

Cases Studies in Environmental Health and Ethics

- 1) A recent study found 200 chemicals in cordblood (residual blood from the fetus following childbirth). The researcher explains that the presence of these chemicals was a surprise since we had always assumed (or hoped!) that the placenta would protect the fetus from any chemicals that the mom might be exposed to. It turns out that babies are exposed to chemicals from the mother's body through breast-feeding also. Chemicals are present in so many of our consumer products, from food to toys to the clothes we wear and cleaners we use.¹
 - Should we enact more restrictive regulations for chemicals in consumer products?
 - Who are the stakeholders in this case?
 - Do we have sufficient evidence to make a decision? How much evidence do we need?
 - What actions could be taken locally (at the city level) while we wait for federal laws to change?

- 2) A baby experienced a life-threatening rash & asthma that her parents connected to lawn pesticide application. Another baby in the community had a life-threatening rash after her apartment was sprayed for a bug infestation. The parents, families, and children came together and advocated to the City Council to approve the Pesticide By-Law that would ban the use of pesticides on lawns and in garden care, and Halifax became the first city to have such a ban.²
 - Should our city adopt similar laws? Why or why not?
 - Who has the responsibility to advocate for children's health?
 - What would the arguments against such a law be?
 - Who would have a stake in this decision?

- 3) We have known for several years that phthalates and BPA, both used in the manufacture of plastics, can leach from flexible tubing, vinyl flooring, squeezable plastic toys, vinyl gloves, and carbonless register receipts. But recent studies suggest the largest source of phthalate and BPA exposure in humans is through the food supply. Canned food, processed food, meat, and dairy products are exposed to BPA and phthalates during processing. It may be that most phthalate and BPA exposure in food occurs in processing and packaging, before consumers bring it home. This is concerning because animal studies show that these chemicals function like hormones in our bodies and can lead to problems such as a version of attention deficit disorder, cancer, reproductive health, and increased allergies. Federal regulation may be the only way to control contamination of the food supply by phthalates and BPA.³
 - Should we regulate the type of plastic used in food production and storage in the US? Why or why not?
 - Would you be willing to pay more for food if you knew it was safe?

¹ <http://www.teachersdomain.org/resource/envh10.sci.life.eco.cordblood/> (1.5 minute video)

² <http://www.teachersdomain.org/resource/envh10.sci.life.eco.pesticideban/> (2.5 minute video)

³ Case adapted from the blog post at www.ecogenetix.org. A related fact sheet on phthalates and BPA can be found: http://www.aoc.org/pehsu/documents/patient_bpa_final.pdf