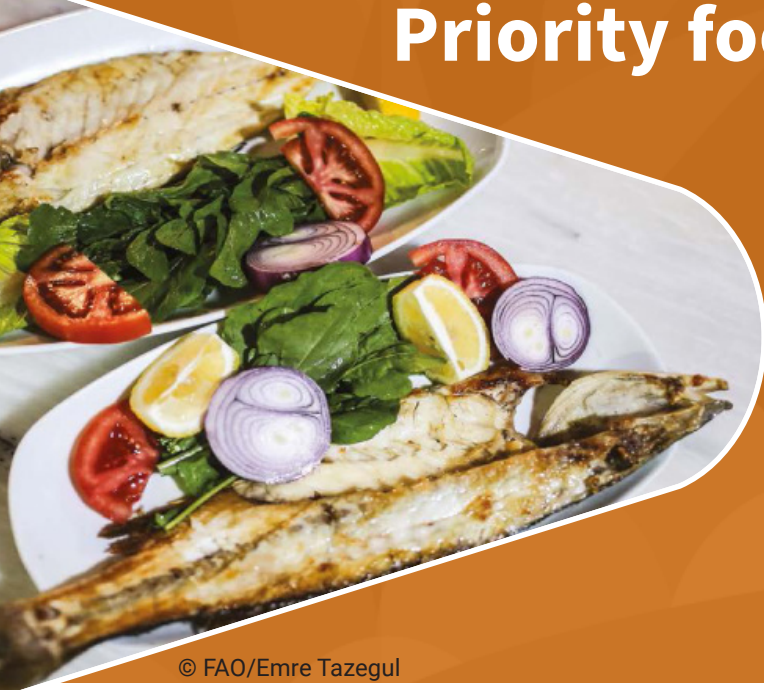


In brief: Priority food allergens



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The Risk Assessment of Food Allergens Part 1: Review and Validation of the Codex Alimentarius Priority Allergen List Through Risk Assessment provides a structured, quantitative assessment framework and recommendations for which foods should be included in a global priority list of food allergens. It was developed for the global community of scientists and risk assessors, and the risk managers or others responsible for risk decision-making and/or communication. The report:

- updates the list of priority food allergens of concern;
- defines quantitative criteria for assessing the addition or exclusion of foods from the priority list;
- provides a generic approach to assess and prioritize; food allergens of concern; and
- ensures transparency and repeatability, and facilitates any future evaluation.

This work represents among the first comprehensive global quantitative risk assessment for food allergens. It can serve as the scientific basis for the Codex Alimentarius to revise and update its related texts on food allergens. Based on the available global data and risk assessment, it provides a generic approach for the members to evaluate the food allergen with the same principle. This harmonization represents the international standard recommendations for food safety and facilitating fair trade.

Part 1 of the *ad hoc* Joint the Food and Agriculture Organization of the United Nations (FAO) / the World Health Organization (WHO) Expert Consultation on Risk Assessment of Food Allergens updated the previous scientific advice from the 1995 FAO Technical Consultation which was incorporated in the General Standard for the Labelling of Packaged Foods (GSLPF) in 1999 (section 4.2.1.4) as foods which shall always be declared.

In doing so it captures recent findings and experience in this field, which continues to evolve in line with science and risk management demands.



What are food allergies?

Food allergy is an adverse health effect arising from a specific immune-mediated response that occurs reproducibly on oral exposure to a given food.

IgE-mediated food allergies are of particular concern and a serious threat to public health as they can cause, among other consequences, potentially life-threatening anaphylaxis. Coeliac disease is a chronic digestive disease caused by non-IgE mediated immune response among genetically predisposed individuals in response to certain proteins in grains, predominantly wheat (gliadins and glutenins), rye (secalins) and barley (hordeins). Because of the prevalence of coeliac disease and its potentiality for rare but life-threatening chronic manifestations, it is often considered when evaluating food allergens.

Globally, over 220 million people must avoid certain foods because of allergies. Protecting allergic individuals from harm requires a concerted effort involving not only the provision of appropriate and accessible information to consumers, but also the commitment from health care professionals, regulatory and governance frameworks, the scientific community, and the food industry. The gravity of disease caused by food allergens and the limited treatment options underline the need to know which foods are most associated with severe food allergies.

Hazard Prioritization

A well-known, quantitative analysis methodology within the risk assessment and risk management process, adapted for IgE-mediated food allergies as a means to help guide the discussion and decision-making process for which foods should be listed as global priority allergens.

A defined prioritization process ensures transparency and repeatability, and facilitates re-evaluation when new data are available without repeating all parts of the process.

