

Research project IZS VE 20/11

Alimentary human exposure to cadmium: intake evaluation and risk assessment

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Cadmium is a heavy metal which is present as an environmental contaminant both naturally and deriving from agricultural and industrial sources. Own Because of its toxicity maximum acceptable limits have been stated in European regulations but EFSA recently expressed the opinion that the health guidance value for cadmium of 7 µg/kg body weight per week should be reevaluated and lowered to a tolerable weekly intake (TWI) of 2.5 µg/kg b.w., in reason of new data related to risk for adverse effects on kidney function.

The current research proposal addresses to evaluate the alimentary human exposure to cadmium and assess the risks to human health focusing on the presence of cadmium in foodstuffs in Veneto region of Italy in which eating habits well represent the whole of the Italian population, in the meanwhile having a relevant production and/or consumption of local products well known to be characterized by cadmium critical level such as horse meat, molluscs, fish, rice and vegetables. Cadmium occurrence in representative food products, and the effect of cooking procedures that could enhance or reduce cadmium assumption will be acquired. Moreover the effect of specific dietary patterns such as vegetarian diets will be explored through a risk-benefit approach.