a few days after eating something. A person can experience mild or serious reactions that affect bodily organs such as the skin, eyes, mouth, stomach, intestines, respiratory system, cardiovascular system and blood circulation. For people with food allergies, even small amounts of food can cause severe, life-threatening allergic reactions. There is no medication for preventing hypersensitive reactions. The only treatment is simply to avoid that which triggers the adverse symptoms and to alleviate the symptoms.

**When you have a guest with a food allergy or some other food hypersensitivity**
- If a guest asks you whether a dish or food item contains a certain ingredient, do not guess the answer.
- Have written information available for employees and customers stating all the ingredients in the dishes that are served/the products that are sold.
- Read the ingredients declaration label every time you prepare food and every time you receive a new shipment of a product.

**What is it people react to?**
Lupin has been introduced as a supplement to wheat flour in various baked goods on account of its positive aspects in baking. Hypersensitive reactions to lupin are normally allergic reactions to the proteins in lupin.

**Heat treated food**
Lupin proteins are stable despite being heated. They therefore can provoke allergic reactions after cooking and frying.

**Also important to note**
Lupin can provoke severe, life-threatening allergic cross-reactions in people with peanut allergy. For this reason, it is a good habit not to add lupin flour to baked goods. Lupin flour is used particularly in France; up to 10 percent of wheat flour in France can contain lupin.
Lupin and lupin products can be labelled as follows:

- Lupin
- Lupin flour
- Lupin seeds
- Lupin bran

Products made with lupin or lupin products:

- Lupini (whole lupin beans)

Products that often contain lupin:

- Baguette/French bread
- Hotdog buns
- Hamburger buns
- Parbaked (semi-cooked) bread
- Milk replacements and soya replacements
- Pizza crust
- Pasta
- Flour

The list does not give a complete overview of all the products that are made with soya or which could contain soya. The list is meant only as a guide.
Herbs and spice mixes (e.g., bell pepper, curry, coriander and nutmeg) can provoke reactions in some people, even though celery spice is the most common spice to which people react. Symptoms are usually unspecified, non-allergic reactions. Strongly spiced food can aggravate the symptoms of eczema. Bell pepper (also known as sweet pepper, in Norway called paprika), chili, cayenne and garlic often trigger reactions such as itching and rashes, and an allergic reaction to bell pepper is not uncommon. For this reason, it is advisable to decorate buffet food with bell peppers.

Food products containing amines can cause intolerances that come to expression as headaches and a feeling of being unwell, especially amongst people who lack sufficient enzymes to metabolize amines. Such foods are chocolate, mature cheese, deep-water fish, salt-cured meat (spekemat), strawberries and red wine. Histamine is one such amine, and most people know that red wine contains a large amount of histamine. When drinking alcohol, the body’s ability to metabolize histamine is reduced. People who are sensitive to histamine therefore get a headache more easily when drinking a moderate amount of red wine, but not necessarily when ingesting other food products with high levels of histamine.

Those who use milk (casein) and egg (albumin) to filter and clarify cider and wine are now required to declare and label such products produced after 2012. In the filtering process, proteins from egg and milk are used to clarify the liquid and remove small gelatinous lumps. The filtering affects both the appearance and taste, and can result in a product also containing residual proteins from egg and milk.

Sunflower seeds, poppy seeds and pine nuts can provoke severe, life-threatening allergic reactions in some people. Because allergies to these seeds are less common than for sesame, they are not included in the list of 14 ingredients that must be declared. Yet since seeds are small and are often ‘hidden away’, we recommend that you avoid sprinkling seeds on salads and other foods. You should always have on hand an alternative bread that has no seeds.

Allergies to additives and processing aids are rare, but for some people who have atopic eczema and food hypersensitivity, certain types of preservatives, antioxidants and flavour enhancers can trigger rashes and itching. Some additives and processing aids can affect the stomach and digestive system, or cause a runny nose or asthma attack.

