

Introduction

Hydraulic fracturing, or “fracking,” is the dangerous and controversial method of extracting hard to reach oil and natural gas from underground wells. Fracking a single well involves combining millions of gallons of water with tens of thousands of gallons of chemicals, including known carcinogens, endocrine disruptors, and other chemicals of concern, and injecting the mixture deep below the earth’s surface to break up rock formations and release the oil or natural gas contained within. The technology widely used to frack for oil and gas has been in use for less than 10 years, yet this relatively new extraction method has created a booming industry: Since 2005, over 80,000 fracking wells have been established, and produced an estimated 280 billion gallons of wastewater in 2012 alone.ⁱ

Breast Cancer Action opposes fracking because the practice exposes the broader public to toxic chemicals linked to breast cancer as well as a host of other health harms. Fracking can contaminate underground water supplies that directly threaten public health both in rural communities that reside near fracking sites as well as urban residents that live far from fracking operations. We have to act now rather than waiting for the negative health impacts of fracking to reach pronounced levels. We demand that regulatory agencies and elected legislators act now to protect public health and the environment from the hazardous impacts of fracking.

Fracking Chemicals are Linked to Breast Cancer and Other Health Harms

A 2011 study by the U.S. House of Representatives Committee on Energy and Commerceⁱⁱ identified over 700 chemicals used in fracking, including dozens of “chemicals of concern.” Of these chemicals, Benzene, Acrylamide, Ethylene Oxideⁱⁱⁱ, Bisphenol A^{iv}, and formaldehyde^v are well-known carcinogens with proven links to increased risk of breast cancer. Fracking also involves the use of endocrine disrupting chemicals such as lead and Di (2-ethylhexyl) phthalate that can lead to increased reproductive problems and breast cancer.^{vi} While many more of the chemicals used in fracking are suspected of increasing our risk of breast cancer, there is insufficient research to confirm the full scale and impact of the health harms they cause.

Fracking is associated with a host of additional diseases and disorders ranging from respiratory illnesses and reproductive problems to cancers. Health reports from communities near fracking operations commonly refer to early symptoms of chemical exposure, including rashes, nosebleeds, severe headaches, difficulty breathing, joint pain, intestinal illnesses, memory loss and other negative health effects.^{vii} Exposure to methane, released during the drilling and fracking process, via air or water contamination can cause dizziness, weakness, nausea and vomiting.^{viii} More serious health problems that develop over time are also a significant concern given that over a dozen proven or suspected carcinogens commonly used in fracking fluid are linked to diagnoses

of leukemia,^{ix} as well as stomach and pancreatic cancer,^x among other cancers.

In addition to a full review of the health impacts of fracking, there remain numerous unanswered questions about the health risks of fracking because companies refuse to fully disclose all the chemicals they use in drilling and fracking process citing “trade secrets.” This lack of transparency and full disclosure is unacceptable. Furthermore, it leaves the public and regulators at a significant disadvantage when weighing the possible health risks because we are unable to comprehensively identify or analyze the full scale of the health risks. Furthermore, the health risks could be significantly higher than the limited data suggests.

Fracking Impacts Everyone

The chemicals used in fracking are toxic and threaten to poison and pollute our air, water and food supplies--basic necessities for life. Fracking chemicals can leach into well water,^{xi} seep into underground aquifers, and contaminate water supplies for people who live locally as well as residents in far-off cities. A 2012 study^{xii} of fracking wells drilled in the Marcellus Shale of northeastern United States determined that it takes fracking chemicals “just a few years” to migrate into water supplies. However, fracking companies continue to insist that the process is safe because the chemicals used stay safely locked deep underground. Unfortunately, evidence suggests that this assertion is simply untrue.

As the practice of fracking expands across the United States, the health harms threatened by fracking are inevitably integrated into our daily lives. The inherent proximity of fracking chemicals to our water supply means that fracking chemicals cannot be separated from our food chain.^{xiii} As cattle drink contaminated water and graze grass grown in contaminated soil, they will produce contaminated meat and dairy products. Furthermore, agricultural products grown in contaminated soil and watered with contaminated water will easily carry toxic contaminants into our grocery products and onto our kitchen tables.

The Time to Act is Now!

