

Physicians care first and foremost about the health of our communities. When an activity has the potential to cause harm to human health, precautionary measures should be taken until cause and effect relationships are fully established scientifically.

The extraction of natural gas in the Marcellus and similar shales involves high-pressure injection of millions of gallons of fresh water, sand and chemicals, some of which are known carcinogens and endocrine disruptors, into the shale formations to force the release of natural gas. Extracting gas is a brutal process which uses 15,000 psi of noisy generated pressure, using a process that pollutes the air with diesel fumes, ground level ozone and volatile organic compounds. It causes methane gas and other chemicals, both injected and those returned from the depths of the earth, like radioactive elements and heavy metals, to migrate in unpredictable underground directions up toward the surface where people and animals live.

Hydraulic fracturing takes clean water and creates billions of gallons of toxic waste fluid for which there is no treatment. Given the vast scale of the proposed drilling, this amounts to an unprecedented level of toxins being released into the air and water. Extensive drilling activity has already caused health problems, environmental disasters and irrevocable damage to water resources in other parts of the country.

Accumulating incidents of explosions and spills, dead fish and livestock, and contaminated water make hydraulic fracturing an unacceptable practice at this time.

The effects of this process on human health, livestock, and wildlife have not been subject to rigorous research by the medical, agricultural or forestry communities.

In the draft Supplemental Generic Environmental Impact Statement the New York State DEC does not include medical data, nor provides for any mechanism of identifying people with resultant health problems, and lacks any analysis of the cumulative effects of thousands of gas wells on human and animal health. From the health perspective, the document is fatally flawed and should be withdrawn.

Our colleagues from professional communities are assisting us in our support and advocacy for an EPA study which should include thorough air and water investigations. We advocate for additional independent scientific studies. **And we insist on a moratorium on the process of high volume slick water hydraulic fracturing until conclusive analysis of the health effects to humans, livestock, and wildlife can be completed.**

** The following county medical societies have written letters supporting the above position: Oneida, Herkimer, Chenango, Oswego, Cayuga, Madison, Broome, Onondaga ** compiled by [GDACC](#)

HEALTH AND HUMAN RIGHTS ISSUES RELATED TO DRILLING FOR NATURAL GAS



***Kofi Annan**, the former United Nations Secretary-General said:*

“Access to safe water is a fundamental human need and, therefore, a basic human right.

Contaminated water jeopardizes both the physical and social health of all people. It is an affront to human dignity.”

WATER IS OUR RIGHT PROTECT OUR WATER

Klaus Toepfer, Executive Director of the United Nations Environment Programme, stated the following at the 57th Session of the Commission on Human Rights:

“Human rights cannot be secured in a degraded or polluted environment. The fundamental right to life is threatened ... by exposures to toxic chemicals, hazardous wastes and contaminated drinking water. Environmental conditions clearly help to determine the extent to which people enjoy their basic rights to life, health, adequate food and housing, and traditional livelihood and culture. It is time to recognize that those who pollute or destroy the natural environment are not just committing a crime against nature, but are violating human rights as well.”

Human rights are incorporated in several international conventions and declarations. The right to health was recognized in 1946 when the Constitution of the World Health Organization stated that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being. This right extends to the underlying determinants of health—and central among these is safe water.

Article 24 of the Convention on the Rights of the Child (1989) guaranteed that children are entitled to the enjoyment of the highest attainable standard of health, which requires States Parties to take appropriate measures to combat disease and malnutrition, which includes the provision of clean drinking-water.

Lack of accessible safe water increases the vulnerability of children to diseases. Their immune systems and detoxification mechanisms are not fully developed, so they are less able to respond to a water-related toxicity. Children also have less body mass than adults. This means that a water borne chemical may be dangerous for a child at a concentration that is relatively harmless for an adult.

The UN Declaration of Human Rights has just been amended with the addition of Article 31—the right to safe and clean water for drinking and sanitation.

Water is the essence of life and human dignity. Water is fundamental to poverty reduction and providing people with elements essential to their growth and development. Recently, the Committee on Economic, Social and Cultural Rights adopted General Comment No. 15 in which water is recognized, not only as a limited natural resource and a public good but also as a human right.