Cross-reactions between latex and certain fruit and vegetables can arise in people who are allergic to latex. In such cases, there is a cross-reaction between the plant proteins in latex and the particular food. Bananas, avocados, bell peppers and kiwi are all common triggers for cross-reactions, but papayas, figs, potatoes, tomatoes and chestnuts can also cause cross-reactions. 30 to 80 percent of people with latex allergy experience symptoms when they eat one or several of these foods. For this reason, we advise against using latex gloves when handling food.
In the following pages, we present a short overview of how food business operators should accommodate for food hypersensitivity when purchasing, storing, preparing, serving and selling food.

**Review the purchasing process**
- It is important to choose the right supplier (or wholesaler). The supplier must be trustworthy. Consider switching suppliers if yours does not provide reliable, good information about products, for example, about when the contents labels for food products change. It is also important to ask yourself whether the supplier has consistent, good control of its sub-suppliers.
- Obtain information from the supplier if products lack complete ingredients lists (e.g., for spice mixes and non-packaged foods).
- Suppliers and wholesalers are themselves responsible to ensure that they label all the 14 ingredients which it is obligatory to declare. At the same time, you as buyer have influence over the supplier by asking for information.

**Identify the ingredients that are used**
- Make sure you know about all the ingredients that are in the products your business uses, including oils, dressing, sauces, bouillons and the like.
- Keep copies of all the ingredients lists for all the products used. This is especially important for compound ingredients used in dishes (e.g., sauces), and for foods that are removed from their original packaging and re-packaged in the kitchen. As much as possible, everything should be kept in its original packaging. If something is moved to other packaging, the ingredients list should be attached to the new packaging, so that you can easily verify the ingredients.
- Read the product-ingredients lists every time your business receives a new shipment. The ingredients in products may have changed since the last shipment. A good supplier should draw your attention to changes in ingredients lists.

**Make information about allergens easily accessible to employees and customers**
- For each dish that is served, and for every food product that is sold over the counter, you should make a food allergen matrix that presents an overview of the 14 allergens which you are required by law to declare. This type of matrix gives employees and customers a simple overview of whether or not a dish/a product contains any of the 14 obligatorily declared ingredients. See the examples of food-allergen matrices on the following pages.
- Food-allergen matrices must always be kept up to date! If you change the ingredients in a dish, then you must update the food-allergen matrix, and ensure that the employees know about the change.
- Keep all details of ingredients for each menu item with your food allergen matrices.
- Go to www.matallergi.no/matindustrien/serveringsbransjen to download a blank food-allergen matrix in Word format.
How should food business operators accommodate for food hypersensitivity?

Examples of food-allergen matrixes for the 14 ingredients you are required by law to declare

The examples below are for dishes from two fictive restaurants. Similar food-allergen matrixes should be made for products sold over the counter. Along with every food-allergen matrix, you should keep complete ingredients lists for all prepared products that are used in dishes, for example sauces, spice mixes, bouillons and the like.

Example 1
Business name: Café Saigon
Food safety supervisor: Sol Wei
Date of last revision: 15 July 2013
Next revision: Next time the ingredients list changes

Name of dish: Asian fried rice
(List all the raw produce and prepared products used in the dish. Remember that all the allergens in prepared products, plus the proper names of gluten-containing grain and the names of nuts, must also be declared below in the matrix.)

Ingredients: Vegetable oil (in this restaurant we use a soya-based oil that can contain traces of soya protein), garlic, ginger, Chinese fried pork (fried in soya sauce), shrimp, peas, eggs, red bell peppers, light soya sauce (contains wheat, soya, among other things), oyster sauce (contains molluscs and gluten from brewers’ malt extract, among other things), black pepper, sesame oil (can contain traces of proteins from sesame seeds).

<table>
<thead>
<tr>
<th></th>
<th>Milk</th>
<th>Egg</th>
<th>Peanuts</th>
<th>Nuts</th>
<th>Soya</th>
<th>Gluten</th>
<th>Fish</th>
<th>Shellfish</th>
<th>Molluscs</th>
<th>Celery</th>
<th>Mustard</th>
<th>Sesame Seeds</th>
<th>Lupin</th>
<th>Sulphites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dish contains</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

A person who is allergic to soya will not necessarily react to soya oil or soya sauce. It is therefore important to have a detailed ingredients list easily available for customers, so that they can themselves decide whether they can order the dish.

