



ARTICLE FOR READING ANSWER KEY



(This article was written by Katy Daigle and has been adapted from <https://www.sciencenewsforstudents.org/article/air-pollution-shortening-lives-worldwide>)

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Read the text quickly (1 minute) and decide which title is the best:

- A** Climate Change Is Here **B** Air Pollution Shortens Our Lives **C** Many Kinds of Pollution

Air is free. But breathing dirty air has a price. Indeed, it can cost someone's life span months — even years.

The study used data gathered in 2016 as part of a project known as the Global Burden of Disease. It was the first major country-by-country look at the link between life spans and what's known as *fine PM* (PM is short for particulate matter). **Less than 2.5 micrometers across, these bits of pollution are less than one-thirtieth the width of an average human hair. Such pollution is known as PM_{2.5}.**

Fine particulate air pollution, or PM_{2.5}, is just one of many common health risks. **But in some places, this pollution shortens people's lives more than other problems like lung cancer or poor water quality.**

All countries suffer

Pollution makes a difference even in countries with relatively clean air, such as the United States and **Australia**. Even the low levels of PM_{2.5} in them costs their average residents **a few months** of their lives.

If **Egyptians**, for example, meet the WHO standards, the study calculated that they could live about **1.3 years** longer on the average. If we were able to immediately set the levels in **China** to those same standards, life spans there would increase by an average of **about nine months**.

India has some of the world's worst air pollution. There, clearing the air to WHO standards would up the chances by 20 percent that a 60-year-old person would live another 25 years, the authors say.

The scientists also compared how other threats shorten life spans across the globe. These risk factors included smoking and cancer. In South Asia (which includes India, for example), they found PM_{2.5} had a bigger effect on life expectancy than did all cancers combined!

In 42 countries — mostly in Africa and Asia — PM_{2.5} shortened life spans by a year or more. Imagine having an extra year with the people in your life who matter most. Clearly everybody benefits when the air is improved.

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Answer the following questions:

- 1) PM_{2.5} refers to very small particles of matter. How big is one? **Less than 2.5 micrometers across, these bits of pollution are less than one-thirtieth the width of an average human hair.**
- 2) Is PM_{2.5} more dangerous than lung cancer? **It depends on the place. But in some places, this pollution shortens people's lives more than other problems like lung cancer or poor water quality.**
- 3) The WHO (World Health Organization) believes that if a country meets the standard set by them, people in the following countries could live longer. How much longer in each country, on the average?

Australia	<u>A few months</u>
Egypt	<u>1.3 years</u>
China	<u>About 9 months</u>