

COT statement on the potential risks from cadmium in the maternal diet: Lay Summary

In 2019 the Scientific Advisory Committee on Nutrition (SACN) agreed to conduct a risk assessment on nutrition and maternal health focusing on maternal outcomes during pregnancy, childbirth and up to 24 months after delivery; this would include the effects of chemical contaminants and excess nutrients in the diet. The Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) were asked to review the risks of toxicity from chemicals in the maternal diet.

Cadmium is a heavy metal found widely in the environment, coming from both natural sources, such as volcanic activity, and human activities, such as the smelting of metals. Cadmium in the soil, water and air enters the human food chain through being taken up by crops, which are consumed by food animals. Once in the body, this metal accumulates over many years, where it may cause damage to the kidneys and loss of bone tissue. It can also cause cancer.

Those of childbearing age (16-49 years) can be exposed to cadmium from food, drinking water, air, dust and ingested soil. Smoking is the main non-dietary source of exposure of cadmium and can lead to a similar internal exposure as the obtained from the diet.

In 2009, the EFSA CONTAM panel established a tolerable weekly intake (TWI) based on the adverse effect on the kidneys, to determine the level of exposure of people below which there would be no cause for concern. The TWI is defined as the amount of cadmium that can be taken in by a person every week throughout their lifetime without causing adverse effects on health. This value was very low at 2.5 micrograms (millionths of a gram) per kilogram body weight. The COT had previously concluded that the EFSA TWI for cadmium was an acceptable value to use for risk assessment.

The COT concluded that the levels of cadmium in water, soil and dust only contribute a small amount of exposure and overall, cadmium in the maternal diet

does not appear to be a health concern.

The COT highlighted that the consumption data used for the exposure assessment was for women of childbearing age and therefore may not be fully representative of the maternal diet, leading to an under/overestimation of the actual exposure. The COT also noted that women who give up smoking while pregnant will still carry a higher body burden of cadmium than those who had never smoked.

The full COT statement can be found at: [Cadmium in the Maternal Diet - Introduction | Committee on Toxicity \(food.gov.uk\)](#)