

This is the weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to mary@turi.org if you would like more information on any of the articles listed here, or if this email is not displaying properly.

Study: Eating Foods with Fewer Pesticides Boosts Women's Chances to Conceive

[Source: Environmental Working Group, November 1, 2017](#)

[Author: Sonya Lunder](#)

Women seeking to get pregnant could significantly improve their chances by eating conventional fruits and vegetables with fewer pesticide residues, or eating organic produce, according to a new study in the prestigious *Journal of the American Medical Association*. Although the authors say more research is needed, the study is the first to link pesticide residues in food with poorer pregnancy outcomes.

Scientists from the Harvard T.H. Chan School of Public Health studied the diets of more than 340 women seeking fertility treatment with assisted reproductive technologies.

Women who reported eating more than 2.2 servings per day of the 14 conventionally grown fruits and vegetables with the highest pesticide residues had a 26 percent lower probability of a successful pregnancy compared to women who ate less than one serving a day of these foods.

[Read more...](#)

See original article in *JAMA Internal Medicine*, "[Association Between Pesticide Residue Intake From Consumption of Fruits and Vegetables and Pregnancy Outcomes Among Women Undergoing Infertility Treatment With Assisted Reproductive](#)

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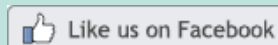
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Spotlight: The High Cost of Exposing Workers to Chemicals at Point of Use

[Source: *Plastics Engineering*, June 2017](#)

Author: Del Williams

...In the manufacturing of plastics, workers often transfer potentially hazardous liquid additives such as plasticizers, colorants, dyes, lubricants, antimicrobials and flame retardants into smaller containers and vessels, or directly into tanks or machinery. At times, liquid solvents and cleaner used for maintenance may be transferred as well.

Chemicals such as acetone are also used in plastics machining and for 3D-printed parts for vapor polishing, which when applied to the surface of plastic alters the finish to a high gloss. ...

These chemicals are toxic, corrosive, reactive, flammable, emit volatile organic compounds (VOCs), or are even potentially explosive and the danger of accidental contact, even for short periods, can pose a severe hazard to workers.

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TURI's Note: [Registration](#) is still open for our upcoming Fall Continuing Education Conference, Thursday, November 16, 2017. To learn more about opportunities for operations and maintenance improvements, sign up for our session, "Plucking the Low Hanging Fruit: How O&M and Worker Engagement Can Generate a Greater Harvest of Reductions".

2003 to 2014 Saw Drop in Urinary Arsenic in Public Water Users

[Source: *Practice Update - Health Day*, October 23, 2017](#)

MONDAY, Oct. 23, 2017 (HealthDay News) -- From 2003 to 2014, urinary arsenic decreased among users of public water systems but not among private well users, according to a study published online Oct. 22 in the *The Lancet Public Health*.

Anne E. Nigra, Sc.M., from Columbia University Mailman School of Public Health in New York City, and colleagues used data from 14,127 individuals who participated in the National Health and Nutrition Examination Survey (NHANES) between 2003 and 2014 to examine national trends in water arsenic exposure. The authors estimated the expected annual number of avoided skin or lung and bladder cancer cases in 2013-2014 versus 2003-2004. They noted that in 2006, the Environmental Protection Agency implemented a maximum contaminant level for arsenic in public water systems of 10 µg/L.

The researchers found that there was a decrease in fully adjusted geometric means of dimethylarsinate from 3.01 µg/L in 2003-2004 to 2.49 µg/L in 2013-2014 (17 percent decrease) among public water users (P-trend < 0.001); no change was seen among well water users (P-trend = 0.35). Assuming these reductions persist across a lifetime, the estimated cancer reduction was 200 to 900 lung and bladder cancer cases or 50 skin cancer cases per year.

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See original article in *The Lancet Public Health*, "[The effect of the Environmental Protection Agency maximum contaminant level on arsenic exposure in the USA from 2003 to 2014: an analysis of the National Health and Nutrition Examination Survey \(NHANES\)](#)".

Swedish government considers action on preservatives in cosmetics

Source: [Chemical Watch, November 2, 2017](#)

The Swedish government is considering action on problematic preservatives in cosmetic products, after a closed consultation on a report by its chemicals agency (Kemi).

