

Dangerously Deep: Fracking's Threat to Human Health

Hydraulic fracturing (fracking) is a poorly-regulated, toxic and dangerous method of oil and gas extraction that has boomed over the past decade, subsequently leading the U.S. to be the largest global producer (and consumer) of natural gas.¹ Yet, all of this fracking and the accompanying infrastructure has plagued frontline communities and workers with well-documented, severe public health and safety impacts — from explosions and leaks, to contaminated drinking water and injuries on the job.

Compounded Risks to Health and Safety

Our shifting climate has already brought a slew of health issues, from heat-related deaths and water-borne illnesses to extreme weather events that have been linked to increases in atmospheric ozone and deaths.² Fracking has helped contribute to and intensify these threats. Research has shown that those who live closest to oil and gas operations are at a higher risk of experiencing negative health outcomes.³ But even those further away are at risk. Research has found that toxic radioactive material released during drilling can travel downwind, harming more than just those closest to wells.⁴

The fracking process releases pollutants like hydrocarbons and volatile organic compounds (VOCs), which can impair breathing and irritate the nose and throat.⁵ Additionally, fracking has been linked to cancer, reproductive problems, blood-related disorders in children and water contamination.⁶ When fracking comes to town it can disrupt the way of living in rural communities, leading to mental health issues in residents and increased crime.⁷



Oil and gas workers experience the brunt of health threats, with a death rate four times that of all U.S. workers.⁸ Not only are they subjected to accidents like explosions and blowouts, fracking workers are regularly exposed to contaminants like carcinogenic silica dust.⁹

Despite all of fracking's dangers, there is limited federal oversight, and companies can get away with not disclosing the chemicals they use to frack.¹⁰ Local governments have also downplayed fracking threats — from passing legislation to prevent any kind of fracking ban in Texas, to instructions to ignore fracking-related health complaints in Pennsylvania.¹¹

Toxic Infrastructure

Natural gas power plants, gas storage facilities, pipelines and petrochemical plants all utilize fracked gas. And like fracking, this infrastructure jeopardizes surrounding communities. The closer one lives to an oil and gas facility, the more potential health risks they are subjected to.¹² Natural-gas fired power plants emit significant amounts of pollutants — including methane, nitrogen oxides (NOx) and particulate matter — which have been associated with respiratory and reproductive issues, headaches, heart disease and strokes.¹³

Underground storage facilities are used to store excess natural gas, but these wells tend to be located near homes and are prone to leaks, blowouts and explosions — as seen in the notorious Aliso Canyon blowout.¹⁴ Pipelines and compressor stations are just as dangerous, with risks of spills, explosions and leaks, and direct health implications on nearby communities. From 1999 to 2018 there have been more than 5,700 pipeline incidents that have resulted in 1,267 injuries and close to 3,000 deaths.¹⁵

Fracking byproducts like ethane can be used to manufacture plastics, which has led to a petrochemical plant boom.¹⁶ But like the other toxic infrastructure that props up fracking, these facilities also emit toxic pollution and are disproportionately sited near low-income communities and communities of color.¹⁷

Environmental Injustices

The dangers of fracking and its infrastructure are especially real for already disadvantaged, poorer communities and

communities of color that are disproportionately situated near toxic facilities. The NAACP found that one million Black people live within a half mile of existing natural gas facilities.¹⁸ Cancer Alley in Louisiana, an area of densely placed petrochemical plants, has subjected predominately Black residents to negative health outcomes for decades.¹⁹ The highly-publicized resistance of the Standing Rock Tribe to the Dakota Access Pipeline brought national attention to the environmental injustices faced by Indigenous people.²⁰ And under the guise of economic prosperity, the fracking industry preys on lower-income, rural communities by bribing them with money in exchange for their land (and health).²¹

Conclusion

Fracking has had a devastating impact on public health, delayed a transition to renewable energy and contributed to climate change. This unsafe process harms our drinking water and health, hurts communities and desecrates the environment. But we can stop fracking. To protect people and the climate, we need to overhaul our energy system with a rapid transition to 100 percent clean, renewable energy, and we must ban fracking nationwide.

Endnotes

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