CONDITION

Valley fever

Valley fever is a fungal infection caught by breathing in spores from soil

WHAT IT IS
A fungal infection usually affecting the lungs

BODY SYSTEM
Lungs, sometimes skin, bones, joints, or nervous system

MAIN SYMPTOMS
Cough, fever, chest pain, severe tiredness

WHAT CAUSES IT
Coccidioides fungal infection from soil spores

HOW IT IS DIAGNOSED
Blood antibody tests, sputum culture, or tissue testing

MAIN TREATMENT
Monitoring, supportive care, or antifungal medicines

CAN IT BE CURED?
Sometimes - most clear; meningitis needs lifelong control

IS IT AN EMERGENCY?
Sometimes - breathing trouble, confusion, or seizures

LONG-TERM OUTLOOK
Most recover; widespread infection may need prolonged treatment

Overview

Valley fever is an infection caused by Coccidioides , a fungus that lives in soil. Its medical name is coccidioidomycosis. You can become infected by breathing in microscopic fungal spores when contaminated soil or dust is disturbed.

The fungus is found mainly in dry parts of the southwestern United States. It also occurs in south-central Washington and parts of Mexico, Central America, and South America. Travel or a short stay in one of these areas may be enough for exposure.

Valley fever usually begins as a lung infection. Many people have no symptoms, while others develop a flu-like or pneumonia-like illness. Most people recover, but tiredness can continue for weeks or months.

In a small proportion of people, the infection becomes long-lasting in the lungs or spreads

beyond them. This is called disseminated Valley fever. It can affect the skin, bones, joints, or the lining around the brain and spinal cord.

Valley fever is not usually passed from one person to another. It is caught from the environment, not through coughing, touching, or sharing household items.

Symptoms

Symptoms usually begin within several weeks of breathing in the spores. They can be mild or severe and may resemble influenza, COVID-19, or bacterial pneumonia.

Common symptoms include:

Some people develop painful red lumps called erythema nodosum. These are caused by inflammation under the skin rather than fungus growing in the rash. Joint pain, especially around the ankles or knees, may occur at the same time.

A lung infection that does not settle may cause an ongoing cough, weight loss, coughing up blood, or persistent chest discomfort. The infection can sometimes leave a lung nodule or a hollow space called a cavity.

Symptoms outside the lungs depend on where the infection has spread. Skin infection may cause sores or lumps. Bone or joint infection can cause focused pain and swelling. Infection of the lining around the brain, called meningitis, may cause a persistent severe headache, neck stiffness, vomiting, confusion, or sensitivity to light.

These symptoms can have many causes. Symptoms alone cannot confirm Valley fever.

- Cough, fever, headache, or chest pain
- Marked tiredness and reduced stamina
- Shortness of breath
- Muscle or joint aches
- Night sweats
- A red, spotty, or tender rash, often on the lower legs

Causes and risk factors

Valley fever is caused by breathing in airborne spores from Coccidioides fungi. The spores may enter the air during construction, digging, farming, dust storms, military training, or other activities that disturb dry soil. Exposure can also happen without a memorable dust event.

The infection does not come from eating food grown in affected areas. Pets, especially dogs, can also develop Valley fever, but they do not normally pass it to people.

Anyone exposed to the spores can become infected. The chance of exposure is higher if you live, work, or spend time in an area where the fungus is present, particularly if you regularly work with soil or dust.

Some people are more likely to become seriously ill or develop infection outside the lungs. These include people who:

Studies have found a higher risk of disseminated infection among people of Black or Filipino ancestry. The reasons are not fully understood, and ancestry alone does not show what will happen to an individual.

- Have a weakened immune system from HIV, an organ transplant, cancer treatment, corticosteroids like prednisone or hydrocortisone , or certain immune-suppressing medicines
- Are pregnant, especially later in pregnancy or soon after giving birth
- Have diabetes or another condition that may make lung infection harder to manage
- Are older or have significant underlying lung illness

Diagnosis

A clinician may consider Valley fever if you have compatible symptoms and have lived in or travelled to an area where the fungus grows. Mentioning recent travel, outdoor work, construction, or major dust exposure can help.

Blood tests look for antibodies made by the immune system in response to the fungus. These are the tests most often used. Antibody levels may also help with monitoring, although they do not tell the full story on their own.

An antibody test can be negative early in the infection. If Valley fever remains a concern, the test may need to be repeated after more time has passed.

A sample of mucus from the lungs, called sputum, may be examined or cultured to look for the fungus. In some cases, fluid or a small tissue sample is tested. Imaging such as a chest X-ray or CT scan can show pneumonia, nodules, or cavities, but imaging cannot confirm the cause by itself.

If symptoms suggest meningitis or another form of disseminated infection, additional imaging or testing of fluid from around the brain and spinal cord may be needed.

Treatment and management

Many otherwise healthy people with mild, uncomplicated Valley fever recover without antifungal treatment. Care may focus on rest, fluids, relief of fever or pain, and follow-up to make sure symptoms are improving.

Recovery can be slow. Trying to return to full activity too quickly may worsen fatigue. A gradual increase in work, exercise, and daily tasks is often more manageable.

Antifungal medicines are considered when the illness is severe, prolonged, or more likely to cause complications. They are also used when infection has spread beyond the lungs. Common treatment options include azole antifungals, such as fluconazole or itraconazole. A medicine called amphotericin B may be used for rapidly worsening or life-threatening infection.

The choice of medicine and treatment length are based on the site and seriousness of the infection, pregnancy, immune health, other medical conditions, and possible medicine interactions. Treatment may continue for months. Bone, joint, or widespread infection often needs longer therapy.

