

Smoking could lead to 40 million excess tuberculosis deaths by 2050

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Between 2010 and 2050, smoking could be responsible for 40 million excess deaths from tuberculosis (TB), according to research published in the *British Medical Journal* today.

The study, led Dr Sanjay Basu from the University of California, used a mathematical model to determine the effect of smoking on future [tuberculosis](#) rates. The research finds that because smoking increases the risk of contracting TB, there will be 18 million more cases worldwide between 2010 and 2050.

Once [smokers](#) develop the disease, they are more likely to die from it, meaning that smoking can single-handedly undermine the Millennium Development Goal to reduce TB mortality by half between 1990 and 2015, say the authors. They add, however, that "aggressive [tobacco control](#) could avert millions of deaths from tuberculosis

It is established, say the authors, that smoking tobacco is a TB risk factor. They add that nearly one fifth of the world's population smokes and that most cigarettes are smoked in countries with high TB prevalence and where the [tobacco industry](#) has expanded its market. Given this, the authors wanted to predict how much impact smoking will have on future TB rates.

The research team developed a [mathematical model](#) to investigate the issue. Similar models have previously been used for HIV, TB detection systems and [drug resistance](#), but not smoking.

In their analysis, the authors found that smoking may have a substantial impact on future TB rates because a moderate increase in individual risk translates into a large population-level risk because so many people smoke.

The results show that from 2010 to 2050 worldwide smoking could lead to 40 million excess TB deaths (from 61 to 101 million). They also conclude that if current smoking trends continue, the number of excess TB cases could rise from 256 to 274 million - 18 million new cases in total.

Furthermore, the authors found that the number of people with current TB infections may be falsely reduced by smoking. This is because smoking can kill so many people with TB that the number of people living with TB is reduced by smoking, even though smoking also causes a rise in new cases.

According to Basu's model the African, Eastern Mediterranean and Southeast Asian regions would experience the greatest increase in new TB cases attributable to smoking.

The authors argue that "aggressively lowering the prevalence of tobacco smoking could reduce smoking attributable deaths from tuberculosis by 27 million by 2050".

Provided by British Medical Journal

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