

Dartmouth Toxic Metals  
Superfund Research Program

NEWMOA WORKSHOP  
Communicating Risk to the Public

## Dartmouth SRP Case Study: Arsenic in Food Products Controlling and Managing Your Message

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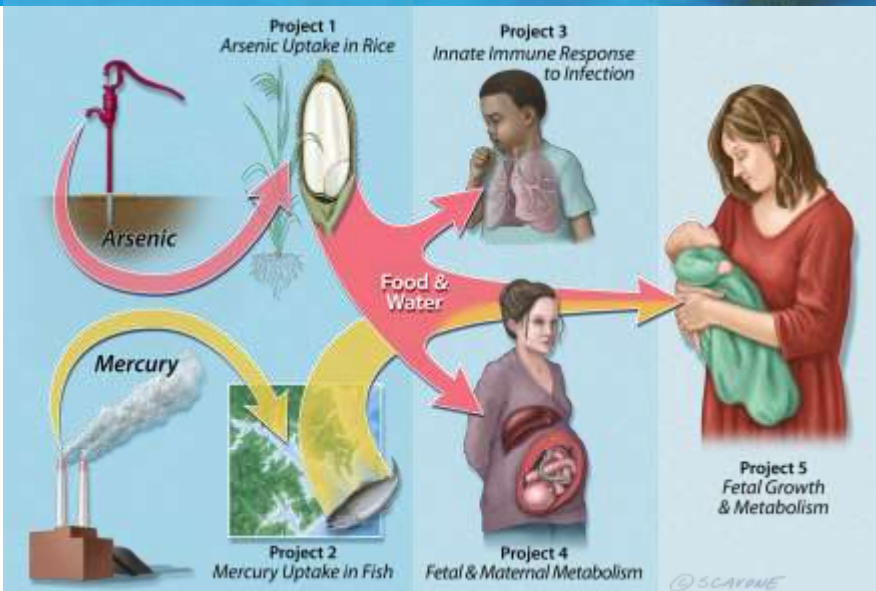
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<http://www.dartmouth.edu/~toxmetal/>

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**ehp** ENVIRONMENTAL  
HEALTH  
PERSPECTIVES

## Arsenic, Organic Foods, and Brown Rice Syrup

Brian P. Jackson, Vivien F. Taylor, Margaret R. Karagas  
Tracy Punshon, Kathryn L. Cottingham

**Release date:**  
**Feb. 16, 2012**



### Main points of the paper:

- Use of OBRS as an ingredient increases arsenic concentration of the product
- For toddler formula this leads to inorganic arsenic concentrations that are too high
- These foods are an additional, newly identified, source of arsenic to diet
- “Urgent need for regulatory limits on arsenic in food”

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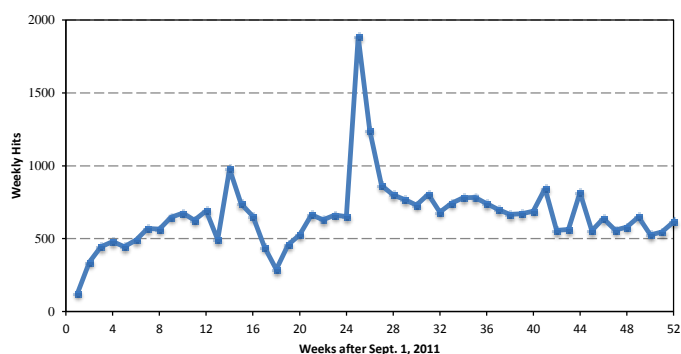
## Dartmouth Now

### ORGANIC FOOD SWEETENER MAY BE A HIDDEN SOURCE OF DIETARY ARSENIC

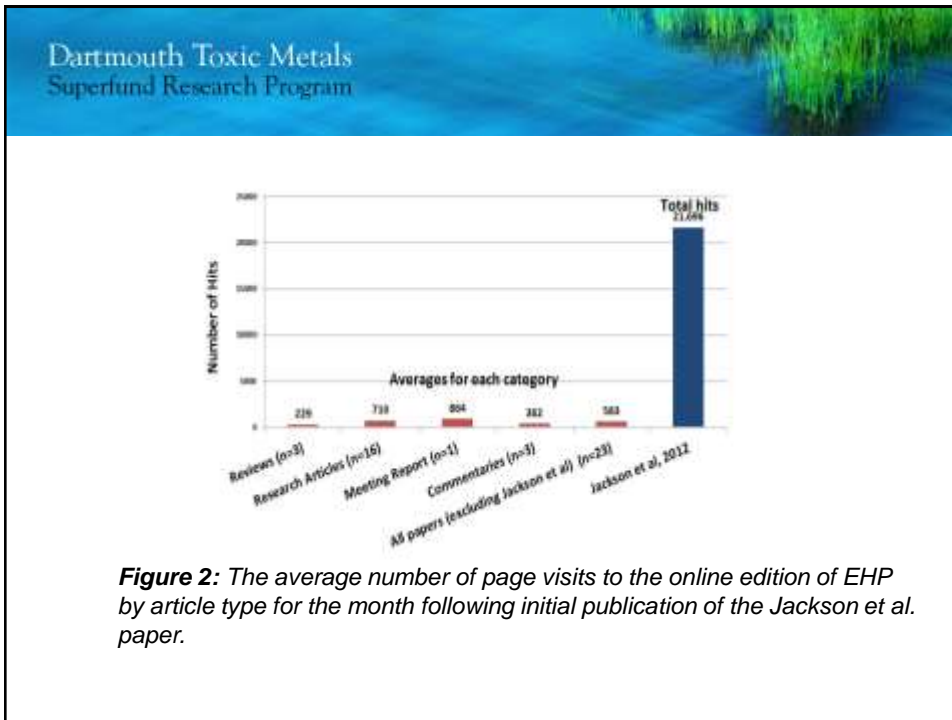


## The Aftermath:

- Multiple TV news reports including major networks
- ~50 media stories
- ~300 emails to Brian Jackson, lead author
- Numerous emails to co-authors and others in Program
- Over 19,000 hits within first two weeks of publication
- ~23,000 hits within first month of online release