Global priority food allergens

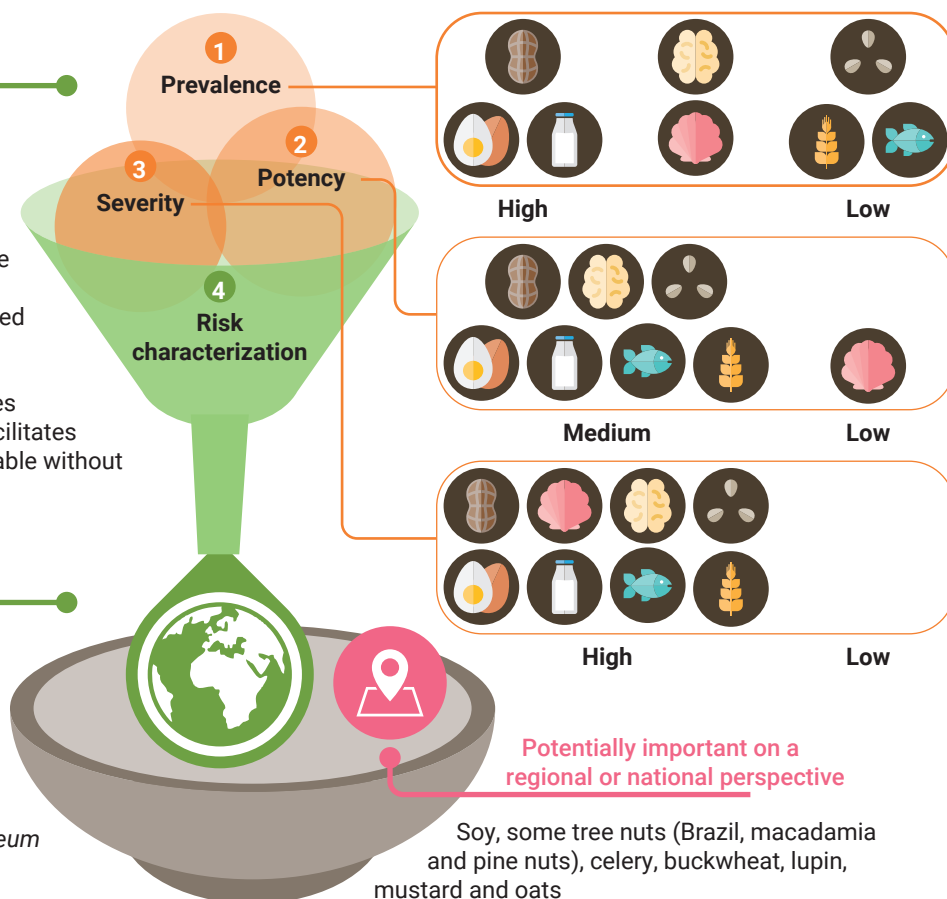
Milk, eggs, peanut, tree nuts (Hazelnut, cashew, walnut, pistachio, pecan, almond), sesame, fish, crustacea and cereal containing gluten (i.e. wheat and other *Triticum* species, rye and other *Secale* species, barley and other *Hordeum* species, and their hybridized strains)

Food allergens of concern

In 2020, allergenic foods were assessed within a structured, quantitative prioritization framework and recommendations were made regarding their potential inclusion or exclusion in a global priority list of food allergens.

The ad hoc Joint FAO/WHO Risk Assessments on Food Allergens systematically assessed, quantified and prioritized risks from foods due to IgE-mediated food allergies through a science-based process comprising three criteria:

- 1. Prevalence:** the proportion of a population known to have experienced an immune-mediated adverse reaction to food and supported by studies from different geographic regions and in unselected populations, representative with regards to gender, age and ethnicity, and so on;
- 2. Potency:** evidence of a credible cause-effect relationship establishing that the food causes food allergies and supported by scientific studies designed to assess the population distribution of doses eliciting or provoking a reaction, or the frequency dose-response of a food allergen; and
- 3. Severity:** a clinical assessment which was inferred from scientific evidence. Allergens were considered to be a common cause of severe reactions if they were reported, in three or more geographic regions, to be the cause of more than five percent of all anaphylaxis reactions presenting to emergency services.



The findings reported in this brief have been adapted from the series of expert consultations conducted under the umbrella of the ad hoc Joint FAO/WHO Risk Assessments on Food Allergens held between 2020-2023.



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More information about the work on food allergens can be found by visiting:
FAO: <https://www.fao.org/food-safety/scientific-advice/food-allergens>
WHO: <https://www.who.int/teams/nutrition-and-food-safety/>

<https://doi.org/10.2471/B09009>