

**AMBIENT AIR POLLUTION, LUNG FUNCTION, AND AIRWAY  
RESPONSIVENESS IN ASTHMATIC CHILDREN**

**Dr. Manjula Jain\***

\*Sr. Professor,

Department of Finance & Marketing,

Teerthanker Mahaveer Institute of Management and Technology,

Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA

Email id: jainmanjula76@gmail.com

**DOI: 10.5958/2249-7137.2021.02504.0**

---

**ABSTRACT**

*Although pollution has been related to decreased lung function in healthy children, longterm studies evaluating pollution's impact in asthmatic patients are limited. In a longitudinal asthma research, we wanted to look at the impacts of pollution and how controller drugs changed those effects. In a four-year clinical study including 1003 asthmatic children, researchers looked at the relationships between lung function and meth choline responsiveness (PC20) and ozone, carbon monoxide (CO), nitrogen dioxide, and sulphur dioxide concentrations. Cleaner mobility, energy-efficient housing, power generation, industry, and better garbage - control policies and expenditure may all help to reduce significant causes of ambient air pollution. The author had also looked at how budesonide and nedocromil affected pollution impacts. Pollutant concentrations were connected to residents' ZIP/postal codes on a daily basis. Adjusting for seasonality and covariates, linear mixed models were used to investigate correlations between within-subject pollutant concentrations and FEV1 and forced vital capacity (FVC) percent predicted FEV1/FVC ratio, and PC20.*

**KEYWORDS:** Air, Asthma, Carbon, Environment, Pollution.

---

**REFERENCES**

1. Villarrubia-Gómez P, Cornell SE, Fabres J. Marine plastic pollution as a planetary boundary threat – The drifting piece in the sustainability puzzle. *Mar. Policy*, 2018;96(8):213–220. doi: 10.1016/j.marpol.2017.11.035.
  2. Aunan K, Hansen MH, Wang S. Introduction: Air Pollution in China. *China Q.*, 2018;234: 279–298. doi: 10.1017/S0305741017001369.
  3. Maduna K, Tomašić V. Air pollution engineering. *Phys. Sci. Rev.*, 2017; 2(12):1–29. doi: 10.1515/psr-2016-0122.
  4. Ierodiakonou D. et al. Ambient air pollution. *J. Allergy Clin. Immunol.*, 2016;137(2):390–399. doi: 10.1016/j.jaci.2015.05.028.
  5. Landrigan PJ. et al. Pollution and children's health *Sci. Total Environ.*, 2019 Feb 10;650(Pt 2):2389-2394. doi: 10.1016/j.scitotenv.2018.09.375.
-

6. Bourdrel T, Bind MA, Béjot Y, Morel O, Argacha JF. Cardiovascular effects of air pollution,” *Arch. Cardiovasc. Dis.*, 2017;110(11):634–642. doi: 10.1016/j.acvd.2017.05.003.
7. Karlsson TM, Arneborg L, Broström G, Almroth BC, Gipperth L, Hassellöv M. The unaccountability case of plastic pellet pollution. *Mar. Pollut. Bull.*, 2018;129(2018):52–60. doi: 10.1016/j.marpolbul.2018.01.041.
8. Rembiesa J, Ruzgas T, Engblom J., Holefors A. The impact of pollution on skin and proper efficacy testing for anti-pollution claims. *Cosmetics*. *Cosmetics* 2018;5(1):4. doi: 10.3390/cosmetics5010004.
9. Rajé F, Tight M, Pope FD. Traffic pollution: A search for solutions for a city like Nairobi. *Cities*, 2018;82:100-107. doi: 10.1016/j.cities.2018.05.008.
10. Chae Y, An YJ. Current research trends on plastic pollution and ecological impacts on the soil ecosystem: A review. *Environmental Pollution*. 2018 Sep;240:387-395. doi: 10.1016/j.envpol.2018.05.008.