



AIR in the Death

Mariam Gogitidze
Elisa Voss
Lorecan Moore

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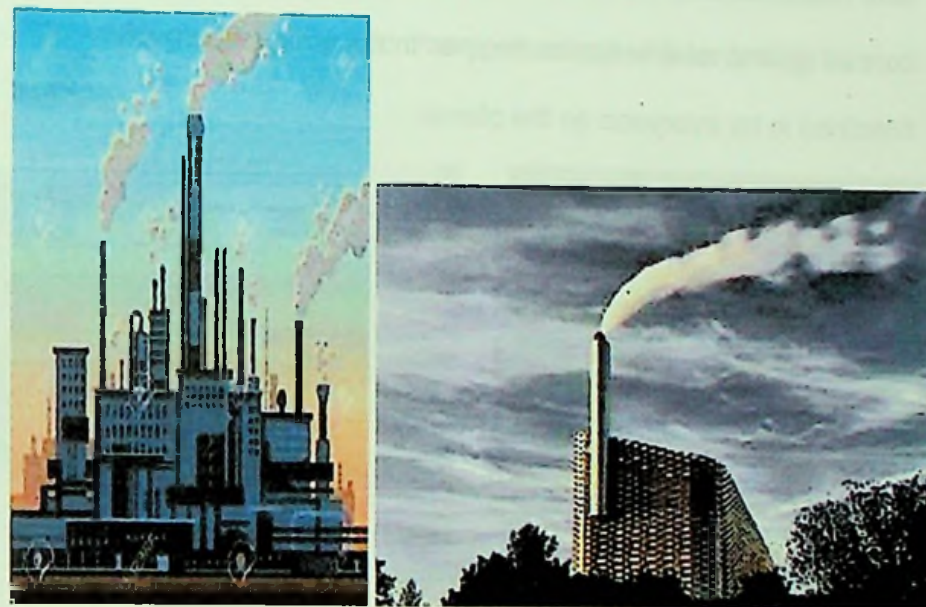
Introduction:

Air pollution is one of the deadliest and fastest growing forms of pollution all over the world, it kills an estimated seven million people worldwide every year. From smog hanging over cities to smoke inside the home, air pollution poses a major threat to health and climate. Outdoor and indoor air pollution cause respiratory and other diseases and is an important source of morbidity and mortality.

Nine out of ten human beings currently breathe air that exceeds the WHO's guideline limits for pollutants, with those living in low- and middle-income countries suffering the most. The effect of air pollution on cognition and mental well-being, however, has been less well understood. Now, evidence is mounting that dirty air is bad for your brain as well.

Science has shown that there are solutions to the air pollution crisis however it is essential that we act now. People all over the worlds are dying and more will become at risk if nothing changes. One of the biggest challenges advocates face is finding people who care about these issues. It is essential that individuals take charge of these issues so that our health will not be compromised and the younger generations will be able to Live long and healthy lives.

Every country, city, and town on the planet is being affected by air pollution. Climate change is caused by air pollution and air pollution is worsened by climate change. The burning of fossil fuels, and even second hand smoke from cigarettes all release pollution into the air. These types of pollution are known as anthropogenic sources which means they are man made.



Everyday people drive to work and school and then back to where they started and release pollution from their cars. The cycle is then repeated over and over by billions of people each time they start their car and drive it anywhere, fossil fuels are burned up and released to be trapped in the atmosphere and breathed in by everyone on the planet.



It is not new information that smoking cigarettes is bad for you, this information has been around for years. You are now taught from a young age in health classes to not breathe in secondhand smoke. Sadly breathing in secondhand smoke is not so easily avoidable because even though after some time the smoke itself is no longer visible, the chemicals still linger. The air we breathe comes through a filter of secondhand smoke, exhaust released from cars, and the smog and chemicals released from factory buildings.



Humans are not the only cause of air pollution, there are plenty of contributors to air pollution that occur naturally. Air pollution from these factors are worsened by climate change and are occurring more frequently because of it but they are not as impactful as the pollution created by people. Smoke from wildfires and ash from volcanic eruptions are examples of natural pollutants. Naturally occurring air pollution is known as natural sources.



In the past few years wildfires have been severely affecting California and the people who live there. The wildfires in California can be traced back to global warming as the cause due to the dry climate and heat. The smoke from the fires have nowhere to go because of the greenhouse gas effect which traps noxious gasses in the atmosphere. The smoke stays in the air and is breathed in constantly on a daily basis by the inhabitants in the area.

