

# Carbon monoxide linked to heart problems in elderly

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Exposure to carbon monoxide, even at levels well below national limits, is associated with an increased risk of hospitalization for the elderly with heart problems, according to a study published today in *Circulation: Journal of the American Heart Association*.

The nationwide study of 126 urban communities, funded by the [Environmental Protection Agency](#) (EPA) and the National Institute of Environmental Health Sciences, found that an increase in [carbon monoxide](#) of 1 part per million in the maximum daily one-hour exposure is associated with a 0.96 percent increase in the risk of hospitalization from cardiovascular disease among people over the age of 65.

This link holds true even when carbon monoxide levels are less than 1 part per million, which is well below the EPA's National Ambient [Air Quality](#) Standard of 35 parts per million. This finding suggests an under-recognized health risk to seniors. Currently, the EPA is evaluating the scientific evidence on the link between carbon monoxide and health to determine whether the health-based standard should be modified.

"This evidence indicates that exposure to current carbon monoxide levels may still pose a public health threat," said Michelle Bell, the study's lead investigator and associate professor of environmental health at the Yale School of Forestry & Environmental Studies. "Higher levels of carbon monoxide were associated with higher risk of hospitalizations for cardiovascular heart disease."

Bell and researchers from the Johns Hopkins Bloomberg School of Public Health and the University of Southern California's Keck School of Medicine based their findings on an analysis of hospital records for 9.3 million Medicare recipients and data on air pollution levels and weather gathered between 1999 and 2005. Their analysis took into account the health effects of other traffic-related pollutants, including nitrogen dioxide, fine particles and elemental carbon.

"We found a positive and statistically significant association between same-day carbon monoxide levels and an increased risk of hospitalization for cardiovascular disease in general, as well as for multiple, specific [cardiovascular disease](#) outcomes, including ischemic heart disease, heart rhythm disturbances, [heart](#) failure and cerebrovascular disease," Bell said.

Carbon monoxide is a tasteless, odorless gas that is a component of automobile exhaust. The researchers acknowledged that additional research is needed to investigate whether carbon monoxide or a combination of it and other traffic-related pollutants are the cause of the increased risk of cardiovascular hospitalizations in seniors.

Source: Yale University ([news](#) : [web](#))

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