

March 23, 2018

## HEALTH ISSUES FOLLOWING THE THOMAS FIRE

Health concerns exist among residents about both indoor and outdoor air quality in the parts of Ventura County within and adjacent to the burned areas of the Thomas fire. Ash is still present from time to time in our environment; it may be irritating to the skin and if the ash is breathed, it can be irritating to the eyes, nose and throat and may cause coughing. The smaller the ash particles are, the more deeply they can penetrate our lungs. Ash particles in the lungs may trigger asthma attacks as well as exacerbations of emphysema. Any decrease in lung function from ash inhalation can worsen cardiac conditions as well. Ash from burned homes may contain arsenic, cadmium, cobalt, asbestos, lead and mercury.

In some cases, smoke has tainted indoor surfaces as well, including walls, floors, fabrics, furniture and appliances. The constituents of smoke taint are potentially injurious to one's health. Smoke residue or taint often contains such substances as benzene, toluene, ethyl benzene and xylenes (BTEX) in addition to a complicated mixture of polycyclic aromatic hydrocarbons. These substances differ from ash in that they are vapors. They are often sticky and adhere tenaciously to surfaces.

Following a major fire event, significant smoke taint may be present on pillows, mattresses and other surfaces and last an indefinite period of time. Many of these entities respond well to cleaning, but due to the nature of some of these surfaces, cleaning methods may be unable to rid them of taint. The long-term health effects of chronic exposure to polycyclic aromatic hydrocarbons may include cataracts, kidney and liver damage, and an increased risk of skin, lung, bladder, and gastrointestinal cancers. Short-term effects of the other constituents found along with polycyclic aromatic hydrocarbons (like BTEX) include symptoms such as eye irritation, nausea, vomiting, diarrhea, confusion and worsening of lung and heart conditions.

People with certain respiratory and cardiac conditions, pregnant women, as well as the very young and very old, may be particularly impacted by smoke taint and ash. It is established that both short and long-term exposure to these substances can have a negative impact on one's health. Different people have differing levels of sensitivities to these substances.

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