PS: Information booklet by NAAF
Example 2
Business name: Café Saigon
Food safety supervisor: Sol Wei
Date of last revision: 15 July 2013
Next revision: Next time the ingredients list changes

Name of dish: Black sesame-seed ice cream
(List all the raw produce and prepared products used in the dish. Remember that all the allergens in prepared products, plus the proper names of gluten-containing grain and the names of nuts, must also be declared below in the matrix.)

Ingredients: Black sesame seeds, milk, sugar, egg yolks, cream, salt, black sesame paste (contains sesame seeds and peanuts, among other things), vanilla seeds from vanilla bean.

Example 3
Business name: La Mancha
Food safety supervisor: Daniel Ås García
Date of last revision: 20 January 2013

Name of dish: Tapas platter
(List all the raw produce and prepared products used in the dish. Remember that all the allergens in prepared products, plus the proper names of gluten-containing grain and the names of nuts, must also be declared below in the matrix.)

Ingredients: Brandade (deep fried rock-fish balls: cod, tempura batter contains egg, cream and wheat flour among other things), Spanish meatballs in bell-pepper & tomato sauce (which includes eggs and wheat flour among other things), Serrano ham, chorizo fried with onions in chili sauce, montenebro (Spanish yellow cheese), manchego (Spanish yellow cheese made with sheep milk), aioli (includes egg yolks and mustard seeds among other things), olives.

Example 4
Business name: La Mancha
Food safety supervisor: Daniel Ås García
Date of last revision: 20 January 2013

Name of dish: Pannacotta with raspberry coulis and exotic fruit
(List all the raw produce and prepared products used in the dish. Remember that all the allergens in prepared products, plus the proper names of gluten-containing grain and the names of nuts, must also be declared below in the matrix.)

Ingredients: Gelatine (In this restaurant we use a gelatine derived from fish), milk, cream, vanilla-bean paste (contains none of the 14 allergens), sugar, cherry liqueur (sulphites and possible traces of egg, since the liqueur the restaurant uses is filtered/clarified with egg), raspberries, fresh mint, powdered sugar, seasonal exotic fruit.

How should food business operators accommodate for food hypersensitivity?

**PS:** It is perfectly possible for a person who is allergic to fish or eggs to tolerate gelatine derived from fish, or alcohol filtered and clarified with egg, but because fish allergy and egg allergy can cause severe, life-threatening allergic reactions, it is crucial that the dish be labelled correctly. Tell the guest what the specific ingredients of the dish are, so that he or she can make a well-informed decision on whether or not to order it.
How should food business operators accommodate for food hypersensitivity?

Labelling of food
• Provide written information for the 14 ingredients which you are required by law to declare. This information must be easily accessible to employees and customers, for instance by being printed on the menu.
• The food-allergen matrixes should be easily accessible to customers who ask about allergenic ingredients in food.
• All dishes on a buffet table shall be marked with the 14 ingredients you are required by law to declare. It will be perceived as good customer service also to list ingredients such as bell peppers and chillies, since many people are known to react to them.

Handling of buffet food
• Gluten-free bread should be located in a different place than glutinous bread.
• Bread with seeds and nuts should be placed in a way that does not allow crumbs to drop into butter, salad or other foods.
• Always offer an alternative bread without seeds and nuts.
• Use specially-designated baskets, bread boards and knives for gluten-free bread.
• Offer a separate “allergy table” that contains the following: milk-free ‘milk’ made of rice, oat and/or soya, lactose-reduced milk, lactose-free milk, milk-free butter, gluten-free bread, crackers and sweet biscuits, crispbread (knekkebrød) and/or cake. Avoid nuts, peanuts, gluten, citrus, fish, shellfish.
• Nuts should preferably be served in separate bowls, not in one common serving dish.
• Do not garnish with nuts, bell peppers or citrus fruit. Such garnishes limit the selection even further for many people with allergies.
• It is wise to inform guests about good allergenic hygiene and to ask them to take necessary precautions: “Please show consideration for our allergic guests. Do not use the serving utensil for one dish in any other dish.” And: “This buffet table contains several allergens. Drips or small bits of one dish may wind up in other dishes. If you are allergic, please ask our chef for a specially-prepared dish.”