Valley fever meningitis usually requires lifelong antifungal treatment because it commonly returns if treatment is stopped. Rarely, surgery may be needed for a complicated lung cavity or damage involving a bone or joint.

Antifungal medicines can cause side effects and interact with other medicines. Monitoring may include blood tests, symptom reviews, antibody tests, or repeat imaging.

Complications

Most infections do not lead to major complications. When complications occur, they may involve the lungs or spread beyond them.

Possible lung complications include persistent pneumonia, scar-like nodules, or cavities. A cavity may remain stable without causing symptoms, but it can sometimes bleed, become infected with other germs, or rupture into the space around a lung.

Disseminated Valley fever can affect the skin, bones, joints, or nervous system. Bone and joint infection may cause long-term pain or damage. Meningitis is a serious complication and can lead to problems with thinking, hearing, balance, or fluid pressure around the brain.

Serious illness is more likely in people with weakened immunity, but it can occasionally occur in someone without a known risk factor. New symptoms in a different part of the body should be assessed rather than assumed to be part of normal recovery.

Prevention

There is no vaccine against Valley fever, and exposure cannot always be prevented in places where the fungus lives. The spores are too small to see, and they may become airborne without an obvious dust cloud.

You can reduce, but not remove, exposure by avoiding dusty outdoor areas and activities that disturb dry soil. Keeping windows closed during dust storms, using indoor air filtration, wetting soil before digging, and avoiding excavation sites may help.

People at higher risk of severe infection may need to take extra care around construction, landscaping, gardening, or other dusty work in affected regions. A properly fitted respirator may reduce dust inhalation during unavoidable exposure, although it cannot guarantee protection.

Valley fever does not normally spread between people, so isolation and avoiding ordinary contact are not needed.

Living with it and what to expect

An uncomplicated lung infection often improves over weeks, but cough, chest discomfort, joint aches, and especially fatigue may last longer. Recovery is not always steady. You may have better and worse days as your stamina returns.

Follow-up over several months may be recommended even when you are improving. This allows a clinician to check symptoms and, when needed, repeat blood tests or chest imaging. Follow-up is particularly important if your initial illness was severe or you have a higher risk of complications.

A lung nodule or cavity may remain after the active infection has settled. These changes do not always require treatment, but they may need monitoring. Tell future clinicians about your Valley fever history because a nodule can resemble other lung conditions on a scan.

Most people eventually return to their usual activities. Some have longer-lasting fatigue or breathing symptoms, particularly after severe pneumonia. Rehabilitation, paced activity, and treatment of other lung conditions may support recovery.

Disseminated infection has a less predictable course. Treatment may be prolonged, and symptoms can return after medicine is stopped. People with meningitis or continuing immune suppression may need ongoing treatment and specialist follow-up.

When to get medical help

Arrange a routine medical appointment if you develop a persistent cough, fever, chest discomfort, rash, or unusual tiredness after living in or travelling to an area where Valley fever occurs. It is also reasonable to seek review if a presumed respiratory infection is not improving as expected.

Seek prompt medical advice if symptoms are worsening, you cough up blood, you are losing weight without trying, or you develop a new painful skin lesion, swollen joint, or focused bone pain. Contact a clinician promptly for compatible symptoms if you are pregnant or have a weakened immune system.

Get urgent or emergency help for:

Keep planned follow-up appointments even if you feel better. Routine monitoring is different from emergency care and helps confirm that recovery is continuing.

- Severe or rapidly worsening trouble breathing
- Blue, grey, or unusually pale lips or skin
- Confusion, fainting, a seizure, or new weakness
- A severe persistent headache with neck stiffness or repeated vomiting
- Severe chest pain, especially with breathing difficulty

Common questions

Is Valley fever contagious?

Almost never. People usually catch it by breathing in fungal spores from soil or dust. Ordinary contact, coughing, kissing, and sharing a home do not spread it.

How long does Valley fever last?

A mild lung illness may begin improving within weeks, but cough and fatigue can continue for several months. Severe, chronic, or disseminated infection may require treatment and monitoring for much longer.

Can I get Valley fever more than once?

Most people develop lasting immune protection after infection, so a second infection appears to be uncommon. Symptoms can still return if the original infection was not fully controlled, especially after disseminated disease or if immunity becomes weakened.

Will Valley fever show up on a chest X-ray?

It may cause pneumonia, a nodule, or a cavity that can be seen on an X-ray or CT scan. These findings are not unique to Valley fever, so blood, sputum, or tissue testing is usually needed to identify the cause.

Do I always need antifungal medicine?

No. Many mild infections clear without antifungal treatment. Medicine is more likely to be used for severe or prolonged illness, infection outside the lungs, or a higher risk of complications.

Can I exercise while recovering?

Light activity may be reasonable as symptoms improve, but fatigue can persist. Build activity gradually and reduce it if coughing, breathlessness, chest discomfort, or exhaustion increases. Seek medical advice before returning to strenuous activity after a severe infection.

Sources

- Centers for Disease Control and Prevention: About Valley Fever
- Centers for Disease Control and Prevention: Clinical Overview of Valley Fever
- Infectious Diseases Society of America: 2016 Clinical Practice Guideline for the Treatment of Coccidioidomycosis
- National Institutes of Health: Coccidioidomycosis-Adult and Adolescent Opportunistic Infections Guidelines
- California Department of Public Health: Valley Fever
- Galgiani JN, Ampel NM, Blair JE, and colleagues. "2016 Infectious Diseases Society of America Clinical Practice Guideline for the Treatment of Coccidioidomycosis." Clinical Infectious Diseases . 2016;63(6):e112-e146.