Federal and state legislators and regulatory agencies have a responsibility to protect public health from the growing fracking industry. Fracking is grossly under-regulated as industry-sponsored loopholes in federal regulations, and an absence of common sense federal or

state laws, leave countless people vulnerable to the health risks of fracking. There is enough evidence to demonstrate that fracking poses significant risks to public health, and as activists we must act now if we want to stop cancer before it starts. A full, nation-wide end to fracking is necessary to protect public health from the broad and wide-reaching impacts that this inherently dangerous practice will unleash, and we hope that you will join us!

Take action against fracking today!

1. Donate to help make our anti-fracking work possible: www.bcaction.org/donate
2. Stay updated on our work to end fracking by joining our email list at: www.bcaction.org
3. Find up to date information and opportunities to get involved via our webpage: www.bcaction.org/take-action/stop-fracking/

Breast Cancer Action's mission is to achieve health justice for all women at risk of and living with breast cancer. We believe that breast cancer is a public health crisis and a social justice issue and we envision a world where lives and communities aren't threatened by breast cancer. For more information go to www.bcaction.org.

ⁱ Ridlington, E and Rumpel, J. *Fracking by the Numbers: Key Impacts of Dirty Drilling at the State and National Level*. Environment America. Oct 2013. Retrieved from:

http://www.environmentamerica.org/sites/environment/files/reports/EA_FrackingNumbers_scrn.pdf

ⁱⁱ United States House Of Representatives Committee On Energy And Commerce Minority Staff. *Chemicals Used in Hydraulic Fracturing*. APRIL 2011. Retrieved from:

<http://democrats.energycommerce.house.gov/sites/default/files/documents/Hydraulic-Fracturing-Chemicals-2011-4-18.pdf>

ⁱⁱⁱ Rudel, R.A., Attfield, K.R., Schifano, J.N. and Brody, J. *Chemicals Causing Mammary Gland Tumors in Animals Signal New Directions for Epidemiology, Chemicals Testing, and Risk Assessment for Breast Cancer Prevention*. CANCER Supplement. June 2007. Volume 109. Number 12

^{iv} Durando, M, Kass, L, Piva, J, Sonnenschein, C, Soto, A.M, Luque, E.H. and Muñoz-de-Toro, M. *Prenatal Bisphenol A Exposure Induces Preneoplastic Lesions in the Mammary Gland in Wistar Rats*. Environ Health Perspect. 2007 January; 115(1): 80–86.

^v Epstein, S. *Unrecognized Dangers of Formaldehyde*. Huffington Post. Jan 2011. Retrieved from:

http://www.huffingtonpost.com/samuel-s-epstein/unrecognized-dangers-of-f_b_804156.html

^{vi} WHO/UNEP. *State Of The Science Of Endocrine Disrupting Chemicals-2012: An assessment of the state of the science of endocrine disruptors prepared by a group of experts for the United Nations Environment Programme (UNEP) and WHO*. 2013.

^{vii} Cantrarrow, E. (May 2, 2013) *Fracking Ourselves to Death in Pennsylvania*. The Nation. Retrieved from:

<http://www.thenation.com/article/174155/fracking-ourselves-death-pennsylvania#>

^{viii} National Library of Medicine. Tox Town. Retrieved from: http://toxtown.nlm.nih.gov/text_version/chemicals.php?id=92

^{ix} Center for Disease Control and Prevention. Emergency Preparedness and Response. Facts About Benzene. Retrieved from:

<http://www.bt.cdc.gov/agent/benzene/basics/facts.asp>

^x Environmental Protection Agency. Technology Transfer Network - Air Toxics Web Site. Ethylene Oxide. Retrieved from:

<http://www.epa.gov/ttnatw01/hlthef/ethylene.html>

^{xi} Lustgarten, A. (Jan 20, 2012). *Years After Evidence of Fracking Contamination, EPA to Supply Drinking Water to Homes in Pa. Town*. Propublica. Retrieved from: <http://www.propublica.org/article/years-after-evidence-of-fracking-contamination-epa-to-supply-drinking-water>

^{xii} Lustgarten, A. (May 1, 2012). *New Study Predicts Frack Fluids Can Migrate to Aquifers Within Years*. Propublica. Retrieved from: <http://www.propublica.org/article/new-study-predicts-frack-fluids-can-migrate-to-aquifers-within-years>

^{xiii} Ibid.