

WHAT DOES SCIENCE SAY ABOUT HEALTH PROBLEMS RELATED TO WILDFIRES?



Long-term health problems linked to urban wildfires are still largely unknown. Science takes years to establish cause-and-effect relationships. Individual body chemistry, personal health history and preexisting medical conditions, as well as other factors like age, poverty or racial disparities, make untangling the relationship between wildfires and health a challenge.

What we do know is that inhaling fine particulate matter (PM 2.5) during a wildfire puts the **cardiovascular** and respiratory systems at risk. Acute exposure is a short period lasting from hours to weeks, and chronic exposure is a long period lasting from months to years – both have an impact on biological systems.

ACUTE EXPOSURE HEALTH RISKS

- Constriction of the airways (bronchoconstriction)
- Difficulty breathing
- Reduced lung function
- Increased airway inflammation
- Change in blood pressure
- Reduced blood flow to the heart (acute coronary syndrome)
- Irregular heart beat (arrhythmias)
- Stroke
- Heart failure

CHRONIC EXPOSURE HEALTH RISKS

- Worsening problems breathing
- Decreased lung function and growth in children
- Hardening of the arteries (atherosclerosis)
- Death from cardiovascular disease



WHAT CONCERNS SCIENTISTS

Scientists know that one of the biggest predictors of how well survivors do after a disaster is related to how quickly they feel safe and are able to get food and shelter. A significant number of survivors of urban wildfires in California have had to wait many months for some of their most basic needs to be met.

HOW DO I KNOW IF I NEED TO SEE A MENTAL HEALTH PROFESSIONAL?

Most people don't suffer lasting mental health problems after a wildfire or other disaster. But the more that's lost, the greater the trauma and the longer it's likely to take to recover emotionally. If you're feeling unusually sad, irritated, angry or anxious, it's possible you need mental health help.

About 30 to 40 percent of direct victims of a disaster experience **post-traumatic stress disorder**, including 10 to 20 percent of rescue workers and five to 10 percent of the general population. Others develop **depression**, and it's not unusual for survivors of a disaster to grapple with both. Here are some of the signs to look for in adults:

- Isolation or thoughts of suicide
- Having flashbacks or recurrent, distressing memories or dreams about the wildfire
- Having a psychological or physiological reaction to a trigger, i.e. seeing fog, thinking it's smoke and having a panic attack
- Avoiding reminders of the fire
- Inability to remember the trauma, detachment from people or having exaggerated negative beliefs about yourself or others
- Hypervigilance or feeling on edge, inability to concentrate, self-destructive behavior