Toxicological reference point - Statement on potential risks from cadmium in the diet of infants

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21. As part of their 2009 assessment, the CONTAM Panel established a new tolerable weekly intake (TWI) for cadmium. Using a group meta-analysis based on urinary b2-microglobulin as a marker for kidney damage, a BMDL5 of 1 mg U-Cd/ g creatinine was calculated. In order for the U-Cd concentration of the population to remain below 1 mg/ g creatinine by the age of 50 years, dietary exposure to Cd should stay below 0.36 mg/kg bw/day or 2.52 mg/kg bw/week. Since Cd has a long biological half- life, CONTAM established a TWI of 2.5 mg/kg bw.

22. The Joint FAO/WHO Committee on Food Additives (JECFA, 2011) established a provisional tolerable monthly intake (PTMI) for cadmium of 25 m g/kg bw, which is equivalent to ~6 mg/kg bw/week or 0.8 mg/kg bw/day. This was a dietary level associated with a urinary level of less than 5.24 mg Cd/g creatinine, which was not associated with increased excretion of b2-microglobulin in humans.

23. In 2011, EFSA produced a scientific report that compared the approaches taken by itself and JECFA to establish a HBGV for cadmium (EFSA, 2011a). EFSA concluded (EFSA, 2011b) after reviewing the calculations that the major source of variation between the two approaches was the choice of toxicodynamic variability function. EFSA upheld its own justification for the lower HBGV "… in order to ensure a high level of protection of consumers, including subgroups of the population such as children, vegetarians and people living in highly contaminated areas …" but pointed out that adverse effects were unlikely to take place in an individual at current dietary Cd levels.