

Cadmium investigated as cause of endometrial cancer

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McDonald's announced a recall recently of 12 million "Shrek"-themed collectible glasses because traces of the toxic metal cadmium were found in them. Cadmium, a silver-white metal, is found in many substances, including certain foods and batteries, and experts believe that it might be a carcinogen. In a new study, University of Missouri researchers will investigate cadmium's potential for causing endometrial cancer.

Jane McElroy, an assistant professor of family and community medicine, and a team of scientists at MU's Research Reactor, College of Veterinary Medicine and chemistry department were recently awarded a \$708,000 grant from the American Cancer Society to study the metal.

"All people will have some [cadmium](#) in their system," McElroy said. "We're questioning the varying amounts people have and looking to see if this could be associated with cancer."

In 2003, McElroy led a study that concluded that women with higher levels of cadmium in their bodies were at higher risk for developing [breast cancer](#) as compared to women with lower levels. She believes that the same could hold true for endometrial cancer, one of the most prevalent types of gynecological cancer, which affects one in 40 women in the U.S.

MU researchers will gather endometrial cancer risk factor data and biospecimens from 750 women diagnosed with endometrial cancer who are on cancer registries in Missouri, Arkansas and Iowa. A group of 750 women not diagnosed with endometrial cancer will serve as the study's control.

Researchers will determine how much cadmium the [women](#) have been exposed to in their lifetime by analyzing urine and saliva samples. They also will consider [genetic factors](#) during the study.

"Having an understanding of the mechanisms that drive endometrial [cancer](#) could lead to the development of pharmaceuticals or other interventions to prevent and treat the disease," McElroy said.

The results could lead to changes in consumer choices and personal behavior. Eighty percent of human-produced cadmium in the environment is a byproduct of nickel-cadmium batteries. Production and disposal of the batteries can cause cadmium to enter the air, soil and food supplies. Foods such as shellfish, kidney and liver are known to have the highest concentration of cadmium, and smoking is known to double a person's cadmium exposure.

Provided by University of Missouri-Columbia

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