



2018 One Health One Planet™ Symposium Health Impacts: Chemicals of Concern in the Environment

BREAKOUT SESSION SUMMARY

Overview

The One Health, One Planet breakout session brought together individuals across a broad range of expertise to identify next steps and unmet needs regarding endocrine disruptors and other chemical contaminants that harm human and environmental health. Attendees had to option to attend one of 10 groups, each of which was tasked with answering three questions:

- 1) What are the major issues in your group?
- 2) Who are your target audiences?
- 3) What are three possible solutions or action items that one can undertake?

Breakout groups covered a wide set of topics, and included consumers, animals and ecosystems, corporations, education, policy, technical issues, environmental justice, food, healthcare, and local issues. We have summarized the discussions of the breakout groups and included action items that citizens can take to educate themselves and others, reduce exposures, and effect change in Pittsburgh and beyond.

I. Animals, Wildlife and Ecosystems

This group focused on how to deliver information in a form that the public can both access and understand. Wildlife already face major issues such as habitat loss, disturbance, pollution, fragmentation by roads and urban sprawl. Messaging must avoid overwhelming the public and instead could be coupled with family-friendly activities such as citizen science events and outings. Ultimately, a preferred outcome would motivate people to vote on issues and laws that will protect environment that saves animals, or perhaps even buy land or open access to lands. However, scientists and educators need to get out of their comfort zones, try bold new ideas, and share both their successes and weaknesses/failures. The group also discussed engaging economists in enumerating the impacts of contaminants on our ecosystem, as well as providing information about contaminant exposure routes that can be accessed by the public to inform their decisions. Suggestions included adding information to a popular and accessible website like Wikipedia, and providing maps of contaminant concentrations in air, water and soil that the public can use to assess their health risk.

Take Action

- Support groups that purchase and preserve land for habitats such as:
 - Allegheny Land Trust
 - Nature Conservancy
 - Western Pennsylvania Conservancy
 - Allegheny Bird Conservation Alliance
 - Youth Birding Club
 - Audubon Society
 - Hollow Oak Land Trust

- Avoid using pesticides on your lawn and garden – use Phipps’ [Eco-Friendly Pest Management Guide](#)
- Use landscapers that are Sustainable Landcare certified by Phipps or NOFA certified
- Buy from local farmers instead of industrial-scale farms and ask about pesticide use
- Learn ways to protect habitats from [pesticide contamination](#)

2. Consumers

Discussion focused on the deluge of information that consumers already sort through regularly. Decision fatigue and information overload can lead to inaction, but the group discussed ways to reach consumers effectively to empower them with decision-making skills. Beyond better education for consumers, one major solution would be encouraging a reduction in heavily packaged goods. This would decrease the need for endocrine disruptors at different stages of the supply chain and take at least some of the burden off the consumer. Discussion also included better labeling—there are many potential external “certifications,” but the value and impact of those certifications can be dubious. Some solutions included more extensive promotion of the use and distribution of streamlined yet broad-reaching consumer guides like those produced by the Environmental Working Group and the Good Guide.

Take Action

- Avoid soft vinyl products like shower curtains
- Avoid plastic labeled with a #3, 6 or 7
- Avoid purchasing products that are heavily packaged
- When you eat out bring your own reusable container to bring home leftovers
- Bring reusable produce bags and opt for produce that has not already been packaged
- Avoid old hand me down plastic toys and vinyl
- Use the Environmental Working Group’s [Skin Deep Cosmetics Database](#) to find the safest personal products like toothpaste, sunscreen and shampoo
- Use the International Living Future Institute’s [Red List](#) to help identify and avoid toxic building products and furnishings like carpet, tile and furniture
- Avoid handling thermal paper cash register receipts (most receipts) and don’t recycle them so that they do not contaminate the recycled paper waste stream
- Filter your drinking water
- Use low-VOC paints
- Avoid furniture made from pressed wood (may contain formaldehyde)
- Avoid furniture treated with flame retardants. Replace old furniture, if you can’t start with the cushions.
- Avoid items with Teflon such as cookware, stain repellants and Gore-Tex
- Avoid items treated to be antimicrobial

3. Corporations

The group that focused on the role of corporations in the continued use of endocrine disrupting chemicals identified that weak regulatory agencies and lack of a long-term view were the two greatest issues. This means it is up to consumers and voters to demand change through buying power and mandatory disclosure of safety data through voting. Solutions can also include shareholder activism and inviting corporations into conversations that include arguments that are both scientific and economic in nature. In addition, a more political angle would be to pressure stores to increase corporate transparency for their products. Corporations are seen as dismissive of their responsibility in the endocrine disruptor crisis, short-sighted in their business plans, and opaque in their management and production processes. Solutions to this could include either consumer pressure or legislative action to

mandate transparency, product labelling, risk assessments and accountability from corporations. However arguments that include both economic and scientific motivation are needed for policy changes that are enforceable and account for both existing and emerging externalized costs.

