

Food Safety today

The complexity of the food and agricultural system, along with the fragmentation, diversification, and de-localization of food production, have give rise to the spread of food related problems across many countries, with complex global implications for food safety and the management of emergencies.

Technological developments, the rapid distribution of food, inappropriate regulations and surveillance, have also contributed to these problems.

Food safety in the new millennium requires enhanced levels of international cooperation for the setting of standards and regulations. The Agreement on the Application of Sanitary and Phytosanitary Measures requires World Trade Organization members to conduct scientific risk assessments to set limits for health risks associated with food.

Food contamination is very common, even in the most developed countries, and foodborne diseases (e.g. campylobacteriosis and salmonellosis) have reached epidemic proportions in several Member States.

Emerging problems, such as contamination from chemicals (acrylamide and dioxines), avian flu, bovine spongiform encephalopathy, multidrug-resistant strains and aflatoxins, are creating additional concerns among both the public and decision-makers.

In particular, the contamination of food by chemical hazards is a global public health concern and is a leading cause of trade related problems internationally. Contamination may occur through environmental pollution, as in the case of toxic metals, PCBs and dioxins, or through the intentional use of chemicals, such as pesticides, animal pharmaceuticals and other agrochemicals. Food additives and contaminants resulting from food manufacturing and processing can also adversely affect health.

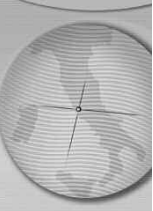
A good food safety programme, one that is properly planned, organized, managed and staffed, should ensure that:

- information on food safety is properly collected and circulated to provide the basis for policy and monitoring;
- health guidelines are constantly updated to provide assistance to countries with state-of-the-art knowledge;
- an international independent body plays a public health advocacy role in countermanding the strong economic forces acting within the areas of food production, retailing and global marketing. The European Food Safety Authority (EFSA) is the keystone of European Union (EU) risk assessment regarding food and feed safety. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent scientific advice and clear communication on existing and emerging risks.

Prevention, a major factor in the reduction of food-borne disease, is also implemented through the provision of information and education to consumers with regards to the risks present in food and safe food handling behaviours that can help minimize those risks.

Today, new technologies based on molecular biology offer an important means of rapidly diagnosing food-borne infections, in particular in the reconstruction of the chain of transmission, as well as in the detection of micro-organisms that are often difficult to culture such as *Salmonella*.

In this edition of the I.J.PH topics such as these are presented with the aim of offering a general overview of the most pertinent themes surrounding food safety in Italy and Europe in the twenty-first century. In this issue matters relating to food safety are confronted and analysed from both qualitative and quantitative points of view, such as: prevention, risk management and emergency communication.



Other investigations undertaken and written up here are applicable to both consumers and authorities alike and address questions such as: The New EU Regulations for Food Safety; The European Food Safety Authority (EFSA) - its mission, organization, functioning, as well as its main findings; the epidemiology of emerging food-borne pathogens and chemical hazards.

Food is of universal interest, and outbreaks of foodborne diseases can cause considerable emotional reactions from within the community: a scientific approach can help to ensure that control and preventative measures are adopted to ensure food safety.

This edition, which represents the works of many adept authors, offers to our readers the best and latest insights into this area; we are sure that the competence of the authors, together with the clarity of their discussions will ensure that this issue will be of great value to those involved in the management of food safety across Italy and Europe.

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