FACT SHEET

Managing Valley Fever Exposure Risk

This WorkCare Fact Sheet covers valley fever exposure risk, symptoms, diagnosis, treatment and prevention measures.

Valley fever (coccidioidomycosis) is a potentially serious infectious disease acquired by inhaling microscopic fungal spores that live in soil. The fungi that cause valley fever are Coccidioides immitis and Coccidioides posadasii.

Exposure Risk

Risk of exposure to these fungal spores appears to be increasing. Climate-change factors are predicted to further extend the range of environments suitable for the growth and dispersal of Coccidioides species, scientists report in the Journal of Fungi. In the U.S., most cases occur in California and Arizona. Other U.S. locations include Washington, New Mexico, Nevada, Texas and Utah.

Case rates have risen consistently in recent years. In 2014, 8,232 U.S. cases were reported compared to 20,003 in 2019. Clinically diagnosed infections range from 9,400 to 22,600 cases per year. Centers for Disease Control and Prevention (CDC) researchers estimate the actual burden of illness is 6 to 14 times higher than reported. Meanwhile, the annual economic impact of illness is estimated at $1.5 billion, according to a report by the Valley Fever Center for Excellence at the University of Arizona College of Medicine.

Valley fever is not contagious, and most people who get infected won't get it more than once. A single inhaled spore can transmit disease, but it is rare for Coccidioides spores to enter the body through a cut, scrape or splinter.

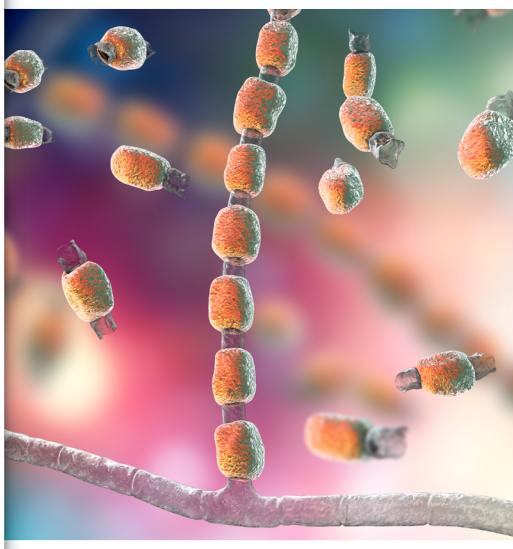
Risk factors for serious illness after exposure include pregnancy, diabetes, suppressed immune system, organ transplant, age over 60 and ethnicity (African or Filipino heritage). Workers in construction, agriculture, mining, utilities, and oil and gas extraction are among those with heightened exposure risk. Others include archaeologists, geologists, military personnel and wildland firefighters. Special circumstances apply to certain lab personnel.

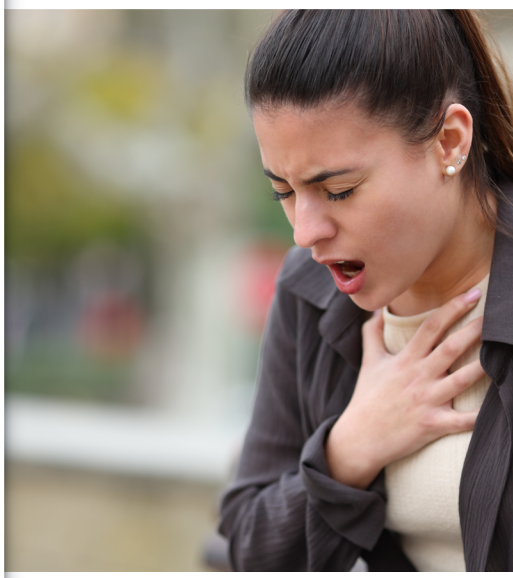
Most cases are not associated with outbreaks linked to a common source. However, they have occurred at military installations, construction and archeological sites, on solar farms, and among people exposed to earthquakes or dust storms.

Diagnosis and Treatment

Many people who get infected never develop symptoms. If exposure is suspected, it's important to see a medical provider for symptoms such as fatigue, fever, cough, chest discomfort, body aches, headache, night sweats and rash. Researchers say cases are often misdiagnosed because the symptoms are similar to other illnesses.

Routine blood tests are used to diagnose valley fever. Microscopic examination of sputum, tissue biopsy, serum tests and fungal genetic analysis are also test methods. A skin test may be used to detect an immune response to the fungus. A chest X-ray may be performed to identify lung abnormalities; in severe cases





body scans may be used as a diagnostic tool. Studies indicate that front-line clinical training on routine testing helps expedite recognition and needed treatment.

Milder cases typically resolve on their own within weeks to months. A physician may prescribe antifungal medication to treat underlying infection. Severe cases require hospital care. When the infection spreads outside the lungs it can affect the brain, joints, bone, skin or other organs. This disseminated form of the disease is rare and can be fatal.

Prevention

There is no vaccine to prevent valley fever. Antifungal medication (prophylaxis) has not been shown to protect people who suspect exposure from becoming infected.

Here are 10 recommended prevention measures:

1. Watch case trends and be aware of endemic areas.
2. Wear an N-95 respirator (mask) when there is exposure risk.
3. Keep building and car windows closed; recirculate air and use air filtering systems.
4. Avoiding work in dusty areas, during dust storms or in high winds.
5. Use excavation equipment with enclosed, air-conditioned, HEPA-filtered cabs.
6. Continuously wet soil when digging or moving earth.
7. Wash equipment before it is moved offsite or stored.
8. Change clothing and shoes at the worksite before going home.
9. Clean and protect cuts and abrasions and thoroughly wash hands.
10. Control the spread of dust with groundcover such as gravel or plants.

NIOSH recommends that workers wear respiratory protection when digging manually or with heavy equipment, and when working near earth-moving trucks or equipment in endemic areas. Respirators should be NIOSH-certified and used in conjunction with a workplace respiratory protection program.

Related Resources

American Lung Association - Valley Fever overview

Arizona Department of Public Health - Valley Fever

California Department of Public Health - Valley Fever on the Rise

Centers for Disease Control and Prevention - Valley Fever

Impact and Control of Valley Fever, National Academies Workshop Proceedings, 2023

NIOSH - Jobs at Risk

OSHA - Valley Fever Control and Prevention

UC Davis Health Center for Valley Fever