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How to Breathe Easy in Polluted Cities

Try these seven ways to lessen the burden on your lungs.

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Residents wearing masks on a hazy day in Beijing, October 9, 2014. (REUTERS/Barry Huang)

Before leaving the house, residents of Delhi and Beijing are as likely to check the city's Air Quality Index ([AQI rating](#)) as the weather forecast. Once the level of pollutants reaches a critical concentration—which varies by location—it's no longer safe to breathe outdoors.

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>..air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

The Air Quality Index (AQI) associates a numerical value of particulates with a color and an advisory warning. ([AirNow](#))

One quarter of the world's population now breathes unsafe air, according to the [2014 Environmental Performance Index \(EPI\)](#). The relationship between filthy air and poor health is frightening. [Fine particulate matter](#), which comes from fuel combustion (such as from vehicle exhausts or coal-fired power plants), can easily penetrate our bloodstream and contribute to cardiovascular and lung disease. Last year, the [World Health Organization reported](#) that ambient air pollution contributes to one in eight of all deaths—that equated to 7 million deaths in 2012 alone.

Citizens have begun fighting back against the growing danger, pushing governments to [release pollution figures](#), buying air filtration products in [vast quantities](#), and becoming involved in [grassroots campaigns](#) to take back control of their environments. But there are also easy, affordable things you can do right now. Try these easy ways to reduce your exposure to bad air—in any city.

Download predictive outdoor pollution apps

The number of sites and apps that offer predictive outdoor air quality reports is steadily growing. Last month, Microsoft launched an app that provides air quality information for more than 200 cities in China up to two days in

advance. [Your Weather](#) combines data with weather forecasts to help city dwellers make better decisions about when and how to brave the air. In the U.S., the federal government's [Airnow](#) website and [mobile app](#) offer a next-day AQI predictor. Earlier this year, to help residents navigate polluted Delhi, the Indian government launched the mobile app [SAFAR-Air](#), complete with next-day air forecasting.



([Speck](#))

Install indoor air pollution sensors

Low-cost, high-accuracy sensors that measure air quality are a hot new area of technology startups. At the SXSW festival this year, Carnegie Mellon scientists unveiled their \$200 [Speck](#) air pollution monitor, which can measure the concentration of fine pollutant particles in your home. In China, the \$65 [Laser Egg](#) reader begins shipping this week. "The results we see from our Laser Egg are on par with professional equipment usually in the range of thousands or tens of thousands of dollars," developer Liam Bates told Citylab.

Buy an air purifier—and keep it clean

Air purifiers are a staple in many urban homes. Although it might seem counterintuitive, it's a good idea to turn off your air purifiers regularly to air out your home. Choose a day of low pollution and then open the windows one room at a time for at least 10 minutes, before sealing them shut and switching those purifiers back on. Doing so will allow stale air from the previous day out and allow relatively clean air back in.

If you're in doubt of your purifier's efficiency, start switching your filters up more often than the instructions suggest. Bear in mind that filters on air conditioning units may also become clogged more quickly in a smoggy area.

Invest in wearable technology

Wearable pollution sensors allow you to monitor your personal exposure. Inevitably, these kinds of sensors face a barrage of difficulties when recording accurate data outdoors, since pollution levels can change every second depending on external factors, such as traffic and weather patterns. However, the creators of keychain-sized gadget [Clarity](#) are confident the idea will catch on and eventually expect crowdsourced data from their product to help citizens gain a more complete picture of environmental hazards.

AirBeam: Share & Improve Your Air



Other similar devices already on the market, or slated to arrive soon, include the [AirBeam](#), the palm-sized device in the video above, as well as the [Lapka PEM](#) and the [TZOA sensor](#), both of which can stream data to the wearer's smartphone.

Create less indoor pollution

When measuring your personal AQI, it's worth remembering that the air quality

in your home sometimes bears no correlation to what is going outside. Many factors can affect the quality of indoor air, from cooking to burning incense. Also be sure to chuck major dust collectors, such as old cushions and heavily upholstered furniture.

Wear a respirator

Smog masks are becoming cool—as [CNN noted](#), they even graced the runways at China Fashion Week last year. But in order to fully gain the benefits, you'll need to purchase an air-purifying respirator, rather than a facial accessory made from cloth—a [common sight in cities](#). Proper respirator masks make a seal with the face and have a filter to prevent contaminated air entering your mouth or nose.

Exercise at off hours

The [jury's still out](#) as to whether the benefits of exercise outweigh the negative effects of pollution. Either way, to avoid inhaling polluted air deep into your lungs, experts suggest hitting the running track early in the morning or later in the evening to avoid the most pollutant-heavy times of the day.

About the Author



Sarah O'Meara is the former lifestyle editor of *The Huffington Post UK* turned Shanghai resident. She writes a weekly column for *The Telegraph* on life in China, and features for *Nature*, *Al Jazeera*, and *Business Traveller*, among others.

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