

HEALTH IMPACTS FACT SHEET

There are now hundreds of peer reviewed scientific articles on all aspects of toxins related to unconventional oil and gas production. **The Endocrine Disruption Exchange (TEDX) has published research and aggregated data identifying low-dose exposure to chemicals associated with oil and gas development and operations as Endocrine Disrupting Chemicals (EDC).** These chemicals **affect not only reproduction and fetal development, but are linked to respiratory health, metabolism issues, malignancy as well as all the problems listed below.**

The New York State Department of Health (NYSDOH) released *A Public Health Review Of High Volume Hydraulic Fracturing For Shale Gas Development* in December 2014. In this study, it found that residents living near fracking activities had the following health problems: **skin rash, nausea or vomiting, abdominal pain, breathing difficulties, cough, nosebleed, anxiety, stress, headache, dizziness, and eye and throat irritation.** This study led to their recommendation that fracking should be banned in New York State.

The Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction), Third Edition, October 14, 2015, by Concerned Health Professionals of New York and the Physicians for Social Responsibility cites a number of studies. Below are some studies published in 2015 or 2014. The citing after each will read PSR-C then the page number.

- Uncertainty. California Council on Science and Technology studied the impacts of well stimulation on human health from the exposure to fracking-related air pollution. The unknown number and toxicity of chemicals mixed in these fluids make it difficult to quantify risk but the paper identifies the potential health risks. One conclusion: that “officials should fully understand the toxicity and environmental profiles of all chemicals before allowing them to be used in California's oil operations.” PSR-C p.72
- Birth defects, birth weight, and infant mortality.
 - In rural Colorado a study of almost 25,000 births from 1996-2009, congenital heart defects and neural tube defects (defects of the brain, spine or spinal cord) were associated with the density and proximity of natural gas wells **within a 10-mile radius of mothers' residences**. There are several chemicals emitted by natural gas development known to increase the risk of birth defects. PSC-C p.76
 - University of Pittsburgh study of three heavily drilled PA counties found the more exposure a pregnant woman had to gas wells, the higher her risk for a smaller-than-normal baby. Mothers living nearest to a high density of wells were 34% more likely to have babies small for their gestational age. Low birth weight is a leading cause of infant mortality. PSR-C p72,73
 - Health professionals in Vernal, Utah reported a 6-fold increase in infant death rates over a three-year period. The air quality which was formerly pristine in Uintah County, UT received an “F” rating for ozone in the American Lung Association's 2013 State of the Air Report. The Uintah Basin has 11,200 oil and gas wells. It is known that pregnant women who breathe more air pollution have much higher rates of virtually every adverse pregnancy outcome that exists, said one health professional. PSR-C p76
 - Preliminary data from researchers at Princeton University, Columbia U. and MIT used Pennsylvania birth records from 2004 to 2011 to assess the health of infants born within a 2.5-kilometer radius of natural-gas fracking sites. They found that proximity to fracking increased the likelihood of low birth weight by more than half, from about 5.6 percent to more than 9

percent. The chances of a low APGAR score, a summary measure of the health of newborn children, roughly doubled, to more than 5 percent. PSR-C p77

- Other preliminary studies from Colorado and Pennsylvania comparing infant birth weights and premature births with proximity to wells had similar findings as above. PSR-C p77; 72-73
- Rashes and upper respiratory problems.
 - A Pennsylvania, Yale-led study found that health symptoms reported by residents increased in frequency as distance between residence and gas wells decreased. Those living less than one kilometer from drilling activities had increased reports of rashes and upper respiratory problems. PSR-C p.73
- Urgent Care & Hospitalization.
 - Hospitals in the Bakken Shale region reported a sharp rise in ambulance and emergency room visits since the boom in drilling and fracking. Drug overdoses and oil field related injuries accounted for 50% of the cases in one emergency room. PSR-C p. 76
 - University of Pennsylvania's Center of Excellence in Environmental Toxicology found the increasing number of gas wells in Pennsylvania is significantly correlated with inpatient rates of hospitalization. PSR-C p.75
- Animal Health.
 - A Yale University School of Medicine study in SW Pennsylvania found evidence that dogs in households less than one kilometer from a gas well had elevated risks for health problems, especially dermal conditions. PSR-C p 73
 - Food animals have been shown to have increased respiratory and growth problems over time. The life of a food animal is very short compared to that of humans and some wildlife where cumulative effects would be pronounced. PSR-C p73
- Car Accidents. In Texas, commercial vehicle accidents have increased more than 50 percent since the beginning of the state's drilling and fracking boom in 2009. PSR-C p. 75

The BLM did not conduct a human health impact assessment in its Draft Resource Management Plan.

For more information on health impact studies go to www.endocrinedisruption.org TEDX is an excellent source of articles, organized by category.

A no leasing alternative is not only reasonable, but represents the best way to protect the North Fork Valley now and in the future.



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