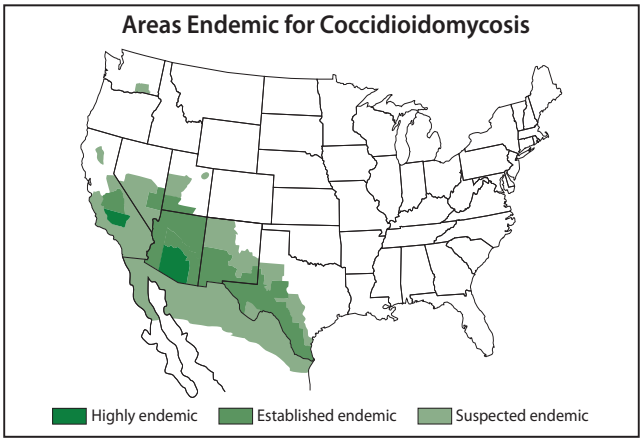
Valley Fever
and the Expanding Geographic Range of *Coccidioides*



Map of the approximate areas ("endemic areas") where *Coccidioides* is known to live or is suspected to live in the United States and Mexico.

Valley fever, a fungal infection also called coccidioidomycosis, is a major cause of illness in the southwestern United States. Although most reported Valley fever cases are from Arizona (nearly 70%) or California (nearly 30%), some people get Valley fever after being exposed to the fungus *Coccidioides* in other areas. The geographic range of this fungus is likely larger than previously recognized; for example, it was found in Washington State.

From soil to lungs

People and animals can get Valley fever by breathing in the fungus *Coccidioides* from the environment. The fungus lives in certain areas of the western United States and parts of Mexico and Central and South America. Valley fever can cause flu-like symptoms that may last for weeks to months.

Common symptoms may lead to delayed diagnosis and treatment

Valley fever symptoms (fatigue, cough, fever, headache, and muscle aches or joint pain) are similar to other common illnesses, so diagnosis and treatment are often delayed. In a small number of people, the infection can cause chronic pneumonia, spread from the lungs to other parts of the body and cause meningitis (brain or spine infection), or even lead to death.

Geographic range of Valley fever expands to Washington State

Scientists believed that *Coccidioides* only lived in the Southwestern United States and parts of Latin America until discovering it in south-central Washington in 2013 after several residents developed Valley fever without recent travel to areas where the fungus is known to live. Samples from one patient and soil from the suspected exposure site were analyzed using a laboratory technique called whole genome sequencing and were found to be identical, proving that the infection was acquired in Washington.

Coccidioides lives in dry, dusty soil. It was recently found in south-central Washington.

After this discovery, many unanswered questions remain: How widespread is *Coccidioides* in Washington? How did it get there? How long has it been living there? Information about where a person was most likely infected with Valley fever, how strains are related, and which areas could pose a risk is essential for raising awareness about the disease among public health officials, healthcare providers, and the public. CDC is working with state and local public health officials and other agencies to better understand where the fungus lives so that healthcare providers and the public can be aware of the risk for Valley fever.

Valley fever is a serious, costly illness

Nearly 75% of people with Valley fever miss work or school for about two weeks.

As many as 40% of people who get Valley fever need to stay in the hospital.

The average cost of a hospital stay for a person with Valley fever **is almost $50,000.**

National Center for Emerging and Zoonotic Infectious Diseases
Division of Foodborne, Waterborne, and Environmental Diseases

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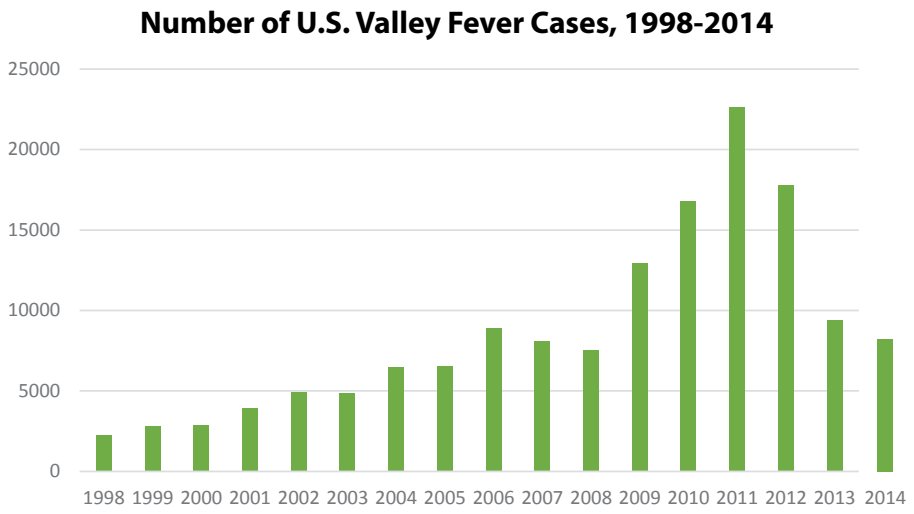

Changes in the number of cases may be due to:

The way cases are being detected and reported

Environmental factors such as temperature, rainfall, and land use

The number of susceptible people exposed to *Coccidioides*

Valley fever causes more severe illness in some groups of people

Anyone who lives in or travels to areas where *Coccidioides* is in the environment can get Valley fever. Valley fever can affect people of any age, but it's most common in adults older than 60. Certain groups of people may be at higher risk for developing severe forms of the infection, including people who have weakened immune systems, pregnant women, people with diabetes, and people who are black or Filipino.

CDC is taking action by:

- Supporting states to track and better understand the impact of Valley fever on local communities.
- Monitoring the epidemiology of Valley fever to understand national trends in illnesses.
- Developing new tools to detect *Coccidioides* faster and more easily in the environment.
- Serving as a reference laboratory for state health departments and providing training in laboratory diagnosis.
- Increasing awareness of Valley fever among healthcare providers and the public to minimize delays in diagnosis and treatment.

Future directions for reducing the burden of Valley fever include:

- Better understanding the full geographic distribution of *Coccidioides* to recognize which areas pose a risk.
- More research on the prevention of Valley fever and how to reduce the severity and duration of illness.
- Developing better tests to diagnose Valley fever more quickly and accurately.

For more information:
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