

When policymakers ignore science, children pay the price

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Dr. Richard Jackson: When policymakers ignore science, children pay the price

It's time to reject the myth that pouring harmful chemicals and particles into our air won't destroy our children's future.

More than a decade ago, I authored a paper warning that the toxic pollutant lead was damaging the brains of our children and costing each year's cohort of American babies hundreds of billions in lifetime income. Today I am writing because there is mounting evidence that failing to protect our children from air pollution will cost far more.

For too long, the powerful damage done by lead exposure to children went first unrecognized, and then malignantly unaddressed by those responsible for taking action.

Shifting blame to mothers for negligence was a more convenient tactic than taking responsibility for their actions: "*Why would a good mother have her children living in slum housing?*"

But lead, unfortunately, was just one on a long list of dangerous hazards that went ignored until it was too late: in the early 1970's most American newborns were bathed with the germicide hexachlorophene, until researchers discovered that it caused brain damage, nerve damage and seizures in infants; mercury was used as a teething powder in many households through 1950, until researchers linked the element to serious neurological deficiencies in infants.

Many of the protections we rely on today were enacted only after concerned parents and children's advocates fought to advance them. Repeatedly, our society has ignored the health of those most vulnerable among us: infants may be unable to speak, but they are profoundly sensitive to environmental threats surrounding them.

This month, the American Journal of Public Health published an [article](#) by a group of scientists, physicians and children's health advocates urging officials at the federal, state and local levels to increase efforts to reduce exposure to air pollution in order to protect our children's brains.

The article highlights mounting evidence linking air pollution to neurodevelopmental disorders in children, like autism, ADHD, memory deficiencies and reduced IQ. The rate of these disorders in children is on the rise, and cost the U.S. economy tens of billions of dollars a year in medical costs and lost productivity.

Most worrisome for every parent and grandparent in America should be that the U.S. Environmental Protection Agency, instead of fulfilling its duty to protect our children from environmental harms, has in the last two years rolled back a multitude of clean air protections, endangering the health and development of our children.

One of life's greatest joys for welcoming parents is to behold their new baby. Brain development in the womb is a complex biological process. Among the greatest miracles in this new developing person is a brain that weighs less than a pound, approximately one-eighth of the child's birth weight.

This marvelous organ will grow by an astonishing one percent per day for the next three months and will have grown three times larger by the time the child begins nursery school. More oxygen and nutrition go to the brain at this time than any other organ, more even than to the muscles.

Sadly, this astonishing and all-important brain growth for the child, and, yes, for society at large, is often taken for granted and can go unprotected.

And while the human brain is remarkable and adaptable, increasingly it's being disturbed by exposure to common pollutants.

The government policy makers that should be protecting our children's developing brains are the ones increasingly guilty of child neglect: *"Why would a pollution policy not keep up with critical pediatric neuroscience?"*

Similar to the fully dispelled myth that lead is harmless, the myth that air pollution merely burns the eyes, throat and bronchial tree is also nearly defunct, though still being proffered by vested interests.

Let's not duplicate the selfish blunders of the past. The thin membrane between the lung and the bloodstream is not only penetrable by oxygen and carbon dioxide, but also by toxic pollutants formed during combustion, as well as tiny particles formed during burning of fossil fuels and other materials.

The heart of a child is pumping not only 20 percent of the oxygen to her brain, it is delivering a similar portion of the inhaled toxic particles and pollutants. In adults, we see angina, irregular heart rhythms, and even heart attacks from air pollution; we are now learning that these air pollutants are harming the brains of our children.

That damage to a child's brain can be lifelong – it's time to reject the myth that pouring harmful chemicals and particles into our air won't destroy our children's future.