The right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water.

While the General Comment emphasizes the right to water for personal and domestic uses, other uses are also important. Water is essential for numerous activities that sustain human life and ensure human dignity.



The Center for Children's Environmental Health Mount Sinai School of Medicine

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As pediatricians specializing in environmental medicine, we at The Center for Children's Environmental Health are opposed to the current use of hydraulic fracturing not only due to the multiple known risks to children's health, but also due to the substantial lack of research into the health effects of this practice. While this particular void in research is prominent and must be addressed, multiple health concerns have already been brought up by a wide range of individuals and groups, from rural communities to political bodies and environmental organizations to public health experts. Some of these concerns include:

- Contamination of drinking water
- Increased air pollution due to industrial traffic and the production process
- Psychological effects from accidents or other traumatic events

The establishment of clean, unpolluted, easily accessible drinking water was a public health victory that resulted in significant reductions in morbidity and mortality. Hydraulic fracturing presents a threat to this significant achievement. Of the numerous chemicals used in the hydraulic fracturing process that have been publicized, many are nervous system- and respiratory-toxicants, as well as carcinogens. For instance, benzene is an International Agency on Research for Cancer Group I carcinogen. While the health effects of these known chemicals are worrisome, what is perhaps more concerning is that we do not know all the chemicals used in the process. This lack of knowledge will handicap the ability to fully study the possible risks. How can we adequately study potential health effects of hydraulic fracturing if we do not know all the compounds that are being used? It is vital that these chemicals are fully disclosed so researchers and the general public understand what individuals are being exposed to.

The burden of childhood asthma has grown substantially over the past several decades, as the prevalence of asthma in children has steadily increased. Since many of the products of diesel fuel combustion have been linked to asthma, respiratory symptoms, and various other health effects, the impact of exposing more children to these air pollutants should be examined. With the potential for toxic spills and explosions, the disaster management plans of potential drilling areas should be examined as part of this study, especially those of daycares and schools. Research has shown that children and adolescents are at risk for mental health disorders, such as post-traumatic stress disorder (PTSD), anxiety, and depression, following a variety of disasters, including shooting sprees, terrorist attacks, and natural events such as tornadoes. Therefore, the potential impact of explosions and spills on children's mental health should be evaluated. While some individuals and groups, especially those associated with the energy extraction industry, have minimized or outright dismissed these concerns in favor of promoting jobs and tax revenue, recent events, including the BP oil spill in the Gulf of Mexico and the coal mine disaster in West Virginia, serve as examples of the potential results of emphasizing profits over human health and safety.

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A common saying in the field of pediatrics is that "children are not small adults." This often repeated statement serves to remind us that children differ from adults in fundamental ways. This is especially relevant in the field of pediatric environmental health. For a variety of reasons, children are exposed to toxic substances to a greater degree than adults. They breathe more rapidly than adults, increasing their exposure to air pollution. They have a greater surface area of skin per body weight than adults, which increases their dermal exposure to toxic substances. The developmental exploration of infants and toddlers includes placing items in their mouths, resulting in more frequent contact with certain chemicals such as phthalates and bisphenol A (BPA). On a pound of body weight-per-pound of body weight comparison, children consume more food and water than adults do, which elevates their exposure to pollutants in drinking water and pesticides.

We also know that in some cases infants' bodies are less efficient at handling toxic substances than adults. In part due to differences in biologic processes such as metabolism of toxic substances, levels at which adverse events occur may be lower for children than adults. Since infants and children are continually developing, a toxic insult in this age range can have long-term adverse effects on development. This concept is especially important in pregnancy, when critical developmental processes can be disrupted by water and air pollutants resulting from hydraulic fracturing such as organic solvents and polyaromatic hydrocarbons. It is instrumental that the assessment of any new chemical or technology includes the potential effects on the health and development of pregnant women, infants, and children.

