

Toxic baby bottle scare or simply scary science?

Public health officials advise caution over panic

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Chris Mackie isn't ready to dismiss the latest scare over a new Canadian study showing plastic baby bottles leached a chemical that mimics estrogen when heated.

But the senior medical adviser at Hamilton's public health department says the science doesn't yet support calls to ban bottles containing bisphenol A, which some studies suggest may be a factor in development and diseases like breast and prostate cancer.

As a result, Dr. Mackie advises parents concerned about the issue to either switch to bottles that don't contain bisphenol A -- such as glass or plastic ones that specifically state they don't contain the chemical -- or avoid heating ones that do.

That means heating milk or other fluids separately in glass containers or metal pots, and washing plastic baby bottles by hand with warm water, rather than putting them in the dishwasher.

"In public health's opinion, the evidence is not conclusive that these levels of bisphenol A (identified in the study) are causing a problem in our children, but there is enough evidence that we're concerned that it may be a problem," Dr. Mackie says.

"The unique thing about science is that as new data and information becomes available, an area of knowledge can improve, and that's what's happening here. There's an area where the science is evolving right now."

The study, conducted on behalf of Toronto-based environmental group Environmental Defence, tested three different sizes each of Gerber, Playtex and Avent brands of plastic baby bottles containing bisphenol A.

It found they leached between five and eight parts per billion of the chemical when heated to 80 degrees Celsius.

According to the study, this heating "simulates repeated washing of the bottles (approximately 60-100 times) and indicates how much bisphenol A would leach from a well-used bottle."

At room temperature, the study found the levels of leached bisphenol A were either non-detectable or at minute fractions of one part per billion. But Dr. Mackie notes that even the amounts detected in heated bottles are well below Health Canada's existing exposure guidelines of 25 parts per billion per day.

The federal agency is presently reviewing those guidelines, but they are already twice as stringent as those in the United States and Europe.



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"It is fairly conservative relative to other guidelines," Dr. Mackie says.

"Even with the issue that has been identified here, the exposures are within the limits set by the guidelines," he says

"Health Canada is taking this seriously, too, and they've launched a full review of bisphenol A and whether we should reduce our guidelines on acceptable levels."

But a McMaster University scientist who specializes in reproductive biology and toxicology is far less cautious in assessing the Environmental Defence study. Dr. Warren Foster says he's worked with bisphenol A and the study's data don't come close to warranting the concern it's raising.

He accuses Environmental Defence of misusing the study to get the media to further its agenda of banning bisphenol A. Indeed, the study drew national media attention when it was released last week and was the lead item on the CBC's National newscast.

"Going to the public with information now creates alarm and unnecessary alarm, I think," says Dr. Foster, director of the Centre of Reproductive Care and reproductive biology division in the department of obstetrics and gynecology.

"I'm offended that this is getting the attention that it's getting because I think it's irresponsible and unconscionable to concern the public when the information is so controversial and unsupported by the science."

Dr. Foster says bisphenol A is "weakly estrogenic" and a reproductive hazard, but the potential risks aren't yet known because the research hasn't been done.

The effects found so far tend to be at "fairly high concentrations" and studies on mice suggesting harm at low doses don't meet the scientific standard of being reproducible at credible laboratories, he says.

"My advice to parents is that this is way too premature and unlikely to be a risk to their children," Dr. Foster.

"If they are concerned, then the alternatives are to move to glass bottles, if they feel the concern's warranted. But outside of that, I would not change my practices with my own children, with what I know."

But Cassandra Polyzou, one of the authors of the Environmental Defence study report, insists science supports the call for a ban.

Bisphenol A is also used in many plastic water bottles and in epoxy resin that lines soup and other food tins. Her groups wants those uses banned as well.

Ms. Polyzou notes retailers like Lululemon and Mountain Equipment Co-op have already taken bisphenol A products off their shelves.

She suggests some opposition, at least south of the border, comes from scientists linked to the plastics industry.

"This is a big fight. It's a big battle for the public interest versus the private interest," Ms. Polyzou says.

"The Canadian government has a great chance to lead on this," she says.

"We've known that it's an endocrine disrupter for over a decade. It's gone beyond the precautionary principle. It's that we need to do something about it."

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