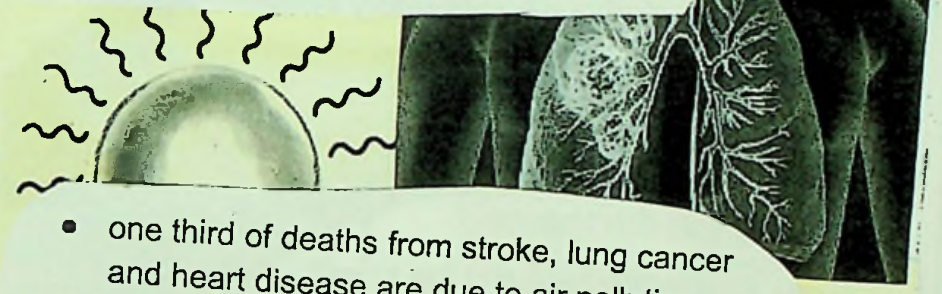


Volcanic eruptions are less frequent than forest fires but they still contribute to polluting the air. The most recent volcanic eruption was the Whakaari/White Island eruption in New Zealand. Like many other eruptions, a lot of smoke and ash were released from the volcano, and like the other forms of air pollution, got trapped in the atmosphere.



Effects of air pollution on health:

Air pollution causes countless health related issues for humans. As the world gets hotter and more crowded, our engines continue to pump out dirty emissions, the very air we breathe is growing dangerously polluted: nine out of ten people now breathe polluted air, which kills 7 million people every year. Many of these include physical diseases however one's mental state is also greatly affected by air pollution.



- one third of deaths from stroke, lung cancer and heart disease are due to air pollution.
- nine out of 10 people breathe unhealthy air
- Air pollution is now the biggest environmental risk for early death, responsible for more than 6 million premature deaths each year

Water Plus Minerals from the Soil



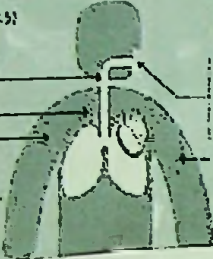
Algal Cell Containing Chlorophyll

Fine particles (PM 2.5) pollution can cause:

- Shortness of breath
- Wheezing, coughing
- Chest pain
- Fatigue

Fine particles can make these conditions worse:

- Cardiovascular and heart disease
- Asthma and COPD

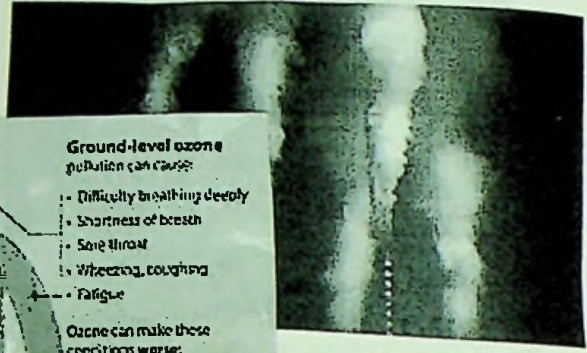


Ground-level ozone pollution can cause:

- Difficulty breathing deeply
- Shortness of breath
- Sore throat
- Wheezing, coughing
- Fatigue

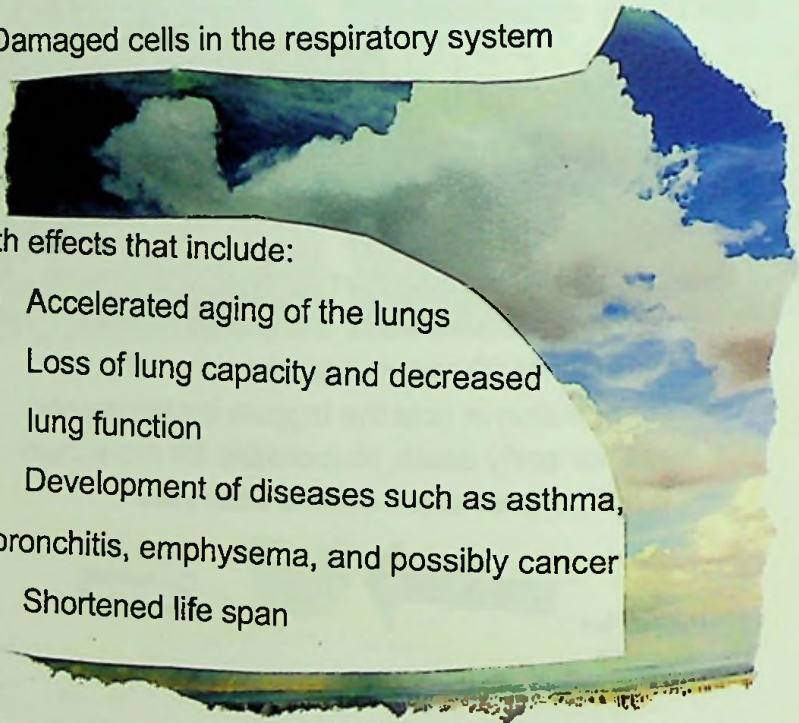
Ozone can make these conditions worse:

- Asthma and COPD



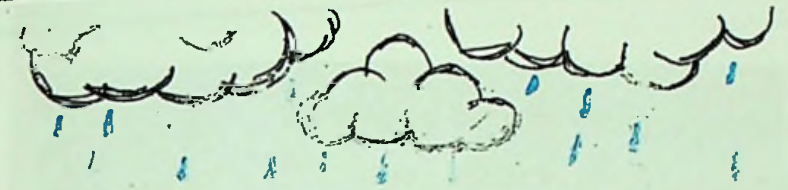
Some immediate health issues due to air pollution include:

- Aggravated cardiovascular and respiratory illness and diseases
- Added stress to heart and lungs, which must work harder to supply the body with oxygen
- Damaged cells in the respiratory system



health effects that include:

- Accelerated aging of the lungs
- Loss of lung capacity and decreased lung function
- Development of diseases such as asthma, bronchitis, emphysema, and possibly cancer
- Shortened life span



Researchers found that long period of increased Air pollution exposure, such as that found in major urban areas, may be linked to a nearly 17% rise in cases of bipolar disorder

Some other diseases that can be Increased by air pollution include:

- bipolar disorder
- major depressive disorder
- personality disorder (like conduct disorder)
- Schizophrenia



BRAIN

Frontal REGION

- PLANNING
- CREATIVITY
- INHIBITION



PARIETAL REGION

- SENSATION
- PERCEPTION
- NAVIGATION

HIPPOCAMPUS

- REGULATE LEARNING
- LONG TERM MEMORY
- SPATIAL MEMORY

Children are especially affected by growing up in air polluted environments. Some of the effects they have to live with include:



- Higher air pollution levels increase short-term respiratory infections, which lead to more school absences
- Children who play several outdoor sports And live in high ozone communities are more likely to develop asthma
- Children living near busy roads are at increased risk for asthma
- Children with asthma who were exposed to high levels of air pollutants were more likely to develop bronchitis symptoms
- Living in communities with higher pollution levels can cause lung damage



INHALER



MASKS



SMOG



No Pollution Painting

<https://thefunnyplace.org/funny-pictures/getting-back-the-clouds/>

Solutions To Air Pollution

- Plant and care for trees - trees filter pollutants and absorb carbon dioxide.
- Better Household Practices - Use gas logs in place of wood. Avoid setting fire to garbage or dry leaves. Try to mulch or compost your yard waste.
- Use Energy-Efficient Devices.
- Understand the Concept of Reduce, Reuse and Recycle.

- Drive your car less and use the public mode of transportation
- Turn off your engine. An idling engine creates a hot spot of pollution. Buses and big trucks produce particularly unhealthy exhaust.



The Borgen Project "5 Innovations Improving Air Quality in Mexico City"

<https://borgenproject.org/innovations-improving-air-quality-in-mexico-city/>

- Emphasis on Clean Energy Resources - solar, wind and geothermal.
- Energy conservation and efficiency - producing clean energy is crucial. But equally important is to reduce our consumption of energy



Mascot illustration of the Earth wearing a surgical mask to cope with air pollution

https://www.barewalls.com/art-print-poster/earth-mascot-mask-air-pollution_bwc35155608.html



3 ways we can solve the air pollution crisis

<https://www.greenpeace.org/international/story/28533/3-ways-we-can-solve-the-air-pollution-crisis/>

What you can do about air pollution

<https://www.pca.state.mn.us/air/what-you-can-do-about-air-pollution>

How to improve air quality?

<https://solarimpulse.com/air-pollution-solutions#>

No Pollution painting

<https://www.pinterest.ca/amp/pin/298926493995892724/>

Air Pollution

<https://www.nationalgeographic.org/encyclopedia/air-pollution/>

Something in the Air

https://fod-infobase-com.corvette.salemstate.edu/p_ViewVideo.aspx?xtid=210698

Whakaari/White Island

<https://volcano.si.edu/volcano.cfm?vn=241040>