**Figure 1:** Hits to the DSRP website over the year (Sept 1, 2011-Sept 1, 2012). Each point represents a weekly total of visits to the DSRP webpage. The total visits during the week following the release of the Jackson et al paper (February 12<sup>th</sup>-18<sup>th</sup>, 2012) were 1885.



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## Development of the Perfect Storm...

### Baby Formula + Organic Foods + Arsenic

Papers & Interviews

Press Release

NEW YORK WASHINGTON, DC  
Dr. Oz 9/13/11

ConsumerReports

ABC NEWS NBC NEWS

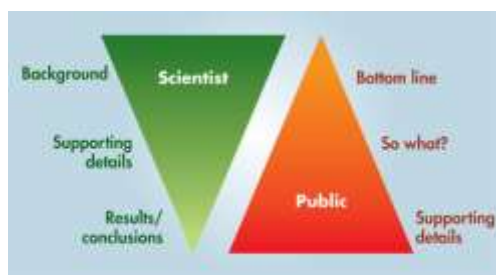
## What we didn't expect...

### 1. Misinterpretation of the data

- Misunderstanding arsenic levels in formula compared to drinking water
  - powder vs. liquid
  - inorganic vs. organic arsenic
- Applying the public drinking water limit to cereal bars

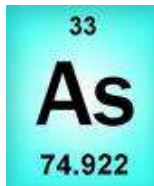
### 2. Products Uncovered!

## Effective Communication with the Public



Source: Communicating the Science of Climate Change,  
Somerville and Hassol, 2011

***Emerging Science—Emerging Contaminants—  
Potential Synergistic Effects = UNCERTAINTY***



- ✓ **Arsenic: odorless, colorless, tasteless**
- ✓ **Health effects at high levels of exposure known—over 100 ppb in water.**
- ✓ **Health effects less than 10 ppb (maximum contaminant level for public water supplies as set by EPA)— UNCERTAIN**
- ✓ **#1 on ATSDR Priority List of Hazardous Substances**

## IDEAL

**Risk related message.  
Be Clear.**

**Present:**

- 1) The Problem.**
- 2) Information about the problem.**
- 3) Action.**





## REALITY

- What are effects—???
- What action should I take—???



## REALITY

### What we know

- ✓ Could be long term health effects
- ✓ Not good for young children to be drinking/eating that much Arsenic based on current knowledge
- ✓ Emerging Risk—be careful about making recommendations that could change an important dietary requirement for an individual
- ✓ Contaminant in food—responsibility to convey Benefits as well as Risks

## REALITY

What we don't know.

- What are effects—???
- What action should people take—???

What we can say... (in some cases)

- ✓ Reduce your exposure to contaminant

## Contaminants of Emerging Concern (CECs)

PBDEs, PPCPs,  
TCE, MTBE  
1,4-Dioxane



## UNCERTAINTY

- ✓ Building Trust
- ✓ Connecting to Community/Target Audience



**“At the end of the day people won't remember what you said or did, they will remember how you made them feel.”**

— *Maya Angelou*

**“When people are stressed out or upset , they typically:  
...want to know that you care before they care what you know.”**

— *Dr. Vincent Covello, Center for Risk Communication*

✓ **Brian Jackson--Personal sense of responsibility to  
reply to all emails**

—**Building Trust without realizing it**

## **Lessons Learned:**

- ✓ **Talk to local communities**
- ✓ **Message plan—know your audience/media**
- ✓ **Emerging science—will information change an  
important behavior for an individual?**
- ✓ **Timing**
- ✓ **Notify**
- ✓ **Update—FAQ**
- ✓ **Burnout**

✓ Review Numerical Information:

**$\mu\text{g}$  ppb ng/g**



**Weights - Metric - U.S. Conversions**

1 gram	=	0.0332 ounce
1 kilogram (kg)	=	2.205 pounds
1 ounce (oz)	=	28.350 grams
1 pound (lb)	=	453.592 grams
1 ton, metric (t)	=	2,204.623 pounds
1 ton, metric (t)	=	1.102 net tons
1 ton, net or short (sh ton)	=	0.907 metric ton

- Will the media/public know how to interpret these numbers?
- Based on the numbers, is there a way for them to gauge the risk and put it in perspective?
- Is there a possibility that the numerical information could be skewed and become misleading?

✓ Prepare ahead:

- What you know/What you don't know/What you are trying to find out
- Talk to local communities to get a sense of the types of information that would be helpful to them
- Keep messages clear and simple (3 main points)
- Prepare Press Release with care
- If you have more than one spokesperson, make sure you are all using the same message
- Remember how easy it is for people to access information they might not understand
- Be ready with clear, easy to understand follow-up/background information on your website.

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- Put yourself into the position of being an objective, trusted resource
- Brian received thank you emails—people were grateful for the information and clarification.



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