

Understanding Pollution: How Safe from Air Pollution Are Our Homes?

When talking about air pollution it is important to remember that it isn't just outside affecting the environment; it's also in our homes. Air travels everywhere on the planet, and it should come as no surprise that the pollutants that are in the air outside are making their way into our homes, but indoor air pollution doesn't even refer to those pollutants. It is concerned with the pollutants whose sources are already in our homes, and it is a very serious issue with 4.3 million deaths a year attributed to it.ⁱ There are multiple health effects, and just as many sources of indoor air pollution that make it an immediate global issue.



understanding
POLLUTION 
Photograph by Karina Norton

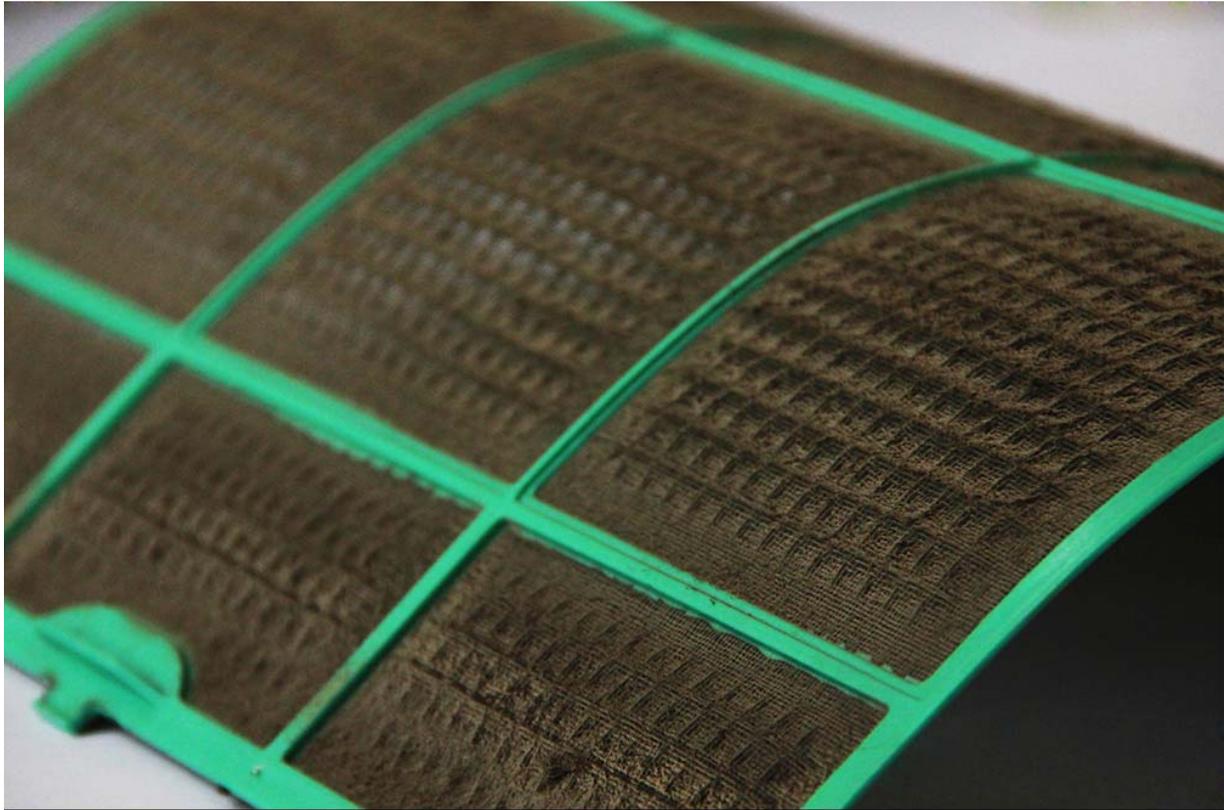
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Indoor air pollution is defined as “Indoor air pollution refers to chemical, biological and physical contamination of indoor air.”ⁱⁱⁱ Some of the more common pollutants found indoors are radon, carbon monoxide, respirable suspended particles (particles that are small enough to inhale), volatile organic chemicals (VOCs), formaldehyde, lead, and tobacco.ⁱⁱⁱ Most, but not all, of these pollutants are caused by carbon based fuels that are used to heat your homes, cook, and heat your water; even something as simple as having a fire in your fireplace.^{iv} To go over the effects of some of those pollutants: Radon causes 20,000 cancer deaths yearly.^v We then move onto respirable suspended particles which have been connected to eye, nose, and throat irritation, respiratory infections and bronchitis as well as emphysema and lung cancer.^{vi} The effect of carbon monoxide is that it reduces the body's ability to deliver oxygen to all vital organs^{vii} Volatile organic

