ILSI Europe
International Life Sciences Institute

ILSI Europe Scientific Portfolio

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Exposure & Intake Assessment

The food that we eat may contain contaminants alongside nutrients and food additives. Dietary intake and exposure assessments are important factors of any risk and benefit analysis for food. ILSI Europe aims to be a global centre of expertise in this field so as to improve the estimates of dietary intake and to contribute to more relevant nutrition recommendations and safety assessments.

Sometimes when nutrients are added to food we might not assimilate or absorb them correctly due to potential interactions with other components. This means that the potential benefits of food fortification could be compromised. ILSI Europe investigates both of these processes to understand more about what is on our plates and how we are affected by it.

FOOD INTAKE ASSESSMENT METHODOLGY

As the saying goes, "We are what we eat", but do we really know the composition of our food? And importantly, how much of it do we actually ingest? Assessing the exposure of individuals to the many different substances and agents in food (whether intentionally or non-intentionally added) is a key component of any risk-benefit assessment for ensuring safe and beneficial food for the consumer.

Evaluation of New Methods for Dietary Intake Assessment

Many new tools and applications are being developed to assess the diets of individuals and for research aims. However, these new technologies for diet assessment vary widely in terms of sources and quality of data. This activity will help us to better understand the relative merits of specific new tools and applications currently available for dietary intake assessment. Ultimately, this project will provide guidelines and criteria for developers that will lead to improved quality of dietary intake assessment tools.

Status: Completed

Impact of Modifying Nutrient Intakes

A range of dietary changes in nutrient and food intake are recommended to promote optimal health and to prevent diseases like obesity. To help consumers meet these recommendations, food manufacturers and retailers have been encouraged to adapt the nutritional composition of their products. ILSI Europe is identifying preferred modelling approaches to estimate the impact of changes in nutritional composition of certain foods such as salt, sugar, omega-3 and vitamin D on economics and population health.

Status: Manuscript in preparation

Occurrence of Additives and Consumer Loyalty

Many substances such as additives, flavours, enzymes and food contact materials are proven safe and their safety limits approved for use in foods.
Most of these approvals though rely on the assumption that all foods in a category where the substance is permitted will contain that substance and at the maximum permitted levels.
This is obviously not true as food producers utilise such additives provided they are necessary in a given product and at various concentration well below the maximum allowed. This distorted exposure assessment does not allow for a realistic long-term exposure which reflects patterns of food additives and other substance taking into account the range of possible concentrations in food, the proportion of foods in a given category that contain the substance, and the effect of consumer loyalty on individual consumption behaviour.
This activity will aim at reviewing the available information and to considering the potential methods for incorporating occurrence data and quantitative information about consumer loyalty into realistic exposure models.

Status: New activity

FOOD INTAKE DATA

Do Europeans consume the recommended amount and types of nutrients? Food intake data can be used to build dietary guidance and to evaluate the risks and benefits associated with food intakes. ILSI Europe examines population nutrient intakes and assesses how nutrient intakes affect nutrient status and related health outputs, and makes risk-benefit assessments regarding food fortification.

Omega-3 & Omega-6 PUFA Intake, Ratios & Health Effects

Intake of polyunsaturated fatty acids (PUFAs) plays a key role for health: from the development of the central nervous system to the reduction of risk of cardiovascular diseases. However, does the European population meet nutritional requirements in terms of PUFAs? And are the requirements aligned across EU countries? ILSI Europe has reviewed the current omega-3 and omega-6 PUFA intakes across Europe in vulnerable groups and compared the results with current recommendations. In a second and third publication in this activity's series, the importance of ratios *versus* absolute amounts and the relationship between arachidonic acid and health outcomes will be discussed.

Status: Manuscript published
Two manuscripts in preparation

Iodine Intake in Europe

More than two billion people worldwide are at risk of iodine deficiency. Dietary iodine intake is required for the production of the thyroid hormone. The adverse effects of iodine deficiency – goitre, cretinism, intellectual impairments, growth retardation, neonatal hypothyroidism and increased incidences of pregnancy loss and infant mortalities are well known and easily corrected. However the number of people at risk may increase in the coming years due to current health strategies to decrease salt intake. This activity will review iodine intakes across Europe and compare it with the current recommendations and will propose new strategies to improve iodine intake if needed.

Status: Manuscript in preparation