

Toxic air hurting kids' lungs, heart & mind

But Pollution Board Sat On Findings For 7 Yrs

MOST VULNERABLE

How children get affected by pollution

40%

Indian children have hyperreactive airway disease

100%

Increase in hyperreactive airway disorders like wheezing, bronchitis, bronchial asthma in last decade

20-22%

are overweight due to lifestyle and genetic causes

2-10%

Hypertension

Pollution also a major cause for depression and attention deficit hyperactivity disorder



Results of study by Central Pollution Control Board

➤ Reduced lung function in 43.5% Delhi schoolchildren compared to 25.7% in control group (schoolchildren in West Bengal and Uttarakhand)

➤ Sputum of Delhi children contain 4 times more iron-laden macrophages (specialized cells) than controls. Abundance of siderophages (macrophages that have ingested red blood cells) in lungs may indicate covert pulmonary haemorrhage

➤ Hypertension in Delhi children at 6.2% (control group 2.1%). This means there's three times more incidence of high blood pressure among them

Jayashree Nandi | TNN

New Delhi: Children in the national capital are more vulnerable to air pollution than their counterparts in other states and in more ways than one. They are falling victim not only to pulmonary disorders but also hypertension, ADHD and depression.

Medical investigators from Kolkata-based Chittaranjan National Cancer Research Institute had pointed out this "dangerous epidemic" to Central Pollution Control Board as early as 2005 when a study examined over 11,000 school children in Delhi and compared them with a control group of children in the towns of West Bengal and Uttarakhand. CPCB took seven years to publish it and place it in public domain.

The research study that had examined cellular lung reaction was one of the first to conclude that air pollution related complications are not restricted to lungs and can lead to several metabolic conditions. Such a long delay in publishing a scientific report that "could have been a wake-up call" is indefensible, some scientists who conducted the study said.

Among its startling finds is the fact that incidence of hy-

pertension in Delhi schoolchildren is three times that of the control group. Delhi's schoolchildren were 2.5-times more likely to suffer Attention Deficit Hyperactivity Disorder and boys were more vulnerable than girls.

Dr Manas Ranjan Ray, head of department of experimental haematology and co-investigator in the study, said, "When we conducted the study, there were 38 lakh vehicles in Delhi. Today there are over 75 lakh. We found very high incidence of hypertension, obesity and even juvenile diabetes. In a neo-rich city, lifestyle factors also play a major role. One of the key recommendations we made to CPCB was inclusion of one fresh fruit in the diet of children of all schools including municipality schools. Another was regarding regular medical check-ups in schools for hypertension and lung health. But we never imagined it would take close to a decade to publish the research."

Another researcher complained that scientists are always treated like "backbenchers" by government bodies like CPCB who have no regard for "valuable research".

A senior officer from CPCB who declined to named

said peer review and extensive interpretation of data took years. "We cannot publish such alarming findings before being certain. It was a very expensive and difficult study and needed interpretation," he said.

The study was peer reviewed by Indian Council for Medical Research and All India Institute of Medical Sciences but researchers say the report was stuck in red tape for years after the review. "Seven years is way too long for interpretation. Now the average time is a year for peer review and even that is considered pretty long," AL Ramanathan, a professor from School of Environmental Sciences, JNU, said.

Incidence of air pollution-related complications among children has gone up dramatically in the past few years. "Checking the BP of young children is a regular practice now among doctors. More than a million children are affected with respiratory infections in India every year. The incidence is quite high in Delhi, we are also noticing psychological effects of pollution like depression among children. It's something that is not widely discussed but quite prevalent," paediatric consultant Dr Sanjeev Bagai said.