Take Action

- Become a shareholder advocate for greater product transparency and eliminating endocrine disrupters from products
- Contact companies and ask them to eliminate toxins in their products
 - <https://living-future.org/declare/>
- Encourage lawmakers to pass laws that protect consumers and the environment
- Use purchasing power to support corporations that maintain transparency
- Contact companies and ask them to reduce their packaging

4. Education

Education and the effective dissemination of information became the center of many conversations. Participants believed that the general public: 1) must be fully aware of the issue of chemical contaminants to care about the issue, and 2) must be made aware in a way that avoids hopelessness so that they are motivated to take action. The need for empowerment through education pervaded conversations within many groups: consumers need information to make cognizant decisions for their families, voters need information to support relevant legislation and politicians that are willing to act, youth need an introduction that is age-appropriate, and wildlife managers need information to help protect the ecosystems and wildlife impacted by human consumption. Since endocrine disruptors can seem alarming and mysterious to new audiences, the messaging would need to be crafted to avoid “chemophobia” and hopelessness and be age-appropriate for children. However, alongside the need for education is the need to meet the public where they are, build the capacity for problem-solving, and build relationships with the communities at greatest risk. The group Identified communication strategies included social media campaigns, online curricula, community focus groups and panels, scientists and doctors visiting classrooms, and written newsletters. One large-scale idea was the creation of an online curriculum and a social media campaign using the best-known communication strategies from social psychology, behavioral psychology, and communication science. Messaging should focus on what audiences love and what matters to them and should use repeated, diffuse learning opportunities.

Take Action

- EWG.org
- The Smart Human
- <http://www.sixclasses.org/>
- Create a social media community that provides meaningful information from trustworthy sources (avoiding clickbait, scare tactics, chemophobia)

5. Environmental Justice

Increased minority representation at educational events was identified as a major solution for environmental justice; we must avoid having conversations without the affected communities. Endocrine disruptors disproportionately impact underserved communities, but the breakout group identified the need to acknowledge that not everyone has the luxury to worry about endocrine disruptors. Some individuals, especially depending on their socioeconomic situation, focus more of their time, money and concerns for basic necessities. We are not all coming in with the same priorities. In addition, underserved communities have a wide variety of backgrounds and education levels, and the messaging

for each community needs to be accessible for all. Also, we need to do a better job of highlighting achievements and accomplishments of communities already fighting environmental battles.

Take Action

- Express your opinions to your elected representatives
- Identify community leaders in impacted areas and seek their opinions before acting
- Support measures that will lower cost barriers to change (e.g., normalize alternatives to plastics, encourage action from politicians, appeal to corporations on the basis of social justice.)

6. Food

Though there was a breakout group dedicated to foods, this theme arose in discussions among multiple groups. Since packaging is a source of EDCs, discussion focused on ways to reduce the need for excessive packaging and warn consumers of the health risks. Ways to reduce the need for packaging included buying local, encouraging fresh foods over processed foods, increasing food access and availability, and motivating responsibility from manufacturers through consumer action. Since packaging is a source of EDCs, discussion focused on ways to reduce the need for excessive packaging and warning consumers of the concerns. Ways to reduce the need for packaging included buying local and organic, encouraging fresh foods over processed foods, increasing food access and availability, and (again) motivating responsibility from manufacturers through consumer action. In addition, one proposed solution was for consumers to do intense research and delineate the supply chain in food chemical contamination (farm to fork), prioritize and evaluate “generally recognized as safe” chemicals for safety, and use untargeted analytical chemistry to determine food contact materials in food.

