

Risk characterisation

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Food

84. Mean total exposure to mercury from food for women of child-bearing age ranges from 0.13-0.29 µg/kg bw/week, whilst exposure in high consumers (97.5th percentile) ranges from 0.62-0.84 µg/kg bw/week. Without considering exposure from non-dietary sources and assuming all mercury is in the form of MeHg, these estimates are below the EFSA TWI of 1.3 µg/kg bw for MeHg (EFSA, 2012).

Drinking water

85. The 97.5th percentile mercury exposure from drinking water for a woman of childbearing age in England & Wales, Scotland and NI is 0.027, 0.0091

and 0.0045 µg/kg bw/week respectively. Assuming all the drinking water mercury is in the form of MeHg, compared to the EFSA TWI (1.3 µg/kg bw), these exposures represent 2.1 %, 0.70 % and 0.35 % of the TWI.

86. The exposures from drinking water alone are far below the TWI. The 97.5% percentile water consumption in women of childbearing age was used and hence the exposures calculated are considered conservative.

Air

87. An average adult female is at worst expected to be exposed to 0.031 µg/kg bw/week of mercury if they live near an urban industrial site. This exposure is equivalent to 0.78% of the inorganic mercury TWI (4 µg/kg bw) and 2.38% of the MeHg TWI (1.3 µg/kg bw). The industrial site air mercury concentration is 5.7 times higher than the urban background concentration so for the general population this value is conservative.

Soil

88. Only soil mercury values from England were used to estimate the UK's exposure to mercury from soil as there were no values available for Scotland, Wales and NI. The exposure to mercury from soil in both urban and non-urban regions is presented in Table 5 and shown as a percentage proportion of the EFSA TWI's for MeHg and inorganic mercury.

Table 5. Median and 75th percentile exposure to soil mercury in urban and non-urban regions as a proportion of the inorganic mercury and MeHg EFSA TWI's.

Median / 75th percentile	Region	Mercury exposure (µg/kg bw/week)*	% inorganic mercury TWI (4 µg/kg bw)	% MeHg TWI (1.3 µg/kg bw)
Median	Non-urban	0.00060	0.015	0.046
Median	Urban	0.0017	0.042	0.13

75th percentile	Non-urban	0.0011	0.028	0.086
75th percentile	Urban	0.0032	0.081	0.25

89. The 75th percentile exposure to mercury through soil ingestion is far below the TWIs and therefore of low concern for the general population.

90. There is uncertainty regarding sub-populations that exhibit pica behaviour that may regularly consume soils/clays containing mercury; however, due to a lack of data this is not incorporated into the risk assessment.