

# Web Critique Report

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## Indoor Air Pollution

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### **Introduction**

My Public Health Problem is Indoor Air Pollution. This is a type of topic that that only comes about when something unfortunate happens and if a problem develops over a long period of time. I feel that this an issue that everybody should have some knowledge about because all of spend a great amount of time indoors in our lives. Indoor air pollution refers in the air quality inside or around building, dewing and structures and that the air quality is healthy, safe and comfortable to the occupants. I chose this topic because I wanted to learn more about how safe the air we our breathing indoors is and what are some signs that the air quality in certain places are poor.

### **Section 1: Background and Problem Statement**

According to *Health People 2010*, "Since the mid-1980s, asthma rates in the United States have risen to the level of an epidemic. Asthma and other respiratory conditions often are triggered or worsened by substances found in the air, such as tobacco smoke, ozone, and other particles or chemicals." This site was alright it was just an overview of overall environmental health and it was hard to follow. America has noticed that overtime there is a problem with its air quality. Indoor air pollution is no joke it can lead to death. "The degradation of indoor air quality by harmful chemicals and other materials can be up to 10 times worse than outdoor air pollution. This is because contained areas enable potential pollutants to build up more than open spaces do," stated in HowStuffWorks.com. This Web site was pretty good for this part of the paper it gave general knowledge and background on indoor air pollution. This pollution can come from anywhere and anything within the building that you are in that is why this pollution is dangerous. "Indoor pollution sources that release gases or particles into the air are the primary cause of indoor air quality problems in homes. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the home. High temperature and humidity levels can also increase concentrations of some pollutants" according in the EPA Web site. Indoor air pollution really breaks down into two concerns, which is a release of the pollution, and/or the quality of ventilation also the climate of the building plays a role. This information from the EPA Web site was very reliable and easy to follow and the best Web site I found. The some of the problems stemming from indoor air pollution is illness, death, and how living safe with these possible pollutants according to the World Health Organization Web site, which provide little

information about actually indoor air pollution and was one of the worst Web site that I found.

## Section 2: Research

- *JSTOR*
- <http://0-www.jstor.org.csulib.ctstateu.edu/stable/1691425?seq=1>
- Summary: This article gave information about how fossil fuels and other fuels used for heating and lighting can give off emission into the structure that you are in and they are harmful to your health if you constantly inhale them because they are poisonous. It provided a list of possible pollutions in a building and the causes of it. It gave information about each possible threat and its source. For example, Pollutant: Radon and the source of it are from building construction materials like concrete, stone and water. This article also gave measures of control for indoor air pollutions. Like one of the controls were a behavioral adjustment which could come from combustion of by-product like smoking and having smoke free zone can keep you from inhaling their poisons. This was a really informative article, but meant for someone educated.
- *Academic Search Premier*
- <http://0web.ebscohost.com.csulib.ctstateu.edu/ehost/pdf?vid=2&hid=8&sid=89c0882e-0725-4617-90a3-8799f7e992aa%40sessionmgr9>
- Summary: This article gave information about how indoor air pollution is affected by temperature and humidity. In this article it explained different research about how temperature and humidity affect indoor air quality. Also that temperature and humidity had little effect on the odor of the pollutant. That the increase in temperature and humidity will cause the air quality inside to decrease. This article used graphs and scientific research in it.
- *Science Direct*
- [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6VH3-3XJKFY81&\\_user=843411&\\_rdoc=1&\\_fmt=&\\_orig=search&\\_sort=d&\\_view=c&\\_acct=C000045579&\\_version=1&\\_urlVersion=0&\\_userid=843411&\\_md5=0788d00a92bb6a885e3fda45fc97e1b5](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VH3-3XJKFY81&_user=843411&_rdoc=1&_fmt=&_orig=search&_sort=d&_view=c&_acct=C000045579&_version=1&_urlVersion=0&_userid=843411&_md5=0788d00a92bb6a885e3fda45fc97e1b5)
- Summary: This article touches upon how indoor air quality is affected by an array of chemicals and materials. It talks about combustion products like tobacco smoke, cooking, and heating. It also talks about volatile organic

compounds which comes from paints, varnishes, solvents, and preservatives. It talks about if structure of a building begins to deteriorate, exposure to asbestos may be an important risk factor for the chronic respiratory disease mesothelioma. And it goes in depth about all forms of indoor pollution, their causes, their source and their affects. This article had tables to present information.