Avoid cross-contamination in the kitchen and dining/serving area
• Have a designated area for preparing allergen-free food.
• When you prepare food for customers with allergies, your work surfaces, pans and utensils shall be clean before each use and washed after each use. They shall be cleaned with hot soapy water.
• Use specially-designated pans, cutting boards and utensils for each individual allergenic ingredient – particularly for eggs, fish, peanuts, nuts and sesame seeds.
• It is easiest to remove water-soluble food residue such as milk and flour; it is more difficult to remove egg, fish, nuts and seeds.
• Use protective lids when preparing food and when heating food in a microwave oven, in order to avoid spills and contamination.
• Check to make sure that residue from one food does not remain and ‘hide itself’ – check the ovens, the deep fryer, the dish-washing machine and other places in the kitchen on a regular basis.
• Store the most common allergens separately, for example, store nuts on a separate shelf, in a separate container with a lid.
• Ensure that food products are easy to distinguish from each other, well-marked and stored in permanently-designated places, so that you can avoid mix-ups.
• Good hand-hygiene is crucial, also between the times when different food products are handled. This will help you avoid cross-contamination.
• You may want to inform customers about the allergens that are being used in the kitchen: “The following allergens are used in the kitchen: egg, milk, fish, nuts, and so forth.”

Typical sources of contamination:
1) Griddle and grill surfaces that are not sufficiently cleaned after frying various raw foods
2) Deep fryers that have been used to fry different raw foods (breaded meat and fish, shellfish, potatoes)
3) Grill flour that has been used to bread different raw foods
4) Steam and splatters from foods that are in the process of cooking
5) All kitchen utensils (spoons, knives, rolling pins, tongs, cutting boards, casserole dishes, pans, plates, griddles, grills, work benches and so forth)
6) Towels that are used to dry surfaces where, for example, a piece of fish was previously placed

Have good routines for taking customers’ orders and for serving food
• If a customer asks you whether a food item or a dish contains a certain ingredient, do not guess. Check with the cook, the food-allergen matrix and other related sources. If you check but are still unsure, tell the customer so that he or she can make an independent decision whether or not to order the food.
• Have an overview of routines for taking customers’ orders and for serving food. How does information flow back and forth between the guest and the kitchen? How does the cook find out that a guest has allergies?
• If a guest asks for a dish to be prepared without certain ingredients, do not answer
“Yes” unless you are sure that none of those ingredients will be in the dish that is served.

- Make it possible for the guest to speak face-to-face with the cook. By this means, the cook will receive direct information, the guest will become safer, and the restaurant will avoid an intermediate stage in the handling of information where a mistake can arise.
- Ensure that the right food is served to the right guest: When the food is ready, it should immediately be labelled with the guest’s name and the ingredients it lacks. Do not put the label on a lid of some sort, for it could be changed around and confusion could arise. Put the label on the individual dish/plate.
- Serve the person who has food hypersensitivity at the same time the other guests in the party are served.
- Encourage guests with allergies or intolerances to enter into a good dialogue. A simple statement printed on the menu can convey that the restaurant personnel are knowledgeable on the subject: “Do you have a food allergy? Ask us for help!”

Correct and identical knowledge amongst all employees

- Have a food safety supervisor who is responsible for teaching employees and for updating the information and the menus.
- New employees need information on food allergies, intolerances and other hypersensitive reactions.
- All employees periodically need to repeat food-hypersensitivity training.
- The chain is only as strong as its weakest link:
  - Serving staff, waiters’ assistants, etc.
  - Chef, sous-chefs, cooks
  - Waiters
  - Cleaning staff, dishwashers
  - Maître d’hôtel, head waiter
  - Conference host
  - Management

Limit the use of the most common allergens

For the most common allergenic ingredients, there are variants of food products that do not contain the allergens, or which contain fewer allergens: gelatine that is not derived from fish, grill flour and batter without milk powder, vegetable oil without soya/nuts/peanuts, bouillon without processed meats.

(PS: As long as you are using fish, nuts and other allergens in the kitchen, there will always be a certain risk of contamination between foods. Guests at a buffet or salad bar can also splatter and cross-contaminate dishes. Explain to allergic guests how the food is made and state the possibilities for contamination. This will enable guests to make informed decisions about what is safe to eat. It is not always possible to offer safe enough food to certain allergic people. Be honest about this, and apologise for the fact in a polite, friendly way.)