Take Action

- Avoid canned goods including soft drinks. Even items that say BPA free may contain BPS or BPF which is just as bad as BPA
- Minimize your exposure to pesticides by eating organic food. If you can't afford to buy all organic at least buy organic for the [Dirty Dozen](#)
- Buy in bulk, If you have a choice, purchase food that is not packaged in plastic
- Vary your diet
- Do not microwave food in plastic
- Increase the amount of leafy greens in your diet
- Avoid processed food
- Avoid food wrapped in coated paper (like burger wrappers)
- Visit The Endocrine Disruption Exchange for more information (endocrinedisruption.org)

7. Health Professionals

This discussion identified the time lapse between research and clinical practice—though information may exist about the dangers of endocrine disruptors to different demographics, the information and solutions may not have appropriately reached healthcare professionals. Other identified concerns included time pressures for health care professionals, the medical industrial complex influence, the translation of difficult science for general public, and the still unclear impacts of endocrine disruptors on epigenetics. The discussion group took particular note of childbearing families, seniors, and women as demographics of highest concern or at greatest risk from endocrine disruptors. Possible solutions for health at the immediate patient level included empowering doctors to write scripts for life style coaches and even cooking classes—all of which would contain instruction on how to cut out endocrine disruptor-containing products from lifestyles.

Take Action

- Professionals working with pregnant women must alert them to the dangers of endocrine disrupters
- Professionals in cross-disciplinary fields regularly engage to maintain awareness of health impacts from unexpected sources

8. Local Issues

One of the breakout groups focused on issues local to Pittsburgh. Beyond sharing common issues such as city residents' plastic use, Pittsburgh contends with the construction of a petrochemical cracker plant just outside of the city in Beaver, PA. Considering the measures Pittsburgh has taken in recent decades to recover from the heavy industrialization earlier in the twentieth century, the proposal of this plant feels like regression due to the likely impacts on air and water quality. Pittsburgh also faces an ongoing battle with hydraulic fracturing of shale for natural extraction and with both operational and abandoned coal mines. Some solutions to Pittsburgh's local concerns included greater showcasing of sustainability success stories like Phipps Conservatory and Botanical Gardens and Chatham's Eden Hall campus and Living Buildings and Living Labs. There was also a focus on building large collaborations from city stakeholders like UPMC, the universities, and even industries to bring awareness to the negative impacts of fracking and the proposed cracker plant.

Take Action

- Volunteer and take action with local environmental organizations:
 - GASP
 - PennFuture
 - Green Building Alliance
 - Pittsburgh Parks Conservancy
 - Grounded (formerly Gtech)
 - Women for a Healthy Environment
- Report and learn about "smell events" from local pollution with the SmellPGH app
- Find your legislator and share your concerns:
<http://www.legis.state.pa.us/cfdocs/legis/home/findyourlegislator/>

9. Policy

The policy discussion discussed both needed changes to policies and ways to get the public on board with the needed changes. The first solution focused on language: avoid words that may carry party-related connotations like "regulation," speak to the public using plain English, and impress on audiences the needed protection for children and families. The group discussed starting with "low-hanging fruit" such as policies regarding labelling laws—again, stressing the impacts on children and babies. Attendees identified the need for more stringent oversight of over 83,000 chemicals currently unregulated in the US market. Also, revisit the Grandfathering Policy, demanding a review on currently untested compounds "generally regarded as safe." All of this, though, will require a better informed public - media should inform us about this, voters should know more, and those active in this issue should conduct outreach to future voters in schools.

Take Action

- Express your opinion to your elected representative
- Be aware of environmental issues at the voting booth: <https://www.lcv.org/>
- Find out who or what funds your representatives:
<https://www.followthemoney.org/tools/election-overview/>

10. Technical Issues

This group discussed concepts that seemed to arise as “technical issues” from other concepts. Topics included advocacy to increase funding for academic research—in particular funding to help chemists develop more sensitive analytical methods. In hold, there was an emphasis on the importance of interdisciplinary meetings to connect, biologists, chemists, green chemists and doctors to discuss issues (like EDCs) that impact multiple disciplines and will most likely require interdisciplinary solutions—without cross-community conversations, solutions will arise much more slowly. In addition, the group discussed the need for outreach education, in particular to high schools to transfer knowledge and excitement for science to teenage students.

Take Action

- Advocate for increased funding for research
- Research professionals engage in science communication training to ensure effective delivery of important information
- Read [Environmental Health News](#) for the latest chemical policy news
- Check [Collaborative on Health and the Environment's Toxicant and Disease Database](#)