

## Melamine in Food Products Manufactured in China

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<http://emergency.cdc.gov/agent/melamine/chinafood.asp>

News reports and the World Health Organization (WHO) state that tens of thousands of infants in China who consumed infant formula contaminated with melamine are suffering from urinary tract stones, kidney damage, and kidney failure. For more information visit the Food and Drug Administration website.

### **What is melamine?**

Melamine is a synthetic chemical with a variety of industrial uses including the production of resins and foams, cleaning products, fertilizers and pesticides. It does not occur naturally in food.

### **Why is melamine dangerous in food?**

Animal studies have demonstrated that exposure to low levels of melamine produced no observable toxic effects. Exposures to high levels of melamine, or exposures to lower doses of melamine together with certain other chemicals, have caused urinary tract problems in animals. These have included urinary tract and kidney crystal and stone formation, and kidney failure. Exposures of animals to high doses of melamine over long time periods (years) have been associated with cancer of the bladder.

### **Should I be worried about food products purchased or consumed in the United States?**

The United States does not allow melamine to be used as a food ingredient. Most reports of melamine in food products and of health problems related to melamine in food products have centered in China. The US Food and Drug Administration (FDA) is working together with local, state, federal, and international agencies to ensure the safety of the American food supply including broadening its domestic and import sampling and testing of milk-derived ingredients and finished food products containing milk, such as candies, desserts, and beverages that could contain these ingredients from Chinese sources. As of October 6, 2008, FDA testing of milk-based products imported into the United States from China had found melamine contamination in only a few products (e.g., White Rabbit Creamy Candies and Mr. Brown's coffee mixes). For current information on whether food products purchased in the U.S. might pose a concern about melamine, visit the Food and Drug Administration website.

### **Why are infants particularly affected?**

Infants may be more affected than other people because formula is their primary food source and they therefore consume more melamine per unit of body weight than older children and adults who consume a variety of foods.

## **What should I do if I believe I or my child may already have been exposed to melamine, for example, during travel to China?**

See a doctor right away if you or your infant has any of the following symptoms: stomach pain; vomiting; fever; irritability or excessive crying; blood, crystals, or particles in urine; painful urination; little or no urine; swelling of hands, feet, or face.

## **If I'm pregnant or breastfeeding and think I may have been exposed to melamine, would it be toxic to my baby?**

If you are pregnant and have already ingested some of these listed products or you are breastfeeding while ingesting the listed products, discontinue their use. Effects on the unborn child are unknown. Melamine only stays in the body for a few days. The effects on the kidneys of the formula-fed infants in China are thought to result from continuous use of the products containing relatively high concentrations of melamine over many days.

## **Should my child or I be tested for melamine exposure?**

Laboratory tests for melamine in blood serum and urine exist but are still investigational and not yet commercially available. Because many people are exposed to very small, nontoxic amounts of melamine from different sources in the environment and industry, detection of melamine in the body would not necessarily predict future illness.

## **How long does melamine stay in the body?**

Scientists do not know exactly how long it takes the human body to eliminate melamine. Animal studies suggest that excretion is fairly rapid—for example, half of the total quantity of melamine consumed was eliminated in 4 hours in pigs and 3 hours in rats.

## **How should health care providers treat potential melamine exposures?**

The most important action is to stop any ongoing exposure. Specific laboratory and imaging studies can be used based on the patient's symptoms, for example to evaluate kidney function or urinary stones.

## **What is CDC's advice for travelers to China?**

Because of uncertainties related to dairy products in China at this time, CDC recommends that you do not consume any dairy products produced in China, including all brands of infant formula, milk or other drinks that contain milk products, food, such as yogurt or ice cream that could be milk-based or contain a large amount of milk or milk products. Many foods and drinks including candies, crackers, and desserts may contain milk or milk products. Ingredients on the food or drink label that suggest milk or milk products include milk, milk powder, whey, lactose, and casein. Additional advice for travelers is available in Travel Notice: Melamine in Chinese-Manufactured Infant Formula.

## **Where can I get more information about melamine?**

For more information visit the Food and Drug Administration website.