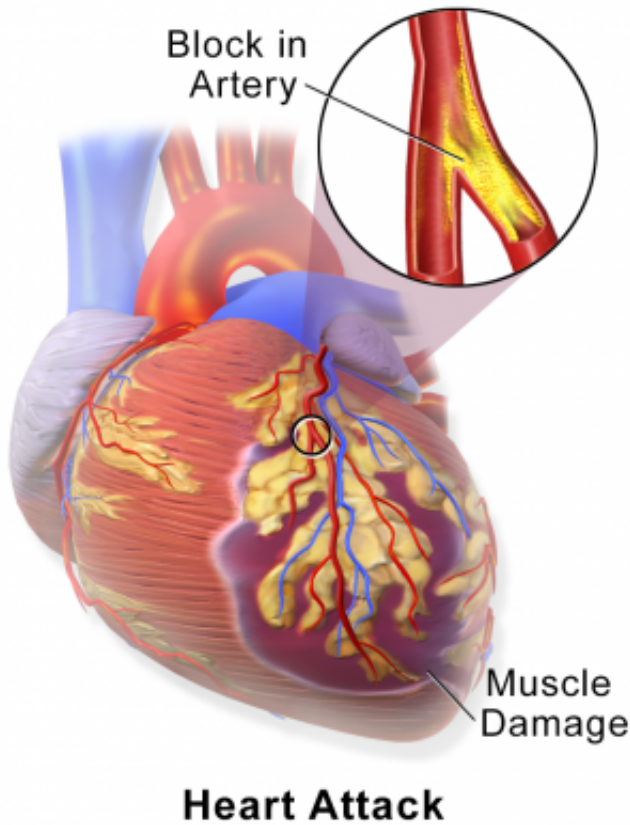


Household air pollution linked to higher risk of heart attacks, death

13 June 2016



Myocardial Infarction or Heart Attack. Credit: Blausen Medical Communications/Wikipedia/CC-A 3.0

Long-term exposure to household air pollution from lighting, cooking or heating with fuels, such as kerosene or diesel, may increase the risk of heart attacks and death, according to new research in the American Heart Association's journal *Circulation*.

Burning cleaner fuels, such as [natural gas](#), was associated with a lower risk of cardiovascular deaths.

According to the World Health Organization, one-half of the world's population lives in poverty and

burns fuels for lighting, cooking and heating purposes.

"We know that smoking tobacco products and outside [air pollution](#) are linked to [heart disease death](#)," said Sumeet Mitter, M.D., lead researcher and cardiovascular disease fellow at Northwestern University's Feinberg School of Medicine in Chicago, Illinois. "Our study, using exposure history and time, is the first to find a significant and independent increased risk for all-cause, total cardiovascular disease and [heart attack deaths](#) due to increasing lifetime exposures to household air pollution from kerosene or diesel burning."

Researchers measured exposure from indoor pollution generated from burning kerosene, wood, diesel, cow dung and natural gas in an observational study of a community in northeastern Iran from 2004 to 2008 (Golestan Cohort Study). Of the 50,045 study participants (average age 52 at enrollment) 58 percent were female. Most study participants were of Turkmen ancestry (74 percent) and lived in rural areas (80 percent).

Participants completed lifestyle questionnaires that tabulated exposure to household fuels for cooking and heating throughout their lives. Blood pressure and other body measurements were regularly documented.

They found participants who burned kerosene or diesel had a:

- 6 percent higher risk of dying from all causes during a 10-year period;
- 11 percent increased risk of [cardiovascular death](#); and
- 14 percent increase in ischemic (clot-caused) [heart](#) disease.

Conversely, those who used natural gas had a 6 percent lower risk of cardiovascular death compared to other fuels.

"Since heart disease is the leading cause of death worldwide, it is important for physicians to assess for a number of modifiable risk factors for heart disease, including household air pollution, so that they can intervene and help patients and communities worldwide transition to cleaner burning fuels and reduce the risk for cardiovascular death," Mitter said.

"The next step would be to create a study to measure particulate matter to better establish a dose-response relationship between household air pollution and cardiovascular death," Mitter said.

Provided by American Heart Association

APA citation: Household air pollution linked to higher risk of heart attacks, death (2016, June 13) retrieved 30 June 2022 from <https://medicalxpress.com/news/2016-06-household-air-pollution-linked-higher.html>

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