More vigorous research into the impact of hydraulic fracturing has been urged by various groups representing a wide range of individuals and issues, including the District II (NY) American Academy of Pediatrics (AAP), Environmental Working Group, and the Subcommittee on Energy and Environment of the 111th US Congress. The New York State Senate recently voted to support a moratorium on hydraulic fracturing until more information can be gathered regarding the impact on drinking water and the environment. We at the Center for Children's Environmental Health at the Mount Sinai School of Medicine support the EPA's attempt to study the impact of hydraulic fracturing on drinking water, but also urge that the other potential health threats as mentioned above are part of a comprehensive study on this matter. It is imperative that the health effects on pregnant women, infants, and children are adequately studied.

Resources:

- American Academy of Allergy, Asthma & Immunology. 2010. Asthma Statistics. Accessed online Aug 5, 2010.
- American Academy of Pediatrics, District II, New York State. 2010. Memo of Support A. 10490/S.7592.
- Environmental Working Group (EWG). 2010. Drilling Around the Law. Accessed online Aug. 4, 2010 at <http://www.ewg>.
- Pandya RJ, et al. Diesel exhaust and asthma: hypotheses and molecular mechanisms of action. *Enviro Health Perspect.* 2002 Feb;110 Suppl 1:103-12.
- Perera, FP, et al. Prenatal Airborne Polycyclic Aromatic Hydrocarbon Exposure and Child IQ at Age 5 Years. *Pediatrics* 2009;124:e195-e202.
- Science & Environmental Health Network - <http://www.sehn.org/precaution.html>
- The Endocrine Disruptor Exchange. <http://www.endocrinedisruption.com/home.php>. Accessed Aug 9, 2010.
- US House of Representatives Committee on Energy and Commerce. 2010. Energy & Commerce Committee Investigates Potential Impacts of Hydraulic Fracturing. Accessed online Aug 4, 2010.
- World Health Organization International Agency for Research on Cancer. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. <http://monographs.iarc.fr/ENG/Monographs/suppl7/suppl7.pdf>. Accessed Aug 9, 2010

Water is a Human Right from Food and Water Watch
On Wed Jul 28, 2010 at 03:24:50 PM PDT

The UN General Assembly passed a resolution today on the human right to water and sanitation. The official tabulation: 124 states voted yes, 42 states abstained—including the U.S.—and no state voted against. This is a fantastic victory that finally establishes the critical recognition that all human beings have a right to clean water—a vital and natural resource upon which all of us depend.

The passing of this resolution, which was introduced by the Bolivian government, should affirm that we are finally—and collectively—advancing the conversation about the human right to water. This is especially rewarding for our water activists and our network of allies who have been working on this issue for the past 10 years.

U.S. municipalities and states are increasingly recognizing water as a human right. As this trend gains momentum, so will our ability to pressure the federal government to affirm the right to water in global forums. We eventually hope to make the human right to water an internationally recognized law. Until then, we must continue to educate and inform on behalf of our mission.

We believe that water is a common resource to which we all have an equal right and a responsibility to protect. So does the United Nations. Water is enshrined in the right to life and dignity, as set forth in the Universal Declaration of Human Rights. In 2002, the United Nations Economic and Social Council adopted water as a right to ensure fair and non-discriminatory access to safe drinking water.

<http://www.foodandwaterwatch.org/water/world-water/right/>



American Academy of Pediatrics, District II, New York State

Dedicated to the Health of All Children

Memo of Support
A. 10490/S. 7592

An act to establish a moratorium on conducting hydraulic fracturing for extraction of natural gas or oil in New York State until 120 days after the Environmental Protection Agency issues a report on the effects of hydraulic fracturing on water quality, air quality and other public health impacts.

The American Academy of Pediatrics, District II, NYS, representing more than 6,000 pediatricians and the millions of children we care for across the state, strongly supports A10940/S7592.

This legislation provides an opportunity for the EPA to study the potential public health impacts of hydraulic fracturing, and for New York State's leaders to have that information before it makes any decision about permitting hydraulic fracturing in our state.

AAP, District II, NYS membership is concerned about the potential negative impacts on water, air, soil contamination, increased traffic and possible spills of contaminated materials in areas where many children and families live. Allowing time for the EPA study will allow our state leaders to move forward on this issue fully informed about whether hydraulic fracturing is a good public policy for our state.

We urge the legislature to pass this legislation now, imposing the moratorium to provide the time to for our state leaders to have the latest EPA data to inform our decisions going forward.