

Some “Lead-Free” Pottery Can Still Taint Food

Colorful pottery may look nice on the dining room table. But beware: it can cause serious harm if it can contaminate food placed in it with lead.

Although we’re all exposed to small amounts of lead during our daily routine, exposure to large amounts can cause lead poisoning, a dangerous condition that occurs when the body absorbs lead into the bloodstream.

The Food and Drug Administration (FDA) says it has confirmed reports from local and state agencies that traditional ceramic pottery made by several manufacturers in Mexico—and labeled “lead free”—in fact contains lead.

Agency investigators have in some cases found that the pottery exceeded FDA’s limits for “leachable” lead—lead that could get into food that comes in contact with the pottery.

This makes the dishware potentially hazardous if it’s used for cooking, preparing, serving, or storing food or drinks.

Manufacturing Problems

FDA is most concerned about lead in pottery made by families and small-scale artisans in Mexico.

“The problem lies in the use of improper manufacturing practices by some potters,” says Michael Kashtock, Ph.D., an FDA consumer safety officer and food scientist.

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Pottery made with earthenware must undergo glazing, a process in which a thin, glass-like coating is applied and



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fused onto the surface of the clay. This seals the pottery’s pores, allowing it to hold food or liquid.

The glaze fuses to the pottery when it is fired in a kiln, a special oven used to bake clay.

“In the past, potters have usually used lead glazes,” says Kashtock. “Today, many of the potters in Mexico have switched to non-lead glazes. However, they may be using old kilns that were once used for firing lead-containing glazes.”

Kashtock says that while these potters believe they are making a lead-free product, the kilns they are using may be contaminated with lead residues from prior firings of lead glazed pottery. “‘Lead-free’ glaze can then become con-

taminated during the firing,” he says.

Kashtock says that some potters do make safe pottery with lead-containing glaze. “That pottery is safe for use if properly fired,” Kashtock says. “Proper firing of lead glaze binds the lead within the glaze.”

“The problem is not that the pottery contains lead, but that it contains lead in a form that may leach into food,” he says.

Lead Poisoning

Lead in small amounts is part of our environment. In general, this low exposure to lead does not pose a significant public health concern.

However, exposure to larger amounts of lead can cause lead poisoning, which

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can affect nearly every bodily system.

The National Institute of Environmental Health Sciences says lead can be poisonous to everyone—especially so to infants and young children, as well as to fetuses.

Kashtock says the effects of lead poisoning depend upon the amount and duration of lead exposure, and the age of the person being exposed.

“Exposure to large amounts of lead may result in overt and possibly severe symptoms for which an individual is likely to seek medical attention,” says Kashtock.

“However, infants, young children, and the developing fetus can be affected by chronic exposure to low amounts of lead that may not result in obvious symptoms of lead poisoning but that could cause slowed development, learning or behavior problems, and lower IQ scores,” he says.

Advice for Consumers

Be aware that some pottery should be used for decoration only, and not for holding or serving food.

Also, know that a child with lead poisoning may not look or act sick. If your child has been eating or drinking from pottery that may have allowed lead to leach into food, talk to your health care professional about testing your child’s blood for lead.

Be wary if pottery you have was purchased from a flea market or a street vendor, or if you are unable to determine whether the pottery is from a reliable manufacturer.

Look over your pottery and check to

see if it is

- handmade with a crude appearance or irregular shape
- antique
- damaged or excessively worn
- brightly decorated in orange, red, or yellow colors

If you have pottery that fits any of these descriptions or if you’re concerned about the safety of pottery in your home, you can:

- Look for a warning label on the pottery. If the pottery was made for use only as a decorative item, it may have a warning (such as “Not for Food Use—May Poison Food”) stamped onto the bottom.
- Test the pottery. Lead-testing kits, which are sold in hardware stores and online, come with swabs and instructions. They do not damage the pottery. With most, the swab will change colors if lead leaches onto the swab. If a test reveals a positive result for leachable lead, don’t use the pottery for cooking, serving, or storing food or drinks.
- If you are unable to test the pottery or otherwise determine that it is not from a reliable manufacturer, don’t use it for cooking, serving, or storing food or drinks.
- Be aware that no amount of washing, boiling, or other process can remove lead from pottery.

FDA Actions

On Nov. 19, 2010, FDA published guidance for industry to address safety and labeling concerns for traditional pot-

tery that may contain lead.

The agency encourages manufacturers, distributors, and importers to make potters aware of the production practices recommended in the guidance to ensure that non-lead glazed products will not be contaminated with lead.

Any glazed pottery that contains leachable lead and is labeled “Lead Free” is at risk of being refused entry into the United States. The importer is subject to FDA sanctions for any future entries of imported items.

In addition, FDA has partnered with several federal and state health agencies to make information available to the public in English and Spanish about reducing the risks for lead poisoning from traditional pottery. 

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