

After Surgery, Anesthetic Gases Add To Global Warming

December 6, 2010

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The soothing gases delivered by anesthesiologists to get patients through a rough procedure or surgery have done wonders for pain management.



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Most gases used in anesthesiology eventually end up in the atmosphere where they trap heat even more effectively than carbon dioxide.

But now scientists have found that these tools aren't so friendly to the environment. That's because three gases used commonly by anesthesiologists are maddeningly effective at trapping heat and warming the planet.

How effective? A pound of anesthetic gas warms the climate as much as 1,620 pounds of carbon dioxide does, according to study just published in the *British Journal of Anaesthesia*.

Sure, compared with CO₂, the most ubiquitous greenhouse gas, only tiny amounts of these compounds reach the atmosphere. But they still pack a lot of heat once they get there. The volume of anesthesia gases used worldwide for surgery is about as bad for the climate each year as 1 million cars.

The gases — isoflurane, desflurane and sevoflurane — are relatives of refrigerants, like Freon, famous for nibbling away at the ozone layer. Desflurane is 1,620 times more potent than CO₂, in bottling up heat. Isoflurane comes in at 510 more potent, and sevoflurane is 210 worse.

The body can break down small amounts of sevoflurane, but not isoflurane or desflurane. So the vast majority of the anesthetics used eventually finds its way into the environment, the researchers say.

No one's calling for a ban on the gases, but the researchers say that maybe doctors should think twice about desflurane and isoflurane, the worst offenders.

"This ought to make anesthesiologists sit up and take notice," says Ole John Nielsen, an author of the study and an atmospheric chemist at the University of Copenhagen, in a statement. "If all three compounds have equal therapeutic worth, there is every reason to choose the one with the lowest global warming potential."