

# Auto exhaust linked to thickening of arteries, possible increased risk of heart attack

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(PhysOrg.com) -- A team of researchers from Switzerland, California, and Spain have found that particulates from auto exhaust can lead to the thickening of artery walls. Their findings are reported in the journal *PLoS ONE*.

Swiss, California and Spanish researchers have found that particulates from auto exhaust can lead to the thickening of [artery walls](#), possibly increasing chances of a heart attack and stroke.

In a study reported this week in the journal [PLoS ONE](#), the researchers used ultrasound to measure the [carotid artery](#) wall thickness of 1,483 people who lived near freeways in the Los Angeles area. The researchers took these measurements every six months for approximately three years, and correlated them with estimates of outdoor particulate levels at the study participants' homes.

They found that the artery wall thickness among those living within 100 meters (328 feet) of a highway increased by 5.5 micrometers - one-twentieth the thickness of a human hair - per year, or more than twice the average progression observed in study participants.

"For the first time, we have shown that air pollution contributes to the early formation of heart disease, known as atherosclerosis, which is connected to nearly half the deaths in Western societies and to a growing proportion of deaths in the rapidly industrializing nations of Asia and Latin America," said study co-author Michael Jerrett, UC Berkeley

associate professor of environmental health sciences. "The implications are that by controlling air pollution from traffic, we may see much larger benefits to public health than we thought previously."

"This study fills an important gap between studies linking mortality to [air pollution](#) and those that have reported short-term changes in blood pressure," he added.

Jerrett's co-authors include Nino Kuenzli, vice-director of the Swiss Tropical and Public Health Institute in Basel, and Howard Hodis, director of the Atherosclerosis Research Unit at the Keck School of Medicine at the University of Southern California.

**More information:**

- [www.plosone.org/article/info%3Adoi/10.1371/journal.pone.0009096](http://www.plosone.org/article/info%3Adoi/10.1371/journal.pone.0009096)
- [www.berkeley.edu/news/media/re ... iversity\\_basel.shtml](http://www.berkeley.edu/news/media/releases/2010/02/09_berkeley_university_basel.shtml)

Provided by University of California - Berkeley

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