

Dangers of Delhi's air pollution will linger, long after the smog has gone

While the air is cleaner now, the risks remain—especially for children, senior citizens, expectant mothers and those who work out outdoors

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It is not advisable to run in the early mornings and late evenings, when the levels of pollutants in the air are at their highest. Photo: Sushil Kumar/HindustanTimes

Aman Yadav has been training for the Airtel Delhi Half Marathon (ADHM) for more than six months, hoping to achieve a personal best time in the 21km event on 20 November. But now he isn't even sure if he will run.

“I have missed my training for over two weeks. Nowadays, I use a trainer indoors to cycle but that isn't helping,” says Yadav. His friend, Sangeeta Saikia, has been using the stairs of her five-storey building for a workout. The only time she tried running outdoors recently, she came back with eyes stinging.

“I bought a Vogmask recently, after hearing about the pollution level. Tried it for a few days also. But it is extremely difficult to run with a mask on. It is not just cumbersome, but makes breathing difficult. I am keeping my fingers crossed to see if the air clears and then run without the mask, or not run at all,” says Saikia.

Saikia and Yadav are not the only ones worried about the forthcoming ADHM. Many other runners from Delhi wrote to the race organizers, requesting them to postpone the event. The organizers have, however, only sent out an email to all the registered runners with the regular medical advisory, specifying that “due to air pollution being at its peak for the last few days, it is advisable for all participants to seek medical advice and wear protective gear as best advised to them”. The runners are just hoping the air will clear up further by the weekend.

“See, when you exercise, you breathe faster and deeper. When you are running outdoors, the amount of contaminated air that goes into your lungs is going to be higher. It is not advisable to run, especially in the early mornings and late evenings, when the level of pollutants in the air is at its highest,” says Varinder Singh, president of the Pediatrics Respiratory Society, Delhi.

Can a mask help? Krishan Chugh, director and head of department (paediatrics) at the Fortis Memorial Research Institute (FMRI) in Gurgaon, says the mask will be of no use if it is damp—a wet mask will not filter the pollutants. “While an N95/99 can help in the case of virus attacks like swine flu, they are not easy to wear or breathe through. While running, your lungs are already making an extra effort and the mask is only going to make it tougher to run. That said, even a handkerchief can stop at least some of the pollutants from entering your system,” he says.

It is not just runners who are suffering, of course. And even though the worst of the smog has cleared up, Delhi’s air quality is still far from safe. Consider this: Delhi’s Mandir Marg area had a reading of 207 (PM 2.5 level) at 6am on Sunday, and 212 at 6am on Monday. According to the US Environmental Protection Agency (EPA), a range of 0-50 for PM 2.5 signifies good quality air, 31-60 is satisfactory, and 61-90 would be moderately polluted. “No wonder that the hospital admission rate of children has increased by 50% this year,” says Dr Chugh.

The implications can be immediate or longer term. S.K. Kabra, associate professor, paediatrics, at the All India Institute of Medical Sciences in Delhi, advises that “just because the smog looks lesser now, or you have lived with it for a week or are active otherwise, don’t think that you are immune to any of the dangers that come with pollution”.

A quick check on Aqicn.org, a portal which records real-time air quality, will show you that New Delhi (for that matter, most Indian metros) exceeds the “safe” limit as defined by the EPA. Other than lung problems, such pollution can lead to skin irritation, hinder vitamin D synthesis in the body, increasing the chance of rickets, and leave people anxious or depressed. As a matter of fact, a 2013 study by the International Agency for Research on Cancer had found that outdoor air pollution could cause lung cancer and increase the risk of bladder cancer too.

How it can hit you

A 2010 study by Sarath Guttikunda, affiliate associate research professor at the US’ Desert Research Institute and an expert on air pollution, found that PM 2.5 was linked to between 7,350 and 16,200 premature deaths (and a staggering six million asthma attacks) per year in just Delhi.

The first symptoms would be chest tightness, wheezing while trying to breathe, or a cough which does not respond to routine medication. “People with asthma or chronic bronchitis, fibrosis, etc., have sensitive airways or compromised lung capacity. The polluted air can trigger an attack for these people. Even mild symptoms of these diseases are worsening and now need medication,” says Prashant Chhajed, consultant chest physician and pulmonologist at the Fortis Hiranandani Hospital in Vashi, near Mumbai.

Children tend to be among the worst affected. According to Pallavi Aiyar, author of *Choked*, a book that has been published by Juggernaut, “Children are among the worst-affected demographic, because their respiratory defences have not reached their full capability. They also breathe in more air per kilo of body weight than adults do.”

In some cases, the pollution may lead to poor lung function in children in the future. Any existing asthma or chronic obstructive pulmonary disease will get aggravated immediately. “Similarly, those above 65 years of age, with weak lungs or heart, or blood pressure, will find their symptoms worsening in polluted conditions. It has also been documented that if expectant mothers are exposed to increased levels of pollutants, then the birth weight of their babies is less than average,” adds Dr Kabra.

What you should do

A mask (N95 or N99 is what is recommended) can be handy, especially if you are visiting more polluted areas. Use your judgement while using the mask, however, since wearing it 24 hours will be of little help—it will be difficult to breathe through and not very comfortable to wear.

Dr Kabra emphasizes that people who already have asthma should not skip their medication. “Even if it feels like you are fine right now, stick to your medication. If you see the cough worsening or staying after 10 days, especially in children, then seek medical advice from a specialist.”

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