

Cadmium in the Maternal Diet - Conclusions

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54. Exposure to high levels of cadmium during pregnancy has been associated with adverse effects such as hypertension, pre-eclampsia, micronutrient deficiency in the mother, and adverse birth outcomes for the fetus. Hypertension has also been reported in animal studies showing pregnant animals are more sensitive to the toxicological effects of cadmium in comparison to non-pregnant animals, while pre-eclampsia has been observed in mice with high blood concentrations of cadmium.

55. As cadmium accumulates within the body, previous exposures will determine the body burden so, for example, it should be noted that women who give up smoking while pregnant will still carry a higher body burden of cadmium than women who have never smoked.

56. Food is the main source of cadmium for non-smoking women of maternal age who have never smoked. In this assessment, breads, miscellaneous cereals, and potatoes make the highest dietary contribution to cadmium exposure. Cadmium intake via other routes such as water, soil, and dust only contribute a small amount to total exposure. Taking the total amount of exposure from the TDS, the mean percentage and 97.5th percentile when compared to the EFSA TWI of 2.5 µg/kg bw/week were 22-58% and 58-100% respectively.

57. Overall, cadmium in the maternal diet does not appear to be a health concern.

58. However, consumption was based on data from women of childbearing age and therefore may not be fully representative of the maternal diet, leading to an under/overestimation of the actual exposure. However, it should be noted that use of the 97.5th percentile is a conservative approach in relation to the HBGV, as it is unlikely that every commodity consumed would be in the 97.5th percentile.

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