

Advice 07-2011 of the Scientific Committee of the FASFC on the reassessment of the risks related to exposure of the Belgian population to lead

Risks for health, bound to lead exposure, were evaluated by EFSA and JECFA in 2010. These two bodies have concluded that the PTWI (Provisional Tolerable Weekly Intake) of 25 µg lead/kg body weight was no longer appropriate for the protection of health. Considering the new information on lead, the Scientific Committee has decided to reassess the risks of lead for the Belgian population and to use existing methodologies (approach Margin Of Exposure, MOE) to characterize the risks in absence of PTWI. The EFSA CONTAM Panel identified the developmental neurotoxicity in children, cardiovascular effects and nephrotoxicity in adults as critical effects for risk assessment and derived Benchmark Dose Lower Confidence Limits (BMDL) values for these critical effects. The lowest BMDL value for lead dietary intake was derived from lead concentration in blood. This is 0,5 µg lead/kg body weight/day for developmental neurotoxicity in children. In the current evaluation, different routes of exposure were considered to calculate the total exposure to lead of adults and children. Dietary exposure is the main route of exposure to lead for the general population. Lead exposure through ingestion of soil particles and dust is more important than dietary exposure in children living in urban areas. In some populations, exposure may be stressed because of certain cultural factors (use of crafts kitchen utensils and illicit cosmetics). Margin Of Exposure values between 1.5 and 5.4 were estimated for the total exposure to lead of adults using the BMDL values proposed by EFSA. In children, the determined MOE's were less than 1 indicating that harmful effects on neurological development can not be excluded. The Scientific Committee makes recommendations on the monitoring of lead in food and on the setting up of specific studies. It supports initiatives to raise awareness of consumers to the risk of different sources of exposure.

The full text is available on this website in dutch and in french, respectively under the section "Wetenschappelijk Comité/Adviezen" and "Comité scientifique/Avis".