

# Air pollution triggers asthma in urban India: Experts

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*Higher levels of air pollution in urban India poses a threat to a large population of adults and children, exposing them to pulmonary diseases, like asthma, medical experts have warned ahead of World Asthma Day, which is observed on May 5.*

Global Initiative on Asthma, which campaigns to raise asthma awareness and care around the world has chosen "You Can Control Your Asthma", as this year's theme.

India has about ten percent of the global asthma burden of between 100 and 150 million people - roughly the equivalent of the population of Russia. This number is increasing and worldwide deaths due to asthma have reached over 1,80,000 annually.

India's asthma burden is between 17 and 30 million, estimated from the 2011 population census. It exceeds the burden of Tuberculosis and HIV/AIDS combined. Rough estimates indicate a prevalence of between 10 and 15 per cent in 5-11 year-old children in India.



Air pollution triggers asthma in urban India: Experts (Getty Image)

"The main issues with air pollution is ozone gas levels and particulates. Ozone gas levels are produced by the interaction of sunlight with chemicals that are released from automobile exhausts, particularly diesel vehicles, factories, chemical power plants and smoke generated from coal and oil burning," the ISJ web site quoted Dr. Arun Nair, Chief of Interventional Pulmonary Medicine at Amrita Institute of Medical Sciences and Research Centre in Kochi, as saying.

Dr. Nair said Asthma is not curable, but with advances in therapy, it can be effectively treated in a majority of cases with minimal side effects. However, the best treatment still remains inhaled steroids, while long-term oral steroids could trigger serious side-effects like malfunctioning of adrenal glands.

About 75 percent of asthma patients do not know the right use of inhalers, said Dr. Nair, which expose them to oral infections and infections to voice-chords.

Asthma has genetic elements and run in families but often there is no familial pattern in some

patients. Increased respiratory infections particularly viral infections in childhood can affect the lining of the airways making them more exposed to triggers that can cause asthma.

While allergy is a causative factor for development of asthma, many people develop asthma without ever had any allergy. One should therefore not assume that asthma only occurs in those who have allergy.

According to Dr. Nair inhaled steroids remain the best available therapy for asthma. For a majority of cases, the disease can well be controlled on mild to moderate doses of inhaled steroids which have very good safety profile. Systemic side-effects are due to absorption of inhaled steroids into the blood stream and generally negligible at low to medium doses.

The new advances in the field of asthma allow combination drugs to be given once a day, which will soon be available in India. Further there are drugs that block the allergy causing antibodies which can be used in carefully selected allergic asthma patients who have poor control despite maximum inhaled treatment. In the west, there are interventions which can be delivered via bronchoscope (thermoplasty) to help selected patients. These technologies are yet to be available in India.

There are certain checklists for an asthma patients, according to Dr. Arun Nair.

1. Take your prescribed medications (inhalers) correctly.
2. Ensure the technique of using inhaler is correct
3. Have an asthma self-management plan. Most doctors now provide an action plan for patients.
4. Do not ignore increasing symptoms by staying at home. If you do not get quick relief by taking your salbutamol inhaler and you are finding it difficult to speak, rush to the nearest emergency room of a hospital so that urgent life-saving medications and treatment can be given.
5. Having an asthma bracelet can inform or alert doctors and bystanders of your condition in an emergency
6. Always carry your inhaler with you, both the blue salbutamol inhaler and the brown/pink corticosteroid inhalers and inform colleagues at work of your condition so that prompt response can be initiated in an emergency.

Remember asthma can be controlled easily. Unfortunately many people still continue to die in India from asthma due to lack of awareness, misguided beliefs and poor access to fully trained emergency healthcare facilities.