Heat causes chemical to leach from plastic

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By Liz Szabo, USA TODAY

A new study may provide a clearer picture of how a controversial chemical called bisphenol A leaches out of plastics.

Concern over bisphenol A, or BPA, has grown since August, when a government panel expressed "some concern" that the ingredient — used in some plastic bottles, dental sealants and linings of metal cans — causes neural and behavioral problems among children.

The study in today's *Toxicology Letters* provides evidence that heat — not frequent use — may pose the greatest problem.

Previous studies have shown that repeated wear and tear — such as running baby bottles through the dishwasher — makes BPA leach out of plastic, says the study's main author, Scott Belcher of the University of Cincinnati.

GRAPHIC: How BPA leaching can occur

In the study, new and old bottles filled with room-temperature water released the same amount of BPA. When scientists exposed new and used bottles to boiling water, however, they released BPA up to 55 times more rapidly than before heating.

BPA is known as an "environmental estrogen" or "endocrine disruptor" because it can mimic the effect of sex hormones on the body, Belcher says. Belcher didn't test baby bottles or cans of infant formula, products that have generated perhaps the most concern about BPA's safety. Instead, Belcher — an avid climber and mountaineer — focused on plastic bottles that he and other hikers commonly use.

BPA isn't used in all bottles. It's found in polycarbonate plastic with a number 7 recycling code, a category that includes several types of plastics.

Though scientists haven't yet conducted definitive studies in people, animal tests show that BPA affects reproduction and brain development, Belcher says. Government tests have found BPA in 95% of people studied.

Steve Hentges of the American Chemistry Council says Belcher's study adds little new information, although it does dispel the "myth" that old polycarbonate bottles break down and become unsafe. He notes that many other studies have shown that BPA can migrate into food. Significantly, however, government safety agencies in Europe and Japan also have concluded that the tiny amounts of BPA that make it into food aren't a risk.

The Food and Drug Administration, which said in November that it's "actively reviewing" BPA's safety, also has said typical daily exposures to the chemical aren't dangerous. Many remain concerned, however. Last week, Reps. John Dingell and Bart Stupak, both Michigan Democrats, announced they're investigating the use of BPA in products intended for children, such as cans of formula, which may be lined with BPA. They sent letters asking about the safety of BPA to the FDA and seven formula manufacturers.

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