Keep replacement products on hand

On the following page you will find examples of replacement products for some of the most common allergic ingredients.
How should food business operators accommodate for food hypersensitivity?

### Common Allergenic Ingredients

<table>
<thead>
<tr>
<th>Common Allergenic Ingredients</th>
<th>Replacement Products</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk</strong></td>
<td></td>
</tr>
<tr>
<td>Oat milk and products made from oats (whipping cream, cooking cream, ice cream, vanilla sauce made with oats)</td>
<td>Coconut milk and products made from coconut</td>
</tr>
<tr>
<td>Rice milk and products made from rice, such as desert rice whip in a spray can</td>
<td>Vegetable products, such as margarine without milk</td>
</tr>
<tr>
<td>Soya milk and products made from soya, such as soya yoghurt, ice cream, spreadable (soft) cheese, hard cheese</td>
<td>For lactose intolerance:</td>
</tr>
<tr>
<td>- Information booklet by NAAF</td>
<td>- Lactose-free yoghurt, -milk, -cooking cream, and -whipping cream</td>
</tr>
<tr>
<td>- Pine nuts and peanuts</td>
<td>- Buckwheat kernels/Buckwheat flour – mostly used in soups and porridge, but can also be used in baked bread and breakfast cereals.</td>
</tr>
<tr>
<td>- Cornflakes, rice flakes</td>
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</tr>
<tr>
<td>- Oats, wheat grains</td>
<td>- Oats, wheat grains</td>
</tr>
</tbody>
</table>

### Egg

<table>
<thead>
<tr>
<th>Egg</th>
<th>Snack alternatives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baking powder – improves binding between ingredients. To replace one 1 egg, use 1 tablespoon of baking powder, or alternatively, 1/3 tablespoons vegetable oil mixed with 1 1/2 tablespoons water and 1 teaspoon baking powder.</td>
<td>Pretzels, potato chips (not fried in peanut oil), goldfish crackers, dried fruit, rice chips, crackers, sweet biscuits, olives, cheese</td>
</tr>
<tr>
<td>Egg replacement powder – 1 teaspoon is mixed with 2 tablespoons of water.</td>
<td>- Chia seeds – improves binding between ingredients and adds moisture and texture to cake batter. 1/2 mashed banana replaces 1 egg.</td>
</tr>
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</tr>
<tr>
<td>Chia seeds – improve binding between ingredients in cakes, sauces and so forth. 3 tablespoons water mixed with 1 tablespoon white chia seed meal replaces 1 egg.</td>
<td>- Flaxseed meal + 2 tablespoons water replaces 1 egg.</td>
</tr>
<tr>
<td>(An excellent source of protein and omega-3.)</td>
<td>- Gelatin – can be used to replace egg whites in non-cooked desserts such as pudding, mousse and cream deserts. 1 tablespoon gelatin + 3 tablespoons of warm water replaces 1 egg.</td>
</tr>
<tr>
<td>Farris mineral water – can be used in waffles and pancakes. The carbon dioxide adds extra volume (fluffiness) to the food. Farris can also be added to minced (ground) meats such as meatballs and meat puddings.</td>
<td>- Ammonium bicarbonate (hornsalt) – is a raising agent for crisp baked goods.</td>
</tr>
<tr>
<td>- Agar agar – a vegetable thickener. 1 tablespoon agar agar + 3 tablespoons warm water to replace 1 egg.</td>
<td>- Flaxseed meal + 2 tablespoons water replaces 1 egg.</td>
</tr>
</tbody>
</table>

### Peanuts and Nuts

#### Alternatives in baked goods and other food products:
- Pine nuts, pumpkin seeds, soya beans, bread crumbs, toasted oats, almond essence/extract.
- Other gluten-free prepared products or semi-prepared products:
  - Gluten-free flour mixes
  - Gluten-free cake mixes
  - Gluten-free meat, rolls, baguettes, crispbread (knekkebrød), hotdog buns, pizza crusts
  - Gluten-free snacks: chocolate, crackers, sweet biscuits and the like
  - Gluten-free pasta
  - Gluten-free breakfast cereal/müsli

