

We're finding out more and more about the worrisome link between fracking and health

Jeremy Berke, Business Insider News, 1-6-16

A new study in the journal *Nature* published on Wednesday confirms an opinion long held by experts: that chemicals in fracking fluids and wastewater can pose serious risks for reproductive and developmental health.

This comes on the heels of a *Toxicology and Applied Pharmacology* study from October, which first analyzed the connection between the toxicity of solids dissolved in fracking fluids and changes in the cells of mammals.

The authors of that study found elevated levels of harmful barium and strontium (metallic chemical elements) in cells exposed to the fracking fluid and wastewater, which were linked to the growth of malignant tumors.

The new study, in *Nature*, takes this one step further, by analyzing 240 of the known chemicals in fracking fluids. The evidence they found is shocking: 43% of the analyzed chemicals have reproductive toxicity, and are linked to problems including birth defects, infertility, reduced semen quality, and miscarriages. And 40% of the analyzed chemicals pose problems for developmental health, which can stunt fetal development and may cause premature or delayed sexual development later in life.

Hydraulic fracturing, or fracking, is a method used to release oil and natural gas from tight rock formations deep underground. Fluids are injected deep into the earth at pressures high enough to fracture the rock surrounding the oil and natural gas deposits, allowing the fuel a clear path to the surface.

The fluids — toxic slurries of water and volatile organic compounds like benzene — are the primary cause of health impacts when they leach into groundwater supplies used for drinking due to improper storage, disposal, or work-site accidents.

It's a crucial sticking point for an industry that's had massively positive economic impacts across the U.S.

An Environmental Protection Agency (EPA) report on fracking safety released this past June that first looked at the effects of fracking fluid on drinking water found that the amount of contaminated drinking water wells was slight when compared with the overall number of fracked wells.

AP Photo/Charles Rex Arbogast
In this June 9, 2014 photo, drivers and their tanker trucks, capable of hauling water and fracking liquid line up near a natural gas burn off flame and storage tanks in Williston, ND.

However, the EPA study does admit that insufficient long-term data on pre and post fracking water quality could have limited their results.

The Nature study, then, plays a critical role by highlighting exactly which chemicals in fracking fluids and wastewater are harmful. This will allow the EPA and other regulatory agencies to include these toxic chemicals in future analyses, and ultimately create up-to-date safe drinking water standards in fracking areas.

Though the hydraulic fracking industry is seen as a boon for American energy production, it's had a tough year. From numerous reports of earthquakes in Oklahoma, to the methane-spewing fields of West Texas, it's evident that we need more research to get a better understanding of fracking's negative health impacts.