

“Will recent fires cause a spike in Valley Fever cases?”

Robert Levin, MD, Ventura County Health Officer

The number of cases of Valley Fever (or coccidioidomycosis), caused by *Coccidioides immitis* ebbs and flows annually but has increased over the last three or four years. Cocci (the abbreviated name for coccidioidomycosis or Valley Fever) is caused by a fungus that lives in the soil. It is much more likely to be found in virgin or previously undisturbed soil. It is therefore not as likely for someone to become infected when one is passing by a recently plowed field that is cultivated every year than it is when breathing in the dust of a project that is breaking ground at a previously undisturbed site. Either because fighting wildfires involves digging up virgin soil or because there is a lot of dust and ash in the air associated with a wildfire, there is concern that fires like the Woolsey fire will lead to an increase in the number of Cocci cases in humans. Indeed, last year, around the same time that Ventura County suffered from the Thomas fire, there were a number of additional cases of Cocci.

Cocci should be suspected if someone develops a new cough that lasts for two or more weeks, with or without a fever. Also, chest pain, shortness of breath, weight loss, fever and fatigue may be seen. A small proportion of people with Cocci develop a distinctive rash on their shins that look and feel like the legs have been beaten with a Billy club. This is called erythema nodosum. The majority of the people who get Cocci have no symptoms. Once you get Cocci, whether you have symptoms or not, you develop lifelong immunity. Approximately 30% of Californians have previously been infected with coccidioidomycosis. Certain places in California have more Cocci than others. In California's Central Valley, a newcomer there has a risk of getting Cocci of about 15% per year.

At the time of the Thomas fire, over 4,000 firefighters were engaged in the battle. Only one of them was diagnosed with a Cocci lung infection. As Health Officer for Ventura County, I don't see a clear cut connection between wildfires and Cocci infections. In fact, last year, the increase in cases began in November, one month before the Thomas fire began. It is likely that we will see an increase in cases of Cocci beginning in November of 2018 again. At this point, I can find

little evidence that such an increase and its association with our fires will be anything more than coincidental. Nevertheless, the Health Department's Communicable Disease section will continue to look for such an association during this coming season. After last year's peak in Cocci cases and the overlapping wildfire season, the State of California's Communicable Disease section looked at the data for the entire State and could not find an association between the fires and the increase in Cocci cases.