

THE HEALTH COSTS OF COAL:

COAL ISN'T JUST DIRTY, OUTDATED ENERGY — IT'S ALSO MAKING US SICK

COAL MAKES US SICK

Doctors, nurses, and scientists around the world agree on one simple fact: Coal makes us sick. Not only is coal-burning responsible for two-thirds of U.S. carbon emissions — the main contributor to climate disruption

— but pollution from coal also causes serious health effects and contributes to four of the five leading causes of death in the United States: cancer, stroke, heart disease, and upper respiratory disease.¹ Here are some of the staggering statistics:

Coal-burning is responsible for

- one-third of all U.S. carbon-pollution emissions.²
- over 13,000 premature deaths every year.³
- over 12,000 emergency room visits each year.⁴
- over 20,000 heart attacks every year.⁵
- over 200,000 asthma attacks a year.⁶
- more than \$100 billion in annual health costs.⁷
- smog and soot, which can lead to asthma attacks. One in ten U.S. schoolchildren suffer from asthma.⁸
- one-half of U.S. families now live in places where it is unsafe to breathe the air⁹



SMOG, SOOT, AND ASTHMA

In the United States, there is a 50 percent chance that your air is not safe to breathe, thanks to dangerous levels of air pollution. Pollution from coal-fired power plants leads to smog (or ozone), a weak acid that feels like a sunburn on your lungs. It can cause chest pain, coughing, and breathing difficulties, and it irritates our lungs, triggers asthma attacks, and can lead to irreversible lung damage or even death. Smog can make conditions like bronchitis, emphysema, and asthma worse or even fatal.

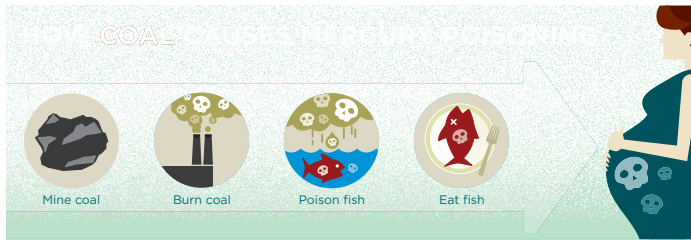
Children are at the greatest health risk from air pollution because they are more likely to be active outdoors and their lungs are still developing. Asthma is the number-one health issue that causes kids to miss school.¹⁰ On “bad-air days” or “air alert days,” particularly during the warmer summer months, kids with asthma are forced to stay indoors for risk of aggravating their conditions.



Meanwhile, soot pollution — a byproduct from burning fossil fuels that results in small particles in the air made from a mixture of metals, chemicals, and acid droplets — causes an estimated 9,700 hospitalizations and more than 20,000 heart attacks each year.¹¹ The smallest soot particles are less than one-hundredth the width of a human hair and are able to go deep into lung tissue and even enter the bloodstream. Dangerous soot pollution is linked to irregular heartbeat, chronic bronchitis, decreased lung function, and irritation of the airways.

MERCURY

Burning coal releases toxic mercury that rains down onto rivers and streams. This poison then accumulates in the food chain, eventually making its way into our bodies when we eat contaminated fish. Mercury is a powerful neurotoxin that can damage the brain and nervous system. Mercury is especially dangerous to pregnant women, women thinking of becoming



pregnant, and young children, since exposure to mercury can cause developmental problems, learning disabilities, and delayed onset of walking and talking.

Currently, coal-fired power plants are the largest single source of unregulated mercury pollution in the United States, emitting over 33 tons of toxic mercury each year.¹² Fortunately, landmark new protections, introduced by the Obama administration in late 2011, will reduce mercury by over 90 percent. Cleaning up mercury means safer fish and healthier children.



Download the Sierra Club's "Safe Sushi" app for iPhone and Android to see the mercury levels in the fish you eat.

TOXIC ASH

When coal burns it leaves behind toxic coal ash and dangerous sludge. This waste is dumped in thousands of sites nationwide and often stored

in open-air pits with no protective liners. From these pits, it can spill or seep into the ground and contaminate drinking water.

Children are most susceptible to the health threats from coal ash and according to the EPA, 1.54 million children live near coal ash storage sites. The toxins found in coal ash have been linked to organ disease, cancer, respiratory illness, neurological damage, and developmental problems. Exposure to coal ash can lower birth rates, cause tissue disease, slow development, and even kill plants and animals. People living within one mile of unlined coal ash pits have a risk of cancer more than 2,000 times higher than what the EPA considers acceptable.¹³



MOVING BEYOND COAL

With stronger pollution standards and clean energy, our kids are breathing easier and our communities are healthier. New protections from the EPA will safeguard public health and reduce pollution from coal plants. And replacing coal plants with clean-energy solutions like wind, solar, and geothermal is helping clean up the air for our kids and families. In Iowa and South Dakota, for example, more than 20 percent of the state's locally generated energy comes from wind.

To learn more about the health effects of coal, and to find out how you can get involved in moving our country toward cleaner energy solutions, visit www.beyondcoal.org.

ENDNOTES

- 1 Physicians for Social Responsibility, "Coal's Assault on Human Health," November 2009, <http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf>
- 2 Department of Energy, Energy Information Administration, "Emissions of Greenhouse Gases in the United States 2008," December 2009, <ftp://ftp.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/ggrpt/057308.pdf>
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- 8 Centers for Disease Control and Prevention, "Asthma in the US," <http://www.cdc.gov/vitalsigns/Asthma/>
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- 12 Madsen, Travis and L. Randall, "America's Biggest Mercury Polluters." Environment America Research & Policy Center and Frontier Group, November 2011, <http://www.environmentamerica.org/reports/ame/americas-biggest-mercury-polluters-how-cleaning-dirtiest-power-plants-will-protect>
- 13 Jeff Stant, "IN HARM'S WAY: Lack Of Federal Coal Ash Regulations Endangers Americans And Their Environment." Environmental Integrity Project, Earthjustice and Sierra Club, August 2010, <http://earthjustice.org/sites/default/files/files/report-in-harms-way.pdf>

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