JOURNAL OF INTERNATIONAL SCIENTIFIC RESEARCH
Volume 3, Issue 5, October 2025 Online ISSN: 3030-3508
https://spaceknowladge.com

THE IMPACT OF AIR POLLUTION ON OUR HEALTH

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Received:21.11.2025
Revised: 22.11.2025
Accepted:23.11.2025

KALIT SO’ZLAR:

air pollution, health, environment, respiratory system, public health, prevention.

ANNOTATSIYA:

Air pollution is one of the most serious environmental problems in the modern world. It has a direct and long-term impact on human health, leading to respiratory, cardiovascular, and neurological diseases. This article explores the main sources of air pollution, the harmful substances present in polluted air, and their effects on the human body. It also discusses preventive measures and public health strategies to reduce air pollution and protect human well-being.

Introduction

In recent decades, rapid industrialization, urbanization, and population growth have significantly increased the level of air pollution worldwide. Air pollution refers to the presence of harmful or excessive substances in the atmosphere that can negatively affect living organisms and the environment. The World Health Organization (WHO) reports that millions of people die each year due to diseases related to polluted air. Clean air is essential for maintaining human health and environmental balance, yet it remains a growing global concern.

Main Part

The main sources of air pollution include industrial emissions, vehicle exhaust, burning of fossil fuels, and agricultural activities. The most harmful pollutants are carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO■), ozone (O■), and particulate matter

(PM2.5 and PM10). These substances enter the atmosphere and are inhaled by humans, causing damage to the lungs, heart, and brain.

Health effects of air pollution:

1. Respiratory problems: Air pollution increases the risk of asthma, bronchitis, and chronic obstructive pulmonary disease (COPD).
2. Cardiovascular diseases: Pollutants can damage blood vessels, raise blood pressure, and increase the risk of heart attacks and strokes.
3. Neurological effects: Long-term exposure to polluted air can affect brain function, leading to anxiety, memory loss, and even neurodegenerative diseases.
4. Impact on children and elderly: Children's developing lungs and the weak immune systems of elderly people make them more vulnerable to air pollution.

Environmental factors also worsen the impact. For example, in densely populated cities or industrial zones, pollution levels are significantly higher. Poor air quality not only harms humans but also affects animals, plants, and the climate.

Prevention and Control

To reduce the impact of air pollution, individuals and governments must take coordinated action.

- Use of renewable energy sources like solar and wind power.
- Promoting public transportation and electric vehicles.
- Planting more trees to absorb carbon dioxide.
- Strengthening environmental laws and monitoring air quality.
- Raising awareness about the health risks of air pollution.

Healthcare professionals also play an important role by educating the public about preventive behaviors, such as avoiding outdoor activities during high pollution levels and wearing protective masks when necessary.

Conclusion

In conclusion, air pollution is a silent but deadly threat to human health and the environment. Its harmful effects can be reduced only through joint efforts, scientific innovation, and public awareness. Every individual has a responsibility to protect the air we breathe. A cleaner environment means a healthier and brighter future for all.

References

1. World Health Organization (WHO). (2023). Air Pollution and Health.
2. U.S. Environmental Protection Agency (EPA). (2022). Health Effects of Air Pollution.
3. European Environment Agency (EEA). (2023). Air Quality in Europe – 2023 Report.
4. Kumar, P. & Nayar, S. (2021). Environmental Health and Pollution Management. Springer.
5. British Medical Journal (BMJ). (2022). Long-Term Exposure to Air Pollution and Mortality Risk.