

# The importance of monitoring child health, nutrition and food hazards during the first thousand days of life



## Interview with Prof. Flavia Indrio, prof. of Pediatrics and Member of the Nutrition Committee of the European Society of Pediatric Gastroenterology Hepatology and Nutrition.

Awareness regarding the notion of food safety has raised globally and significantly in recent years, engaging the stakeholders involved in regulating and actively supervising this issue at all levels, says Prof. Flavia Indrio, member of the Nutrition Committee of ESPGHAN and professor of Pediatrics at the University of Foggia in Italy. In parallel, the expectations of consumers and advocacy groups have grown for a progressively increased and interventional role of governments, policy-makers, industry, researchers and healthcare professionals in this area of public health. Their demand to the stakeholders in decision making is for addressing food safety issues and developing adequate solutions and actions pointing at further protecting the health of food users.

It is currently an established and commonly accepted notion that food safety is not absolute, and that food safety refers to a “reasonable certainty that no harm will result from intended uses under the anticipated conditions of consumption”. This definition recognizes that zero tolerance of risks is realistically not feasible for the majority of foods and the majority of safety contexts, including food chains.

An area of food safety particularly sensitive due to its social implications refers to child nutrition, involving in particular all natural and commercial products that are related to the food provided to infants during the first thousand days of life. Therefore, including food consumed by mothers during pregnancy and infant formula, cerealbased product, fruit-based product, vegetable-based product, meatbased product consumed by infants and children during their first two years of life.

### ***It is crucial to effectively monitor the infant food chain***

The need for effective and continuously updated methods of monitoring food safety during the crucial period of the first 1000 days of life, is increasingly considered of paramount importance in public health to protect the mother-child binomial.



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The monitoring of hazards in foodstuff, covers the infant food chain from the production of primary products (fruits, vegetable and animal-derived raw materials), throughout the consumer's use (process, storage, packaging).

"I would like to emphasize the importance of key research programs like the EU funded SAFFI", says prof. Indrio. Prof. Indrio emphasizes that SAFFI will be able to raise the attention of decision makers, healthcare officers and professionals, including pediatricians, pediatric surgeons, obstetricians, nurses, midwives, dieticians and lactation consultants, on the importance of protecting infants and their families during a most critical period for the mother-child binomial. In particular, it will be important the adoption of integrated strategies, like those proposed by SAFFI, in order to establishing adequate preventive efforts and a game-changing perspective shift in order to develop and adopt efficient monitoring strategies and procedures that will be able to minimize the risks due to hazards in food throughout the first thousand days of life, as the first line of prevention in children's health.

### ***Potential Hazards in infant food***

Biological, chemical, or physical hazards can be introduced into the food supply at any time during food collection, processing, transportation, preparation, storage, and service. Understanding the hazards associated with each of these steps can significantly reduce the potential for foodborne illness. All can be prevented through an effective food safety management system. Biohazard occurs when food is contaminated with microorganisms.

Many microorganisms are beneficial; however, under the right conditions, some can cause foodborne illness. Foodborne illness can be caused by consumption of food or water contaminated with pathogenic microorganisms, which include bacteria and their toxins, fungi, viruses, and parasites. Food can be contaminated both at the source as raw material and during food processing, storage, and distribution. Infected or pathogen-carrying individuals and the environment, through food-contact surfaces and structures, can spread microorganisms into raw or processed foods.

Food contaminants include environmental contaminants, food processing contaminants, unapproved adulterants, food additives, and migrants from packaging material. Generally, chemicals used for pest control or for cleaning and sanitizing food contact surfaces and food preparation equipment can contaminate food.

A variety of foreign materials in food products are hazardous to individuals, causing illness or injury. Foreign items may be unintentionally introduced into food products, or naturally occurring items may not be separated along a food processing line and be excluded from consumption. Materials normally absent from food products include metal fragments in ground meat, bone chips, pieces of product packaging, stones, glass or wood fragments, insects or other dirt, and personal items

Prof. Indrio ends her interview emphasizing the role of the European Union funded project SAFFI (Safe Food For Infants), in addressing the important problem of hazards in infant food. SAFFI is in fact developing an integrated approach to enhance the identification, assessment, detection and mitigation of safety risks raised by microbial and chemical hazards all along EU and China infant food chains.

**TO READ MORE ON THIS AND THE RESERCH OF Prof. INDRIO:**

**<https://www.sciencedirect.com/science/article/pii/S2667009722000124>**



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# SAFFI: THE SINO-EUROPEAN CONSORTIUM PARTNER CENTERS



- Coordination: French National Research Institute for Agriculture, Food and Environment (INRAE),
- Five international infant food companies (Friesland Campina, HiPP, YIOTIS, Beingmate, YFFC)
  - Two food safety authority institutions (ZAIQ and ANSES)
  - Three European technological SMEs (CremeGlobal, Computomics, BDS)
  - The Union of 49 National European Societies of Pediatric (EPA-UNEPSA)
  - Seven leading European and Chinese academic institutions (WU, UNITO, IRTA, IVV; ZJU, ZAAS, JAAS)



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