

## Dirty Air Triggers More Heart Attacks than Cocaine

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The findings, published in The Lancet journal, suggest population-wide factors like polluted air should be taken more seriously when looking at heart risks, and should be put into context beside higher but relatively rarer risks like drug use.

Tim Nawrot of Hasselt University in Belgium, who led the study, said he hoped his findings would also encourage doctors to think more often about population level risks.

"Physicians are always looking at individual patients -- and low risk factors might not look important at an individual level, but if they are prevalent in the population then they have a greater public health relevance," he said in a telephone interview.

The World Health Organization (WHO) describes air pollution as "a major environmental risk to health" and estimates that it causes around 2 million premature deaths worldwide every year.

Nawrot's team combined data from 36 separate studies and calculated the relative risk posed by a series of heart attack triggers and their population-attributable fraction (PAF) -- in other words the proportion of total heart attacks estimated to have been caused by each trigger.

The highest risk PAF was exposure to traffic, followed by physical exertion, alcohol, coffee, air pollution, and then things like anger, sex, cocaine use, smoking marijuana and respiratory infections.

"Of the triggers for heart attack studied, cocaine is the most likely to trigger an event in an individual, but traffic has the greatest population effect as more people are exposed to (it)," the researchers wrote. "PAFs give a measure of how much disease would be avoided if the risk was no longer present."

A report published late last year found that air pollution in many major cities in Asia exceeds the WHO's air quality guidelines and that toxic cocktails of pollutants results in more than 530,000 premature deaths a year.

While passive smoking was not included in this study, Nawrot said the effects of second-hand smoke were likely to be similar to that of outdoor air pollution, and noted previous research which found that bans on smoking in public places have significantly reduced heart attack rates.

British researchers said last year that a ban on smoking in public places in England led to a swift and significant drop in the number of heart attacks, saving the health service 8.4 million pounds (\$13 million) in the first year.

Tim Chico, a heart specialist at the University of Sheffield who was not involved in this research, said it would help health authorities focus on which are the most important triggers.

"However, what triggers the heart attack should be considered the "last straw." The foundations of heart disease that lead to a heart attack are laid down over many years," he said in an emailed comment. "If someone wants to avoid a heart attack they should focus on not smoking, exercising, eating a healthy diet and maintaining their ideal weight."

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