

Southern California wildfires pose health risks to children

December 1 2006

In October of 2003, multiple wildfires raged throughout Southern California. Now, researchers at the University of Southern California (USC) report that residents without asthma in wildfire-endangered regions suffered as much as those with asthma.

The findings appear in the Dec. 1 print issue of the American Journal of Respiratory and Critical Care Medicine. The study is the subject of the journal's cover story and is accompanied by an editorial written by Sverre Vedal, M.D. of the University of Washington School of Public Health and Community Medicine.

Using existing populations from the ongoing USC-led Children's Health Study (CHS), researchers led by Nino Künzli, M.D.,Ph.D., associate professor of preventive medicine at the Keck School of Medicine of USC, sent questionnaires to thousands of residents in 16 cities covered by the Children's Health Study. These ranged from Alpine in San Diego County north to Atascadero.

"The Children's Health Study is a valuable study for us," says Künzli. "The smoke from the fires that year came as a very strong additional problem to the smog and airborne particulates we normally see affecting the health of our children. It was vital for us to understand how and where the fires affected the participants of the CHS study."

The October 2003 fires covered more than 3,000 square miles and destroyed 3,640 homes. Plumes of smoke dominated the region for



several days raising particulate matter 10 to 20 times normal levels.

While many previous wildfire studies had focused on hospital admissions and emergency room visits, there had been less research into the consequences of wildfire smoke on children's health. Since many communities affected by the fires were already associated with the Children's Health Study, Künzli and colleagues saw an opportunity to better assess the effects of the wildfires in an exceptionally large study.

While some of what they found was to be expected– increased nose, eye, throat irritations, for instance– what was surprising was that the relative increase in symptoms tended to be strongest among those without asthma.

"Children with asthma were more likely to take preventive action, such as wearing masks or staying indoors during the fire," says Künzli. "It appears that taking preventive action might indeed have reduced the health problems.'

While it is difficult to rigorously evaluate the effects of potentially protective measures such as wearing masks or staying indoors in such a study as this, the data do imply that simple protective measures as promoted by public agencies appears to reduce the health consequences, suggests Künzli.

"One thing this study shows us is that during severe wildfires, children who do not have asthma may be experiencing what it is like to live with asthma," he says. "That's not to say that asthmatics weren't affected. In fact, for several symptoms, we saw that asthmatics have as many health problems during times without fire smoke than what non-asthmatics reported for the days with the highest levels of smoke."

The findings are a step towards further investigations into identifying



those at highest risk to wildfires and other airborne pollutants such as smog. "It also appears that smoke, whether it be from fires or tobacco (as seen in previous CHS studies) is unlikely to pose the same health threat to all people. Identifying those at highest risk – due to genetic or other similar factors– is an important next step," says Künzli.

Source: University of Southern California

Citation: Southern California wildfires pose health risks to children (2006, December 1) retrieved 1 May 2024 from <u>https://medicalxpress.com/news/2006-12-southern-california-wildfires-pose-health.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.