



## Review

## Consensus document on the prevention of methylmercury exposure in Spain

### Study group for the prevention of Me-Hg exposure in Spain (GEPREM-Hg)<sup>☆</sup>



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## ABSTRACT

The beneficial effects of fish consumption in both children and adults are well known. However, the intake of methylmercury, mainly from contaminated fish and shellfish, can have adverse health effects. The study group on the prevention of exposure to methylmercury (GEPREM-Hg), made up of representatives from different Spanish scientific societies, has prepared a consensus document in a question and answer format, containing the group's main conclusions, recommendations and proposals. The objective of the document is to provide broader knowledge of factors associated with methylmercury exposure, its possible effects on health amongst the Spanish population, methods of analysis, interpretation of the results and economic costs, and to then set recommendations for fish and shellfish consumption. The group sees the merit of all initiatives aimed at reducing or prohibiting the use of mercury as well as the need to be aware of the results of contaminant analyses performed on fish and shellfish marketed in Spain. In addition, the group

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believes that biomonitoring systems should be set up in order to follow the evolution of methylmercury exposure in children and adults and perform studies designed to learn more about the possible health effects of concentrations found in the Spanish population, taking into account the lifestyle, eating patterns and the Mediterranean diet.

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## 1. Background, justification and objectives

Mercury is an environmental toxin that causes a wide range of harmful health effects in humans and impacts natural ecosystems. The general population is exposed to low levels of mercury. Various factors determine the appearance and severity of harmful effects, amongst them: the chemical form of mercury (elemental, inorganic, organic), the dose, age, the duration and route of the exposure, as well as environmental, nutritional and genetic factors [1–3].

The benefits of fish consumption for both children and adults are well-known. However, the intake of methylmercury (MeHg), mainly from contaminated fish and shellfish, can have adverse health effects on foetal and new-born nervous system development. Some studies have also suggested that exposure to MeHg in adults who consume large quantities of fish can cause adverse health effects, particularly cardiovascular effects [4–6].

Fish consumption in Spain is one of the highest in the world, as are its blood mercury levels, according to various recent population-based studies [6].

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