### Gluten

<table>
<thead>
<tr>
<th>Gluten-free grain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Amaranth flour – not a grain, but used like flour in foods ranging from baked bread to pancakes, as a thickener in sauces and in porridge or pudding. Amaranth can easily be mixed with other types of flour. Has a mildly nutty and earthy flavour.</td>
</tr>
<tr>
<td>- Buckwheat kernels/Buckwheat flour – mostly used in soups and porridge, but can also be used in baked bread and breakfast cereals.</td>
</tr>
<tr>
<td>- Garfava flour – flour made from chickpeas (garbanzo beans) and fava beans. When mixed with other gluten-free flour types, it can provide an excellent replacement for wheat flour. Garfava flour functions well as a thickener in soups and sauces, and in baking for meat and fish.</td>
</tr>
<tr>
<td>- Guar gum (guar flour) – used as a thickener, often in prepared products. Made from guar beans (also called cluster beans).</td>
</tr>
<tr>
<td>- Gluten-free oats – oats are gluten-free to begin with, but due to contamination from other grain types during the production process, we advise that you only use specially labelled gluten-free oats.</td>
</tr>
<tr>
<td>- Millet flour/millet flakes – work well in baked goods and breakfast cereals. Can also be used to replace other grain types in soups, meat puddings and the like.</td>
</tr>
<tr>
<td>- Carob flour – neutraly flavoured binding agent and thickener. Made from the seeds inside the fruit pods of carob trees (also called St John’s bread or locust bean tree). Carob flour (or locust bean gum) improves the consistency of gluten-free baked goods.</td>
</tr>
<tr>
<td>- Jyttemel (lytte flour) – a trademarked flour mixture containing buckwheat, rice, sugar beet fibre, psyllium seed husks and potato starch.</td>
</tr>
</tbody>
</table>

### Other gluten-free prepared products or semi-prepared products:
- Gluten-free flour mixes
- Gluten free cake mixes
- Gluten-free bread, rolls, baguettes, crispbread (knekkebrød), hotdog buns, pizza crusts
- Gluten-free snacks: chocolate, crackers, sweet biscuits and the like
- Gluten-free pasta
- Gluten-free breakfast cereal/müsli

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46 / Information booklet by NAAF


• Bolle R., Reaksjoner på mat – et folkehelseproblem med mange uttrykkssformer. Helserådet Rapport 20/12.


• Aas K., Allergiviten – kunnskapsarkiv: www.allergiviten.no


• Information about food and health from Norwegian public authorities: www.matportalen.no/rap_til_spesielle_grupper/tema/allergiker/hva_kan_gi_allergiske_reaksjoner

• Livsmedelverkets (Swedish National food agency) information sheet about allergens: http://www.slv.se/sv/grupp1/livsmedelsforetag/Lokaler-hantering-och-hygien/Allergener/

• Nasjonalt senter for samhandling og telemedisin, Eksemkompetanse – Det åpne nettstedet for behandling av atopisk eksem: www.helsekompetanse.no/eksem/1836

• Webpage for food allergy, developed by Norwegian nutritionists, paediatricians and NAAF: www.matallergi.no

• Norsk Cøliakiforening, Gluten-free ingredients list: www.ncf.no/Glutenfri-mat/Ingredienser/default.aspx

• Sydney Children’s Hospital Randwick, Factsheets: www.sch.edu.au/health/factsheets/

• Draft for regulation of the quality of milk and dairy products, Mattilsynet
  www.matilsynet.no/mat_og_vann/merking_av_mat/generelle_krav_til_merking_av_mat/utkast_til_forskrift_om_kvalitet_paa_melk_og_meieriprodukter.11602
This booklet can be ordered from the Norwegian Asthma and Allergy Association (NAAF):

Telephone: (+47) 23 35 35 35 / faks (+47) 23 35 35 30 / email naaf@naaf.no.
Remember to state the name of the booklet and your mailing address.

The booklet can also be downloaded as a pdf in either Norwegian or English: www.naaf.no/tjenester/Bestill/
English translation: Arlyne Moi, 2014 (http://aomoi.net/arlyne/)