## **Living Near Gas Operations-- Your Health Risks**

## Pennsylvania Studies

**Premature Birth, Low Birth Weight, Infant Mortality, Childhood Cancer** Heavily-fracked counties, including Westmoreland, have 13.9% greater infant mortality, 23.6% greater perinatal mortality, 3.4% more low-weight births, 12.4% more premature births, and 35.1% more cancer in children ages zero to four. Mangano, 2015

Small Birth Weight Babies born to mothers who had the highest "exposures" were 34 % more likely to be small. Gestational size is related to later health problems. Westmoreland County, Pitt, 2015

Cancer Risk Westmoreland County exceeds the EPA level of concern for cancer risk. Oil and Gas Threat Map

**Low Birth Weight, Reduced Health Scores** A mother's exposure to fracking before birth increases the prevalence of low birth weight by 25 % if the mother lives within 1.5 miles of gas wells and a 17 % increase in "small for gestational age" births, and reduced health scores. Hill, 2012

**Low Apgar, Low Birth Weight** If infants are born within a 2.5-kilometer radius of fracking sites, their chances of a low Apgar score roughly doubled and the likelihood of low birth weight increases by more than half. Currie, 2014

**Premature Birth, High Risk Pregnancy** Living in the most active quartile of gas activity was associated with a 40% increase in the likelihood of a woman giving birth pre-term and a 30% increase in the chance that an obstetrician had labeled their pregnancy high-risk. Schwartz, 2015

**Respiratory, Skin Problems** In Washington County, those living within a kilometer of a shale gas drilling site were four times as likely to suffer from skin problems as those living more than 2 kilometers away. Twice as many people reported respiratory problems. Rabinowitz, 2014

**Migraines, Fatigue, Sinusitis** This PA study ranked participants according to how closely they lived to fracking sites. Compared with those in the bottom one-quarter by this measure, those in the top one-quarter were 49 percent more likely to have sinusitis and migraines, 88 percent more likely to have sinusitis and fatigue, 95 percent more likely to have migraines and fatigue, and 84 percent more likely to have all three symptoms. Schwartz, 2016

**Increased Hospitalization, Cardiac, Neurology, Skin** An increasing number of wells is significantly correlated with inpatient rates of hospitalization, most notably cardiovascular admissions; also increased neurological illnesses and skin conditions. Penning, 2014

**Cancer** Eight poisonous chemicals were found near fracking sites in Pennsylvania, The spikes in air pollution almost certainly will lead to a cancer increase in surrounding areas. Carpenter, 2014

## Other U.S. Studies

**Neural Tube and Heart Defects** Babies born to mothers living in areas with the highest density of wells were more than twice as likely to have neural tube defects than those living with no wells within a 10-mile radius, and had a 38 % greater risk of congenital heart defects than those with no wells. McKenzie, 2014

**Asthma** People with asthma who live near more intense shale gas activity are 1.5 to 4.4 times more likely to suffer from an asthma attack. Rasmussen, 2016

Lungs, Heart, Immune Systems These systems are at risk, particularly for young children. Webb, 2016

**Cancer, Non-Cancers** People living within ½ mile of gas wells are at greater risk of disease including cancer. Non- cancer risks are greatest for neurological, hematological, respiratory, developmental effects. McKenzie, Adgate, 2012

**Lower Sperm Count** 23 commonly used fracking chemicals can activate or inhibit the estrogen, androgen, glucocorticoid, progesterone, and/or thyroid receptors. Nagel, 2015

**Infertility, Birth Defects, Impaired Fetal Growth** The risks from exposure include: infertility, miscarriage or spontaneous abortion, impaired fetal growth, and low birth weight. Webb, 2014

"The number one public health threat in Pennsylvania is fracking. Nosebleeds, skin rashes, asthma, and respiratory difficulties are commonly found in areas where fracking occurs. Later complications such as premature births, cancer and tumors are very real threats." Former President of the American Public Health Association, Dr. Walter Tsou with Physicians for Social Responsibility