chemicals have also been linked to eye, nose, and throat irritation; and also headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system.^{viii} We then move onto the effects of formaldehyde. It also causes eye, nose, and throat irritation in addition to causing headaches, runny noses, nausea and difficulty breathing, and has been labeled as a carcinogen.^{ix} Lead that is inhaled collects in the bones of the body and can affect the nervous system, kidney function, immune system, reproductive system, and the cardiovascular system.^x These are just some of the common pollutants and their effects, but the overall effects of indoor air pollution are not limited to just these.

Indoor air pollution kills millions of people every year. As mentioned above, the death toll connected to indoor air pollution is estimated at 4.3 million a year. It is estimated that 50% of all premature deaths of children under five years of age are attributable to indoor air pollution.^{xi} That is a terrifying statistic. Children have no control over the world in which they live, and yet inevitably they are always the ones who seem to pay the steepest price for the many and varied problems that our world faces. Of the 4.3 million deaths roughly 3.8 are from noncommunicable diseases such as strokes, heart diseases, lung cancer, and chronic obstructive pulmonary disease; all of which are more likely with exposure to indoor air pollution.^{xii} One of the biggest concerns is that most of the early symptoms of indoor air pollution are minor. We all get irritated eyes, noses, and throats at least once a year. However, the long term effects have a habit of being extremely serious, and likely fatal. No one wants to get lung cancer, have a stroke or heart attack, or get any of the other major issues that were described in the above paragraph. That doesn't change the fact that people are dealing with this every day, and that if something is not done people will continue to die.

Now, you may be asking "What can I do?" Well, there are several things. For one, you can make sure that your house is cleaned on a regular basis. Chemicals enter your home every day, and if you allow them to accumulate they will begin to have an effect on you. Vacuum, mop, and sweep your floors, and don't forget the walls. If you spill something on a carpet, make sure you get it all up immediately. Having a door mat is also a good idea, as when people wipe their feet most of the chemicals will, hopefully, collect on the mat. When you're cooking, or having a fire if you're lucky enough to have a fire place, open a window to let in some fresh air, and all the smoke from the fire out. One truly major thing that you can do is make your home a smoke free zone. If you, or friends who come over, smoke do it outside. Having to grab a cigarette outside never killed anyone, well not immediately anyway. Another important thing to do is to have your home tested for radon, and some of the other chemicals mentioned above. You can buy fairly inexpensive radon testing kits at most hardware stores, or you can hire a professional tester to come examine your home.^{xiii} A do-it-yourself test kit can be as low as \$8, but can range up to \$100. It may cost you a bit of money, but peace of mind has no price tag. If you're really concerned about indoor air pollution then get an air filter to help. Speaking from experience, you'll be both amazed and disgusted at how nasty the filter is when you go to change it for the first time, after only a month.