Earlier this year, Kemi studied the use of 19 different preservatives in cosmetics, to assess whether they should be subject to national safety measures. It concluded that introducing national restrictions would not be proportionate, but nevertheless called for action at EU level, including a review of the EU cosmetics Regulation's list of approved preservatives. ...

ChemSec would also like to see EU restrictions on nine substances that are banned from use in hand wash products in the US, but still allowed in cosmetic products under EU law.

[Read more...](#)

Also see from [Chemical Watch](#), "[NGO coalition urges EU-wide ban on microplastics in cosmetics](#)".

Cleanup From California Fires Poses Environmental and Health Risks

Source: [The New York Times, October 16, 2017](#)

Authors: Kirk Johnson

SANTA ROSA, Calif. -- Dr. Karen Relucio has heard reports of people digging into the ashes of their burned homes in recent days without gloves, wearing only shorts and T-shirts, looking for sentimental items that might have survived California's horrific wildfires. And as the chief public health officer in Napa County, one of the hardest-hit places, she has used her office as a bully pulpit to urge them to stop, immediately.

"Just think of all the hazardous materials in your house," she said in an interview. "Your chemicals, your pesticides, propane, gasoline, plastic and paint -- it all burns down into the ash. It concentrates in the ash, and it's toxic," said Dr. Relucio, who declared a public emergency over the hazardous waste from the fires, as have at least two other counties.

...

Household building materials are obviously different from the components of a concrete tower. But they pose risks too. Treated wood in a house's frame, for instance, put there to prevent bacteria growth, can contain copper, chromium and arsenic. Consumer electronics contain metals like lead, mercury and cadmium. Older homes might have asbestos shingles. Even galvanized nails are a concern because when they melt they release zinc. All are potentially harmful.

[Read more...](#)

Also see from [Phys.org](#), "[New SOFT e-textiles could offer advanced protection for soldiers and emergency personnel](#)".

Arresting Indoor Air Quality Criminals: Open-surface plating chemical tanks often release hazardous mist and vapor "criminals" into the air

...Properly ventilating exhaust from and supply air to these open surface tanks is key to thwarting these fugitives before they can inflict damage, and doing so ultimately can save a company a whole lot of trouble.

Air quality outlaws often leave behind clues to their escape in the form of corrosion on or around the tank area. The following evidence may point to ineffective capture by the ventilation system:

- **Corrosion and discoloration** to the exterior of metallic ventilation hoods and ducts; discoloration, bubbling or other change in coatings or non-metallic materials above or to the side of the tanks; corrosion or discoloration of the building's structural components and wall components in the tank room or area; and corrosion on the exterior of the building adjacent to roll-up or personnel doors.
- **Repeated malfunction** of system components (valves, lights, sprinkler heads, etc.) in the tank room or area.
- **Precipitation** on walls, ceilings or floors.
- **Odors or haziness** in the air around the tank area.
- **Compromised work environment**, meaning ineffective and/or insufficient ventilation can lead to an unpleasant work environment, employee illnesses or even death. ...

Proprietary chemical suppliers often can provide safer alternatives for metal finishing that still meet industry-recognized specifications. For instance, citric acid sometimes is an acceptable alternative to nitric acid in some passivation processes, offering advantages for both safety and the environment. Whether or not a safer chemical alternative is available, proper ventilation for the processing tank is still necessary and should be evaluated by a professional. Local tank exhaust should keep all vapors and mists away from the operators' breathing zones to protect them from irritating, corrosive and toxic materials.

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Celia Chen Calls for Reduction of Environmental Mercury

[Source: Dartmouth News, October 10, 2017](#)

Author: Joseph Blumberg

At last month's U.N. conference in Geneva, Switzerland, Dartmouth researcher Celia Chen advocated for the inclusion of scientists in the implementation of an international treaty to reduce toxic mercury in the environment.

Chen, a research professor in the Department of Biological Sciences and a principal investigator in the Dartmouth Toxic Metals Superfund Research Program, joined delegates of the Minamata Convention's ratifying and signatory countries in Geneva for the first Conference of the Parties (COP-1). There, she represented Dartmouth as a nongovernmental organization.

Chen and colleagues from Massachusetts Institute of Technology distributed papers that summarized the latest mercury science and its ramifications, relating this information to environmental management issues and policy implementation.

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