

## THE OVERLOOKED CONNECTION BETWEEN HUMAN HEALTH AND FOSSIL GASES

Scientists have proven that human induced climate change and global warming are from burning fossil fuels and are seeking alternative energy sources. Adding to the urgency is the evidence from other scientists who have proven that humanity is facing a more imminent threat to survival because of the overlooked alternative uses of the fossil gases that surface during drilling for oil and gas. Methane and a group of semi-gaseous liquids called the aromatics are both separated from the raw gas on the well pads and enter separate pipelines. The aromatics, including benzene and toluene, are comprised of six carbon atoms attached in a circle called the benzene ring. Chemists use this carbon ring as the building block for the production of practically everything the infrastructure and economy of modern society is dependent upon.

Over the last 50 years as exposure to chemicals derived from fossil gases has increased so have the number of global pandemics attacking the human endocrine system. In the US alone, almost half the individuals born today will become diabetic and/or obese; one of every 88 babies born has autism spectrum disorder. For boys it's one in 54. The cost of treatment and care for these problems along with infertility, Parkinson's and Alzheimer's Disorders, and hormone driven cancers are in the trillions but are in-estimable because they are increasing so rapidly. All of these disorders have been traced back to prenatal, early life, and/or adult exposure to chemicals derived from these oil and gas condensates that interfere with the normal function of the endocrine system that assures species integrity and perpetuity. Before the 1930s these ailments were rare.

Hormones, like these new chemical based products, are made with different permutations and combinations of benzene rings. As signaling chemicals, hormones keep cells and tissues alive, control fertilization of the egg, initiate the construction of the baby in the womb and how it will function, mature, and senesce. Hormones function in concentrations of parts per billion, per trillion, and less. At and following fertilization the slightest shift in a hormone signal can trigger a chain of events starting from the cell to glands and systems that develop and the ensuing

dysfunction may not be expressed until years later. The earlier the shift the greater the damage later on.

For 20 years independent scientists around the world have shown how chemicals that disrupt the endocrine system (endocrine disruptors, or EDs) fool the tissues that respond to natural hormones causing irreversible changes in structure and function; in some studies through three generations. These ED scientists were able to induce alterations in intelligence and behavior by introducing specific EDs as the brain commenced to develop. Direct exposure to benzene and toluene interferes with endocrine control of the brain, heart, nervous, and immune systems, and also causes immediate effects to the eye, skin, and nervous system similar to complaints from those living and working in gas fields.

In addition, another class of ignored gas that escapes at the well head, the polycyclic aromatic hydrocarbons (PAHs) were found in a neighborhood immersed among natural gas wells at concentrations 3 times higher than those detected in a study done in New York City where pregnant woman wore back pack air monitors. The NYC babies exposed to the higher concentrations of PAHs were pre-term, had low birth weights, smaller than norm skull circumferences, and by age 5 had lower IQs. At age seven they had attention, behavior, and metabolic problems, and were obese.

EDs dehumanize the human race by stealing the ability to love, socialize, enjoy each other, and sit down to converse with others in order to solve problems. Now into the fourth generation of individuals exposed to fossil derived EDs the prognosis is bleak. The recent rapid increase in human health pandemics, especially autism spectrum disorder, provides powerful re-enforcement to the climate change argument. Governments must take heed immediately or there will be too few healthy, intelligent individuals left to preserve our humanitarian society and create some semblance of world peace.

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