Reviewer’s report

Title: Association between bisphenol A exposure and body mass index in Chinese school children: A cross-sectional study

Version: 4 Date: 20 September 2012

Reviewer: Justin Teeguarden

Reviewer’s report:

The authors have attempted to overcome limitations in the first submission, but there are substantial issues remaining.

1. How could the conclusions change from the first manuscript (no associations, see comments on previous version) to associations in this version?

2. No confounders were considered in this study: caloric intake, t.v. watching, education and poverty level for example (see Leonardo Trasande, 2012, JAMA, epidemiology, BPA, Obesity and children). It should be noted, as others have, that BPA exposure could be a proxy for other life-style elements that control obesity. How is it possible to make conclusions that BPA is causally related to obesity when something as crucial as caloric intake is not taken into account? This failure to address any reasonable confounders is a fatal flaw in this work.

3. The mechanistic arguments made regarding T3/T4 are once again, suggestive, but only because crucial information are omitted by the authors. The EC50 in the Moriyama paper is 500 uM, other effect levels are near 1 uM. Controlled human studies and controlled non-human primate studies clearly show that at the BPA exposures identified by the authors, blood concentrations are always more than 1000 times lower. This is also true for the estrogen receptors. So, the mechanistic arguments are not at all relevant to the biology expected to occur at the listed exposures. This is a common flaw that continues to propagate through the literature: Effects at high concentrations are reported and insinuations are made that they are relevant for low, environmentally relevant papers.

4. In the end, the paper is one of the least complete epidemiological analysis on BPA and obesity in the literature. It suffers from a failure to consider obvious contributors to BMI: T.V. watching, poverty, education, and caloric intake, for example.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

No.