



Learning disabilities, developmental delays, cerebral palsy, autism and other developmental disorders are harming the ability to learn in **one out of every six children in the United States**, and the number of children seeking special education services has **increased 200 percent** in the last 25 years.

As physicians Philippe Grandjean and Philip Landrigan described in *The Lancet* in 2006, the causes of these disorders are mostly unknown. However, we do know that **chemicals like lead, mercury, PCBs and arsenic are one of the reasons for this serious set of health problems** because these chemicals can cross the placenta and disrupt normal development of the brain before birth.



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Messing with Kids' Brains

How Chemicals Are Affecting Nervous System Development, and What AFT Members Can Do about It

Chemical Industry's lead, mercury, PCBs and BPA

Fathers's Skin Tone

Mother's Shape of Lips



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The developing human brain is much more vulnerable to the harm of toxic chemicals than the brain of an adult. During the nine months of pregnancy, the brain is transformed from a tiny strip of cells on the ectoderm to a complex organ with billions of exquisitely specialized and interconnected cells. The brain continues to develop after birth into early childhood, and the first 1,000 days of human development comprise a window of vulnerability that chemicals can break through to interfere with a child's intelligence and behavior. No other time of life and no other organ are as susceptible to harm from chemicals as the brain during fetal development and the first two - three years of childhood.

More than 200 chemicals are known to harm the less vulnerable brains and nervous systems of adults. Many more chemicals have been shown to harm the development of animals, but there are no scientific studies that have analyzed if these chemicals are damaging humans in the same way. For many of the 80,000 registered chemicals in the United States, there is no information on whether they can harm a human's developing brain or cause any other health problems. This is largely because of the Toxic Substances Control Act (TSCA, pronounced "tosca"), the 1976 law that was supposed to give the Environmental Protection Agency (EPA) the power to "regulate chemical substances and mixtures which present an unreasonable risk of injury to health or the environment."

TSCA has been a troubled law from the start. The law grandfathered in more than 60,000 chemicals without requiring that their manufacturers show that the products were safe. TSCA also has discouraged companies from testing their chemicals for safety and has made it harder for innovators to develop safer materials.

Twenty states have been able to pass more than 100 laws to keep harmful chemicals out of products that can hurt pregnant women and children, but other countries do a better job at modernizing their

chemical regulations to better protect their people from the harm toxic chemicals can cause.

As a result, the AFT and the BlueGreen Alliance are working together to convince Congress to pass meaningful reform of the Toxic Substances Control Act.

Over the last five years, Democrats in the House and Senate have introduced bills to give the EPA the authority it needs to begin to regulate toxic chemicals and to protect public health. However, in 2013, Sen. David Vitter (R-La.) was the primary author of a bipartisan bill, the Chemical Safety Improvement Act, that will not give the EPA the authority it needs to protect our children and will strip states of their power to regulate chemicals.

To reclaim the promise of safe and healthy communities, we need stronger laws to protect us from toxic chemicals. That's why the AFT passed a resolution in 2010 to "work in coalition with other key stakeholders, including labor unions, the BlueGreen Alliance, environmental organizations and persons with disabilities, to advocate for genuine TSCA reform."

Your state and federal legislators need to hear that chemical policy reform matters to you. You can help by distributing this joint publication of the American Federation of Teachers and the BlueGreen Alliance.

FOR MORE INFORMATION on how to get involved in what the AFT and the other 13 labor and environmental partners of the BlueGreen Alliance are doing together to win stronger chemical policies, visit www.bluegreenalliance.org.

- For additional information about federal reform, go to www.saferchemicals.org, the website for the Safer Chemicals, Healthy Families coalition.
- If you would like to know more about what your state may be doing to regulate chemicals, and for opportunities to get involved, visit www.saferstates.org, a network of diverse environmental health coalitions and organizations in states around the country.
- For daily news on how toxics in the environment are impacting children and adults, visit www.environmentalhealthnews.org.



Chemical Compound	Associated Neurological Disease/Disorder							
	ADHD	Autism	Learning Disability	Intellectual Disability (Mental Retardation)	Conduct Disorders & Behavioural Problems	Cerebral Palsy	Impairments in Vision and Hearing	IQ
Lead	✓		✓	✓	✓			✓
Methylmercury		✓		✓		✓	✓	✓
PCBs					✓			✓
Organophosphate Pesticides	✓		✓					✓
PBDEs								✓
PAHs					✓			✓
Arsenic			✓					✓
Perchlorate								✓
BPA					✓			
Phthalates		✓			✓			✓