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Indoor air pollution is a serious issue that is facing the world. Sadly, we live in a world that is full of pollutants, chemicals, and even simple building materials that have adverse effects on human health. You can do three things about this. Number one is, nothing. You can live your life, and live with the consequences. Number two is freak out, go crazy cleaning, lock yourself in your house, and not let anyone in. That might make sure that you have control of the pollutants that enter your house, but is it really living? Number three, is that you can do the simple things that will help make yourself safer such as some regular cleaning, or buying an air filter. You don't have to live your life terrified of all the different chemicals that are in your home, but you should try to contain what is in your home to some extent.

About the Author



Dominick Principe is a graduate of Rowan University with dual Bachelor Degrees in Elementary Education and Writing Arts. He is a prolific reader who devours any book put before him, and feels that life is one great long book without an end. He fills his hours constantly exploring new information, and seeking to educate himself in the ways of the world. He puts all of that knowledge and his passion for learning to good use teaching English as a second

language to students of all ages. When his nose isn't buried in a book, or in class teaching, then he can generally be found typing away at his computer working on some random piece of writing that he was inspired to do.

ⁱ "Household Air Pollution and Health." *WHO*. World Health Organization. Web. 21 Nov. 2014. <<http://www.who.int/mediacentre/factsheets/fs292/en/>>.

ⁱⁱ "OECD Glossary of Statistical Terms - Indoor Air Pollution Definition." *OECD Glossary of Statistical Terms - Indoor Air Pollution Definition*. Web. 21 Nov. 2014. <<http://stats.oecd.org/glossary/detail.asp?ID=1336>>.

ⁱⁱⁱ "Common Indoor Air Pollutants: Sources And Health Impacts." *Http://www2.ca.uky.edu/*. University of Kentucky. Web. 21 Nov. 2014. <<http://www2.ca.uky.edu/hes/fcs/factshts/HF-LRA.161.PDF>>.

^{iv} "Indoor Air Pollution Sources." *EHow*. Demand Media, 3 Apr. 2011. Web. 2 Dec. 2014. <http://www.ehow.com/info_8158149_indoor-air-pollution-sources.html>.

^v "Common Indoor Air Pollutants: Sources And Health Impacts." *Http://www2.ca.uky.edu/*. University of Kentucky. Web. 21 Nov. 2014. <<http://www2.ca.uky.edu/hes/fcs/factshts/HF-LRA.161.PDF>>.

^{vi} "Common Indoor Air Pollutants: Sources And Health Impacts." *Http://www2.ca.uky.edu/*. University of Kentucky. Web. 21 Nov. 2014. <<http://www2.ca.uky.edu/hes/fcs/factshts/HF-LRA.161.PDF>>.

^{vii} "Health." *EPA*. Environmental Protection Agency. Web. 21 Nov. 2014. <<http://www.epa.gov/airquality/carbonmonoxide/health.html>>.

^{viii} "An Introduction to Indoor Air Quality: Volatile Organic Compounds (VOCs)." *EPA*. Environmental Protection Agency. Web. 21 Nov. 2014. <<http://www.epa.gov/iaq/voc.html>>.

^{ix} "Formaldehyde - American Lung Association." *American Lung Association*. Web. 21 Nov. 2014. <<http://www.lung.org/healthy-air/home/resources/formaldehyde.html>>.

^x "Lead in Air." *EPA*. Environmental Protection Agency. Web. 21 Nov. 2014. <<http://www.epa.gov/oaqps001/lead/health.html>>.

^{xi} "Household Air Pollution and Health." *WHO*. World Health Organization. Web. 21 Nov. 2014. <<http://www.who.int/mediacentre/factsheets/fs292/en/>>.

^{xii} "Household Air Pollution and Health." *WHO*. World Health Organization. Web. 21 Nov. 2014. <<http://www.who.int/mediacentre/factsheets/fs292/en/>>.

^{xiii} "Radon Publications: A Citizen's Guide to Radon - The Guide to Protecting Yourself and Your Family From Radon." *EPA*. Environmental Protection Agency. Web. 2 Dec. 2014. <<http://www.epa.gov/radon/pubs/citguide.html#howtotest>>.