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Dangerous Levels of Lead Found in Used Consumer Products

The problem of toxic lead in used consumer products is extremely widespread and present at levels that are far beyond safe limits, researchers conclude in a new study.

Research reported recently by the Associated Press found that lead and cadmium were present in cartoon character drinking glasses. Now a new study has found that many other items available for purchase throughout the United States -- such as toys, home décor items, salvage, kitchen utensils and jewelry -- contain surface lead concentrations more than 700 times higher than the federal limit.

The authors of the study were Laurel Sharmer of the State University of New York, Anna Harding of Oregon State University and Steven Shackley of the University of California, Berkeley. Sharmer, the lead author, is now retired and lives in Monmouth, Ore. The results are published in the December issue of *The Journal of Environmental Health*.

Researchers purchased a collection of used items from second-hand stores, junk shops and antiques stores in Virginia, New York and Oregon. The items included salvaged construction pieces, antique toys, common dishware, jewelry and other collectibles. Many of the items would have significant appeal to children. Before purchase the items were tested in the store using a qualitative swab test. Those that tested positive were purchased.

It was possible to purchase an item that contained lead in every single store the researchers visited.

Using X-ray fluorescence at the Geoarcheological Laboratory at UC Berkeley, the items were quantitatively tested for lead content. Nineteen of the 28 items violated the federal standard for lead, which is 600 parts per million. The amount of lead ranged from twice the federal limit in a metal ice cream scoop to 714 times the limit in a salt shaker lid.

Two of the items tested were salvaged construction items, which are widely promoted in popular TV shows for home decorating or remodeling. Both pieces of salvage had peeling and chalky paint that rubbed off on the hands of the researcher. One of the salvage pieces, a white window frame, had 4,747 parts per million of lead, and a blue window shutter had 23,161 parts per million of lead.

A story carried by the Associated Press on Nov. 22 showed lead present in cartoon character drinking glasses at levels hundreds of times greater than what is allowed by law. Sharmer, lead author of this new study, said although the federal government has launched an investigation into lead in cartoon character drinking glasses, it is critically important that American consumers understand that lead is not limited to those particular products.

"The sale of used items in the United States is not regulated by any federal agency and as a result, it is possible that Americans are bringing the lead poisoning hazards of past generations back into their homes," Sharmer said. "It is very important for consumers to understand that you can't tell if a product contains lead by looking at it."

Harding, a professor of public health at OSU, said a used white painted entry door that was on sale for \$895 tested positive for lead. She said the trend of home decorating with salvage means that many middle and upper-middle class consumers are buying items in second-hand stores for the salvage value, or for an antique look. However, some of these products could be dangerous.

"Many health care providers assume the only children at risk for lead poisoning are those who live in poor neighborhoods, where lead exposure has historically been more of an issue," she said. "Many providers may not think to suggest blood lead screenings for patients in middle- or upper-class families. The public health threat to all people, regardless of income level, is very real."

The researchers acknowledged that it may be impossible, and likely very expensive to regulate the sale of used goods at flea markets, thrift stores, rummage sales and over the Internet. Instead, they recommend a national public health education campaign aimed at making consumers aware that lead can be present in almost any kind of used consumer product and it is virtually impossible to tell whether or not it does by looking at it. Such items must be tested to be sure they are safe.

Children should never be allowed to come into contact with antiques or used products sold by a seller who is not regulated by a government agency such as the Consumer Product Safety Administration or the FDA, the researchers said. Used dishware and kitchen utensils should not be used for preparing, serving or storing food. Construction debris and salvage should be considered to have lead until proven safe.

Examples of used items in the study that contained high levels of lead include a salt shaker lid, small red toy teapot, Garfield cup, a red casserole dish, potato ricer, ice cream scoop, Japanese wine cup, Pewter bowl, and a turtle necklace.