

This paper shows that marine pollution has a very large impact on the human ingestion of toxic substances. Specifically, we studied the main hydrophobic pollutants in the diet of the people of Menorca. A statistically significant association has been observed between a greater consumption of fish and shellfish, and higher concentrations of mercury in the hair of Menorcan 4-year-old boys and girls. Ninety-three per cent of their mercury ingestion comes from the consumption of these food products. This relation is consistent with the higher concentration of this metal in the fish and shellfish in areas lying near this island in comparison to the concentrations found in other seas and oceans. A significant association has also been observed between fish consumption and the accumulation of 4,4'-DDT in the serum of these boys and girls. The consumption of meat also contributes to the accumulation of this pesticide. The incorporation of organochlorine pollutants lies below the FAO/WHO recommendations, but the boys' and girls' mercury ingestion more than doubles the EFSA standards.

Considering the importance of fish consumption in the ingestion of pollutants by the children of Menorca, mainly with respect to mercury, an in-depth study has been conducted on the concentrations of this metal in fish meant for human consumption in the Balearic Islands, Alghero and Alicante (836 specimens). Generally speaking, a higher pollution was observed in the specimens from the Balearic Islands, although the levels in the specimens from Alghero were higher in some cases, depending on the species. The specimens from Alicante showed the lowest concentrations. The average mercury values of the specimens of greater forkbeard, thornback ray, tope shark, langoustine, prawn, porbeagle, dusky grouper, and common dentex collected in the Balearic Islands were higher than the reference limits published by the European Union for human consumption. In the other areas under study, no species were found with average mercury values higher than these reference levels.