<http://healthland.time.com/2012/02/16/oh-baby-why-there-may-be-arsenic-in-your-infant-formula/?xid=gonewsedit>

Today’s piece was prepared by Mike Semanik, MD and is based on a feature article in Time titled “Oh Baby: There May Be Arsenic in Your Formula”.

This attention-grabbing article provides a brief overview of a study recently published in the journal *Environmental Health Perspectives*. The somewhat alarmist article open by linking arsenic to cancer, heart disease, and lower IQ in children (these studies aren’t cited.)

Rice syrup was selected by the study’s authors because rice itself is known to be more easily contaminated by arsenic than other foods. Based on this premise, the Dartmouth researchers set out to test the amount of arsenic found in some common foods: infant formula, cereal bars, and energy shots. Findings highlighted in the study’s abstract and in the article:

* Two of 17 infant formulas tested listed brown rice syrup as a main ingredient, and one had an arsenic concentration six times federal limits (10 parts per billion, or ppb).
* 22 of the 29 cereal bars or energy bars tested had at least one of four rice products among the main ingredients, with arsenic levels ranging 23 to 128 ppb.
* Tests of high-energy products known as “energy shots” showed that one with 84 ppb of total arsenic, and the other two contained 171 ppb.

Concerned parents who noticed the headline are likely to be even more worried by that opening paragraph, especially as it is the background against which the article presents the new study’s findings: that organic brown rice syrup, an organic sweetener used in several types of food, is high in arsenic.

It is worth noting that there are two types of arsenic: organic (arsenic coupled to carbon) which is considered as the more dangerous type despite very little empirical data, and inorganic (uncoupled). The article briefly mentions the organic - inorganic difference and notes (correctly) that the arsenic in the infant formulas is primarily organic. This clarification is later in the article, and presented as a single sentence that is unlikely to quell parental anxiety. (The cereal bars and energy shots contain primarily inorganic arsenic).

It’s also worth noting that the federal standard for arsenic in drinking water was decreased in 2001 from 50 to 10 ppb. Using 50 ppb as a standard would change the study’s results significantly, making the 1 infant formula with a total arsenic concentration of 60 ppb barely above the limit, and putting the remaining 17 formulas well under the limit. Furthermore, only 14 of the 29 cereal bars tested would exceed the federal standard.

Finally, the vast majority of infant formulas do not contain organic brown rice syrup, meaning most formula fed babies are not at risk. While reinforced late in the article, this point may help calm worried parents.

The article draws two reasonable conclusions:. Firstly, that parents avoid formulas made with brown rice; and Secondly, that federal regulators set limits on the amount of arsenic allowable in food. This would not only help to keep infants, children, and adults from consuming too much arsenic, it would also help parents – who already have enough nutrition information to keep track of – sleep a little easier at night.**RESOURCES ON ENVIRONMENTAL SAFETY:**

A link to the abstract of the study being discussed: <http://ehp03.niehs.nih.gov/article/fetchArticle.action;jsessionid=284A3F5B4F8051816316B9070823A81F?articleURI=info%3Adoi%2F10.1289%2Fehp.1104619>

The Agency for Toxic Substances and Disease Registry (ATSDR) website on Arsenic: <http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=3>

The Environmental Protection Agency’s website on Arsenic in drinking water: <http://water.epa.gov/lawsregs/rulesregs/sdwa/arsenic/index.cfm>

The Canadian Food Inspection Agency statement on Arsenic in rice: <http://www.inspection.gc.ca/english/fssa/microchem/resid/2009-2010/arsenrice.shtml>

And that’s today’s Developmental & Behavioral Pediatrics: IN THE NEWS!