- *The INFO Project*
- <http://files.dcp2.org/pdf/DCP/DCP42.pdf>
- Summary: This article explained mostly about the affects of indoor air pollution on the household. It mentioned the different pollutants that develop in the household and where they can be found. I talked about the different conditions that can develop from biomass and coal emissions for adults and children. It also mentioned the deaths and illness develop because of fossil fuel emissions. This Web site also talked about political policy in dealing with emissions. Also mentions preventives and cleaner options.

### Section 3: Statistics

- *America Lung Association*
- <http://www.lungusa.org/site/c.dvLUK9O0E/b.35381/>
- Summary: This Web site found that Poor indoor air quality could cause or contribute to the development of chronic respiratory diseases such as asthma and hypersensitivity pneumonitis. Lung disease claims close to 335,000 lives in America every year and is the third leading cause of death in the United States. Also that second hand smoke is a major indoor air pollutant. It is estimated that one out of every 15 homes in the United States has radon levels above 4pci/L and that that radon is responsible for between 15,000 and 21,000 lung cancer deaths each year in the United States.
- Environmental Performance Index
- <http://epi.yale.edu/IndoorAirPollution>
- Summary: This Web site gave stats on different countries overall indoor air quality and environmental standing worldwide. One recent study has concluded that 4.6% of all deaths worldwide are attributable to acute lower respiratory tract infections caused by indoor fuel use. This Web site gives us graphically data on all the countries worldwide and tells you their environmental performance score on the index.

- Environmental Working Group
- <http://www.ewg.org/node/16209>
- Summary: This Web site did studies on how time we spent indoors and showed all the dangers that we could encounter while indoors. It said that we spend about 80% to 90% of our time indoors. The most interesting they found was "Last year the Mount Sinai School of Medicine tested 2,500 people -- who don't work with chemicals -- for more than 200 industrial chemicals. The tests found 167 chemicals in their bodies, with an average of 91 chemicals per volunteer. Fifty-three can cause cancer, and the others are linked to an array of health problems affecting the nervous, reproductive, hormonal, cardiovascular and immune systems."
  
- Indoor Air Pollution: Introduction for Health Professionals
- <http://www.cpsc.gov/cpsc/pub/pubs/455.html#sbs>
- Summary: This Web site talks about Carboxyhemoglobin levels and related health effects. If you inhale enough it can kill you but it has to 80% of your blood. In a nationwide, random sampling of U.S. office workers, 24 percent perceived air quality problems in their work environments, and 20 percent believed their work performance was hampered thereby. It also gave ways to prevent and help reduce possible indoor air pollution.

#### **Section 4: Consumer Information**

- U.S. Consumer Product Safety Commission
- <http://www.cpsc.gov/cpsc/pub/pubs/464.pdf>
- Summary: This Web site gave consumers all the information about carbon monoxide that you need to know. It mentioned that you should check that all appliances are installed properly. It gave the symptoms associated with carbon monoxide poisoning. It even gave a map of a house and pointed out where the most common points of leakage would be.
  
- CA Air Resource Board
- <http://www.arb.ca.gov/research/indoor/rediap.htm>
- Summary: This gave the information that all consumers need to know while they are indoors. Products such as cleaning agents, paints, and glues should

be used outdoors whenever possible. Gas stoves should never be used to heat the house since high pollutant levels can result. The most effective way to protect your family and yourself from indoor air pollution is to prevent or minimize the release of pollutants indoors in the first place. It gave a nice chart for a consumer to read about indoor pollutants.

