

Clues to why most survived China melamine scandal

February 13 2013, by Luran Neergaard

(AP)—Scientists wondering why some children and not others survived one of China's worst food safety scandals have uncovered a suspect: germs that live in the gut.

In 2008, at least six babies died and 300,000 became sick after being fed infant formula that had been deliberately and illegally tainted with the industrial chemical melamine. There were some lingering puzzles: How did it cause [kidney failure](#), and why wasn't everyone equally at risk?

A team of researchers from the U.S. and China re-examined those questions in a series of studies in rats. In findings released Wednesday, they reported that certain [intestinal bacteria](#) play a crucial role in how the body handles melamine.

The intestines of all mammals teem with different [species of bacteria](#) that perform different jobs. To see if one of those activities involves processing melamine, researchers from the University of North Carolina at Greensboro and Shanghai Jiao Tong University gave [lab rats](#) antibiotics to kill off some of the germs—and then fed them melamine.

The antibiotic-treated rats excreted twice as much of the melamine as rats that didn't get antibiotics, and they experienced fewer [kidney stones](#) and other damage.

A closer look identified why: A particular intestinal germ—named *Klebsiella terrigena*—was metabolizing melamine to create a more toxic

byproduct, the team reported in the journal *Science Translational Medicine*.

Previous studies have estimated that fewer than 1 percent of healthy people harbor that [bacteria species](#). A similar fraction of melamine-exposed children in China got sick, the researchers wrote. But proving that link would require studying stool samples preserved from affected children, they cautioned.

Still, the research is pretty strong, said microbiologist Jack Gilbert of the University of Chicago and Argonne National Laboratory, who wasn't involved in the new study.

More importantly, "this paper adds to a growing body of evidence which suggests that microbes in the body play a significant role in our response to toxicity and in our health in general," Gilbert said.

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