Non-Toxic Times Newsletter

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Bisphenol-A Gets Another “F” in Health

It took until 2008, but Bisphenol-A has finally been making mainstream headlines. Though we’ve reported for several years about concerns over this common consumer chemical, public awareness hasn’t followed as quickly as we’d hoped. That may be changing with new reports showing that Bisphenol-A is more harmful to infants than adults and could also be contributing to the nation’s obesity epidemic.

A basic building block of polycarbonate plastics, bisphenol-A (BPA) is found in polycarbonate water bottles and food containers, food and soda can linings, toys, CDs and DVDs, eyeglasses, and dental sealants. Once used in a product, the chemical bonds that hold this compound to its host material tend to weaken over time, especially when those host materials are exposed to heat, washing, or acidic materials in certain foods. When this happens, BPA leaches out of products that contain it.

A Centers for Disease Control study has detected BPA in 93% of the people tested. In the bloodstream and body tissues, BPA mimics the hormone estrogen. Low levels of BPA have been shown to affect prostate development, promote prostate tumors, affect breast tissue development and sperm counts, and possibly even create and enlarge fat cells. Scientists have also linked BPA exposure to premature puberty, attention deficit hyperactivity disorders, miscarriage, and birth defects like Down Syndrome.

Recently, several new studies on BPA have made the news. Here’s the latest evidence and the lessons it offers:

• A study at the University of Missouri found that ingestion of BPA is likely to be a much bigger problem for infants and young children than for adults. Researchers exposed infant mice to trace amounts of BPA both orally and via injection. Subsequent tests showed that after these exposures the mice ended up with very similar amounts of the chemical in their bloodstreams, which indicates that the mice were not able to detoxify the toxin. Further exploration showed that the mice lacked the high levels of a key liver enzyme needed to break down BPA into safer substances because their livers had not yet developed enough. The study suggests that BPA is of far greater concern to infants and children than adults, whose fully grown bodies are more able to process the BPA they ingest. Because most plastic baby bottles are made from polycarbonate plastic, this finding has immediate implications for parents and caregivers of infants and small children, all of whom should replace their #7 plastic bottles and food containers with those made of glass.

• Researchers are zeroing on the idea that early-life exposures to BPA and other similar hormone-mimicking chemicals may predispose people to a lifetime of weight struggles. Noting that the epidemic rise in obesity over the past 20 years has taken place during a period in which average food intake and exercise levels have remained relatively stable, and finding that widespread human genetic changes couldn’t possibly occur on such a scale in such a short time, scientists say that one of the last conclusions left standing is that environmental toxins are to blame. According to the National Institute of Health Sciences, preliminary results of a variety of studies from a number of labs are all finding that exposure to BPA and other common consumer chemicals during early development can negatively affect how people respond to diet and exercise in later years and contribute to obesity. A study at the University of Missouri-Columbia, for example, found that mice fed BPA during early life become notably more obese as adults. One scientist has even created a new term for chemicals that display this behavior: Obesogens.

• Meanwhile, the National Toxicology Program is reviewing a much-criticized report on BPA created by a panel convened by the National Institute of Environment Sciences to advise the federal government. The agency was flooded with complaints that the assessment of 742 separate studies gave more weight to industry-sponsored research than it gave to independent research. Indeed, an investigation by Milwaukee’s Journal Sentinel found that the panel missed or ignored dozens of studies that could be found on-line using a simple medical research search engine. The analysis conducted by the newspaper also found that studies funded by the chemical industry were much less likely to find that BPA was harmful while some 80% of academic and government research efforts showed the compound to be hazardous.

To safeguard your family from BPA, we recommend taking precautionary steps like these:

• Avoid canned soda and acidic canned foods like tomato and citrus products.

• Look at the recycling symbols on the plastics you use in the kitchen. Don't buy, serve, or consume foods and beverages sold or served in #7 plastics, the category that includes polycarbonate plastics that contain BPA. Better options include polypropylene (#5 PP), high-density polyethylene (#2 HDPE), and low-density polyethylene (#4 LDPE). No evidence has been found to suggest that these plastics leach toxic materials.

• Ask your dentist about the sealants he or she uses. If their sealants contain BPA or if they're unable to verify whether or not this is so, refuse the treatment.

• Use glass baby bottles exclusively. For beverages for young children and grown-ups, replace any polycarbonate sippy cups and water bottles you have with those made from the safer plastics listed above or stainless steel.

• Don't give hard plastic toys to infants, teething children, or any kids who still put everything in their mouth unless you can verify that they're polycarbonate-free. Opt for safer wooden toys and teething rings, etc.

• When it comes to those polycarbonate plastics you choose to keep, wash them carefully in warm water and gentle dish liquid. Don't subject them to hot water, harsh detergents, bleach, or microwaving, all of which can help BPA leach out.

• If you use any of these items for eating and drinking, try not to let food or beverages sit in or on them too long. The longer edibles remain in contact with the plastic, the greater the likelihood of BPA contamination.

To learn more about BPA see http://www.ourstolenfuture.org/NewScience/oncompounds/bisphenola/bpauses.htm. Read more information about the University of Missouri study here. To access the Boston Globe article from which we drew our report about BPA and obesity go to http://www.boston.com/news/health/articles/2008/01/14/is_plastic_making_us_fat/. To read the Milwaukee Journal Sentinel's report on the NIES BPA study, visit http://www.jsonline.com/story/index.aspx?id=705538.