- Pollution Issues
- <http://www.pollutionissues.com/Ho-Li/Indoor-Air-Pollution.html>
- Summary: This Web site gave more of a professional response to indoor air pollution. Several types of combustion sources release inorganic gaseous pollutants, formaldehyde, suspended particulates that can be breathed, and other toxic chemicals. Tobacco products also release a mixture of over 4,000 compounds. It gave conditions and symptoms to indoor air pollution.
  
- Medline Plus
- <http://www.nlm.nih.gov/medlineplus/indoorairpollution.html#cat42>
- Summary: This Web site gave general knowledge about Biological contaminants like mold and pollen. It informed people about Materials used in the building such as asbestos, formaldehyde and lead. It gave you access a prevention guide, too. It also gave information about related issues dealing with indoor air pollution.

## Conclusions

- **Section 1: Background and Statement**
  - The best Web site: Environmental Protection Agency
    - This Web site was the most informative because it's part of their job to research and give information about indoor air pollution.  
Very easy to navigate.
  - The worst Web site: Healthy People 2010
    - It did not give too much info about indoor air pollution and it was hard to navigate.

- **Section 2: Research**

- New information I learned include: I did not know that so many things indoor can release emissions that are harmful to us. Volatile organic compounds, which come from paints, varnishes, solvents, and preservatives. Fossil fuels and other fuels used for heating and lighting can give off emission into the structure that you are in and they are harmful to your health if you constantly inhale them because they are poisonous.

- **Section 3: Statistics**

- New statistics I learned include: That we spend about 80% to 90% of our time indoors. It is estimated that one out of every 15 homes in the United States has radon levels above 4pci/L and that that radon is responsible for between 15,000 and 21,000 lung cancer deaths each year in the United States. In a nationwide, random sampling of U.S. office workers, 24 percent perceived air quality problems in their work environments, and 20 percent believed their work performance was hampered thereby. One recent study has concluded that 4.6% of all deaths worldwide are attributable to acute lower respiratory tract infections caused by indoor fuel use.

- **Section 4: Consumer Information**

- The best Web site: CA Air Resource Board
  - This had everything you need to know for indoor air pollution as a consumer.
- The worst Web site Medline Plus

- Just did not like how it was set up, way to much clicking and redirecting.

<b>Back to Betty C. Jung's Web site</b>	<a href="http://www.bettycjung.net/">http://www.bettycjung.net/</a>
<b>Back to Web site Critique Reports Directory</b>	<a href="http://www.bettycjung.net/Pch201wsreports.htm">http://www.bettycjung.net/Pch201wsreports.htm</a>

### Presentation Outline Template

- **Background/Problem Statement**
  - Why is your topic a Public Health Issue? Indoor Air Pollution
  - Definition: Indoor air pollution consists of toxic gases or particles that can harm your health. These pollutants can build up rapidly indoors to levels much higher than those usually found outdoors. This is especially true if large amounts of a pollutant are released indoors. Moreover, "tighter" construction in newer homes can prevent pollutants from escaping to the outdoors.
- **Research**
  - Most interesting finding: Indoor air quality
  - Why is it interesting? The degradation of indoor air quality by harmful chemicals and other materials can be up to 10 times worse than outdoor air pollution. This is because contained areas enable potential pollutants to build up more than open spaces do
- **Statistics**
  - Most interesting finding: Radon
  - Why is it interesting? That we spend about 80% to 90% of our time indoors. It is estimated that one out of every 15 homes in the United States has radon levels above 4pci/L and that that radon is responsible for between 15,000 and 21,000 lung cancer deaths each year in the United States.
- **Consumer Information**
  - Most Interesting information: Basic info.
  - Why is it interesting? Products such as cleaning agents, paints, and glues should be used outdoors whenever possible. Gas stoves should never be used to heat the house since high pollutant levels can result. The most effective way to protect your family and yourself from indoor air pollution is to prevent or minimize the release of pollutants indoors in the first place

