

# PUBLIC HEALTH REFERENCE SHEET

## Coccidioidomycosis



<b>Name</b>	<i>Coccidioides immitis</i> and <i>posadasii</i>
<b>Reservoir &amp; Transmission</b>	Soil Breathing in the microscopic fungal spores from the air
<b>Incubation Period</b>	Primary infection: 1–3 weeks or 1–4 weeks Disseminated infection: may develop years after primary infection, sometimes without recognized symptoms of primary pulmonary infection
<b>Common Symptoms</b>	Can be asymptomatic; may resemble influenza-like illness; less than 1% leads to disseminated infection
<b>Gold Standard Diagnostic Test</b>	Precipitin tests: IgM antibodies appear 1–2 weeks after symptoms appear and persists for 3–4 months
<b>Risk Groups</b>	Laboratory technicians who may have exposure; those who move or visit endemic areas; the elderly are most commonly infected
<b>Geographic Significance</b>	Most common in Southwest United States, Mexico, Central and South America, and South-Central Washington State

### What is coccidioidomycosis?

Valley fever is an infection caused by the fungus *Coccidioides*. The scientific name for Valley fever is “coccidioidomycosis,” and it is also known as “San Joaquin Valley fever” or “desert rheumatism.” The term “Valley fever” usually refers to *Coccidioides* infection in the lungs, but in severe cases can spread to other parts of the body, called “disseminated coccidioidomycosis”. The fungus is known to live in the top layer of soil in arid and semiarid areas in the southwestern United States and parts of Mexico and Central and South America, and South-Central Washington State.

### How is Valley fever transmitted?

People can get Valley fever by breathing in the microscopic fungal spores that can be mobilized during wind or dust storms, as well as during desert military operations. Valley fever is not contagious. *Coccidioides* can't spread from the lungs between people or between people and animals. In extremely rare instances, a wound infection with *Coccidioides* can spread Valley fever to someone else, or the infection can be spread through an organ transplant.

### Who is at risk for Valley fever?

Anyone who lives in or travels to the southwestern United States (Arizona, California, Nevada, New Mexico, Texas, or Utah), or parts of Mexico or Central or South America can get Valley fever. Valley fever can affect people of any age, but it's most common in adults aged 60 and older. Certain groups of people may be at higher risk for developing the severe forms of Valley fever, such as people who have weakened immune systems, people who have had an organ transplant, people who or are taking medications such as corticosteroids or tumor necrosis factor (TNF)-inhibitors (typically immunosuppressive therapy for individuals with rheumatologic diseases), pregnant women, people who have diabetes, and people who are of African or Filipino race/descent/ancestry.

### What are the signs and symptoms of Valley fever?

Symptoms of Valley fever include fatigue (tiredness), cough, fever, shortness of breath, headache, night sweats, muscle aches or joint pain, and rash on upper body or legs. In extremely rare cases, the fungal spores can enter the skin through a cut, wound, or splinter and cause a skin infection. Some people who are exposed to the fungus *Coccidioides* never develop

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symptoms, while others may develop symptoms between 1 and up to 4 weeks after a breathing in the fungal spores and may last for a few weeks to a few months.

### What are potential complications of Valley fever?

Approximately 5% to 10% of people who get Valley fever will develop serious or long-term problems in their lungs. In an even smaller percentage of people (about 1%), the infection spreads from the lungs to other parts of the body, such as the central nervous system (brain and spinal cord), skin, or bones and joints.

### How is Valley fever diagnosed?

Medical and travel history, symptoms, physical examinations, and laboratory tests which may include serum specimens for *Coccidioides* antibodies or antigens, culture of body fluids or tissues, or histopathologic identification from a tissue biopsy. Imaging studies such as chest x-rays or CT scans may identify Valley fever pneumonia.

### How is Valley fever treated?

The treatment is usually 3 to 6 months of fluconazole or another type of antifungal medication. There are no over-the-counter medications to treat Valley fever. For many people, the symptoms of Valley fever will go away within a few months without any treatment. Antifungal medication may be prescribed to reduce the severity of symptoms, prevent worsening of the infection, and given to those at higher risk for developing severe Valley fever. Those with severe lung infections or infections that have spread to other parts of the body always need antifungal treatment, may need to be hospitalized, and the course of treatment is usually longer than 6 months. Valley fever that develops into meningitis is fatal if not treated, thus lifelong antifungal treatment is necessary.

### How can Valley fever be prevented?

Currently, there is not a vaccine to prevent Valley fever. However, those who had Valley fever may have developed immunity and be protected from reinfection. Respiratory protection in dusty environments may include an N95 respirator and use of indoor air filtration measures.

### What are some public health considerations?

- Document source of infection, if known.
- Document relevant travel and deployment history occurring within the incubation period (1-3 weeks for primary infection).

### References:

“Coccidioidomycosis,” Centers for Disease Control and Prevention, last reviewed December 29, 2020. <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/>.

Defense Health Agency. 2022. *Armed Forces Reportable Medical Events Guidelines and Case Definitions*.

<https://www.health.mil/Reference-Center/Publications/2022/11/01/Armed-Forces-Reportable-Medical-Events-Guidelines>

Heymann, David L. ed. 2022. *Control of Communicable Diseases Manual*. 21st Edition. Washington DC: APHA Press.

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