

Dietary cadmium may be linked with breast cancer risk

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Dietary cadmium, a toxic metal widely dispersed in the environment and found in many farm fertilizers, may lead to an increased risk of breast cancer, according to a study published in *Cancer Research*, a journal of the American Association for Cancer Research.

Cadmium occurs at low concentrations naturally, but scientists are concerned because contamination of farmland mainly due to atmospheric deposition and use of fertilizers leads to higher uptake in plants.

"Because of a high accumulation in [agricultural crops](#), the main sources of dietary cadmium are bread and other cereals, potatoes, root crops and vegetables," said Agneta Åkesson, Ph.D., associate professor at Karolinska Institutet in Sweden. "In general, these foods are also considered healthy."

For the current study, Åkesson and colleagues observed 55,987 women for more than 12 years. They estimated the dietary cadmium exposure using a food frequency questionnaire. During the follow-up period, researchers observed 2,112 incidences of breast cancer including 1,626 estrogen receptor-positive and 290 estrogen receptor-negative cases.

Cadmium consumption was divided into three groups with the highest levels of exposure compared with the lowest. Overall, a higher exposure to cadmium via diet was linked with a 21 percent increase in breast cancer. Among lean and normal weight women, the increased risk was

27 percent.

Both estrogen receptor-positive and negative tumors had the same risk increase at roughly 23 percent. Åkesson said that women who consumed higher amounts of whole grain and vegetables had a lower risk of [breast cancer](#) compared to women exposed to dietary cadmium through other foods.

"It's possible that this healthy diet to some extent can counteract the negative effect of cadmium, but our findings need to be confirmed with further studies," said Åkesson. "It is, however, important that the exposure to [cadmium](#) from all food is low."

Provided by American Association for Cancer Research

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