

Scientific Committee on Health and Environmental Risks (SCHER)

Request for an opinion on the standards of lead in drinking water

Background

Lead is a cumulative poison that can severely affect the central nervous system. With adults, about 10% of ingested lead is absorbed but with children this figure can be 4-5 times higher. It has been shown to cause neurological deficits in children, affecting the IQ by 3 to 4 points for each 10 µg Pb/dL increase in the blood levels of children.

In 1993, WHO proposed an amended guideline value for lead in drinking water of 10 µg Pb/L, based upon an overall assessment of studies of human populations. In view of the revision of the 1980 Drinking Water Directive in 1998, DG ENV (then DG XI) requested the advice of CSTE on the application of this value and on to the time frame in which the necessary changes should take place in order to minimize the potential health risk resulting from water with concentrations of lead at the 1980 directive's maximum acceptable concentration (50 µg/L).

The Plenary Meeting of CSTE considered in 1994 that exposure of man to lead should be minimized on health grounds. It was agreed that, in conformity with the precautionary principle, the maximum level of lead in drinking water should be ultimately reduced to 10 µg/L as recommended by WHO. From an ecotoxicity point of view, a concentration of lead in water around 10 µg/L and perhaps even 1 µg/L would be a better quality objective than the present guideline of 50 µg/L.

In the revised drinking water, adopted by the Council in 1998, a maximum concentration of lead of 10 µg/L was laid down, to be applied from 25 December 2013 on.

In 2008, WHO confirmed the guideline value for lead in drinking water (10µg/L), fully taking into account that the use of lead-containing additives in petrol is decreasing, that lead concentrations in air are declining, and that lead intake from drinking water constitutes a greater proportion of the total intake.

Terms of Reference

In its letter of 18 March, the Institut Européen pour la gestion raisonnée de l'environnement (IEGRE) questions the rationale for this 10µg/L limit and asks the Commission to raise the limit concentration of lead in drinking water to "maybe 15 or 20 µg/L". The reason behind this request is that the strong reduction of the sources of lead other than water makes possible an increase of lead in the drinking water while keeping the same total intake.

Furthermore, IEGRE questions WHO's method used for deriving the lead standard of 10 µg/L and IEGRE states that since lead is considered to be a parameter without threshold, there is no need to decrease the provisional tolerable weekly intake (PTWI).

IEGRE requests this matter to be considered by SCHER

Taking into account

- the application of a standard of 10 µg Pb/L from 25 December 2013 on
- the toxicological and epidemiological evidence on lead
- the confirmation of the lead guidelines for drinking water by WHO in 2003, referring clearly to the decrease of use of lead in car fuels and in lead-containing solder in the food industry
- sensitive subgroups of the population such as pregnant women, infants and children

DG ENV seeks SCHER's opinion on IEGRE's request of 18 March 2010, asking more in particular whether, following the reduction of the use of lead in car fuels and in the food processing industry, a change of the lead standard of drinking water, relaxing the standard from 10 µg/L to 15 or 20 µg/L will not cause a potential risk for human health and is required in the EU legislation.