CONDITION

Fungal arthritis

Fungal arthritis is a joint infection caused by a fungus.

WHAT IT IS
Fungal infection within a joint

BODY SYSTEM
Joints and bones

MAIN SYMPTOMS
Joint pain, swelling, stiffness, reduced movement

WHAT CAUSES IT
Fungal infection

HOW IT IS DIAGNOSED
Joint fluid culture, fungal tests, sometimes tissue biopsy

MAIN TREATMENT
Antifungal medicine and joint drainage

CAN IT BE CURED?
Sometimes - early, complete treatment improves success

IS IT AN EMERGENCY?
Sometimes - sepsis signs require emergency care

LONG-TERM OUTLOOK
Often treatable, but lasting joint damage can occur

Overview

Fungal arthritis is an infection caused by a fungus growing in or around a joint. It is a type of infectious, or septic, arthritis. Unlike the more common bacterial form, it often develops slowly over weeks or months.

The infection may affect a natural joint, such as a knee, hip, ankle, wrist, or shoulder, or an artificial joint. One joint is usually affected, although some infections involve several.

Possible causes include Candida , particularly after a bloodstream infection, surgery, or medical procedure. Other fungi include Aspergillus , Cryptococcus , Sporothrix , and regional soil fungi such as Coccidioides , Blastomyces , and Histoplasma .

Fungal arthritis is uncommon, but it can damage cartilage and nearby bone. Symptoms may initially be mild, delaying diagnosis. Treatment usually requires extended antifungal therapy

and drainage or surgery to clean the joint.

Symptoms

Symptoms usually affect one joint and may develop gradually. Possible symptoms include:

Fever is not always present, and the skin over the joint may look normal.

An infection around an artificial joint may cause persistent pain, implant loosening, or fluid draining through the skin. A draining channel from the joint to the skin is called a sinus tract.

Some fungi can infect other parts of the body, causing symptoms such as a cough, skin changes, headaches, or nearby bone pain. These do not confirm fungal arthritis but can guide testing.

- Persistent joint pain or tenderness
- Swelling, warmth, or stiffness
- Reduced movement or difficulty using the joint
- Pain when walking or putting weight on it
- Pain that worsens despite usual care
- Fever, chills, tiredness, or night sweats

Causes and risk factors

Fungal arthritis develops when a fungus reaches a joint. It may travel through the bloodstream, enter during surgery or an injection, spread from nearby infected tissue, or enter through a puncture wound involving soil or plants.

Risk is higher in people who have:

Immune-suppressing treatments include chemotherapy, medicines used after an organ transplant, and some treatments for inflammatory conditions. Diabetes, serious long-term illness, and very low white blood cell levels may also increase susceptibility.

Fungal arthritis can occur without an obvious risk factor. Regional fungi may infect otherwise healthy people after spores are inhaled, sometimes causing an unnoticed lung infection before spreading.

The condition does not usually pass directly between people.

- A weakened immune system from illness or treatment

- A recent or long hospital stay
- A central intravenous line
- Recent surgery, joint injection, or joint replacement
- A previous fungal bloodstream infection
- Injected non-prescribed drugs
- An injury involving soil, thorns, or plant material
- Lived in or travelled through an area where certain fungi occur naturally

Diagnosis

Symptoms alone cannot distinguish fungal arthritis from bacterial infection, gout, or non-infectious inflammatory disorders. Testing the joint is therefore important.

A clinician will ask about symptoms, medical history, travel, medicines, operations, and exposure to soil or plants. They will examine the joint and surrounding skin.

The central test is joint aspiration. A sterile needle removes synovial fluid from the joint. The sample is checked for cells and crystals and sent for bacterial and fungal cultures.

Fungi may grow slowly, and one sample can be negative despite infection. The laboratory should know when fungal infection is suspected so cultures can be kept for long enough.

Further tests may include:

A biopsy may be needed if fluid tests are negative or there is too little fluid. Finding a fungus in joint fluid or tissue alongside compatible symptoms usually confirms the diagnosis, although doctors also consider possible sample contamination.

- Blood cultures and fungus-specific blood or antigen tests
- X-rays for joint or bone damage
- Ultrasound to find fluid and guide aspiration
- MRI to assess cartilage, bone, and surrounding tissue
- Synovial biopsy to collect tissue from the joint lining

Treatment and management

Treatment depends on the fungus, affected joint, immune system, and whether an artificial joint is present. Care often involves infectious disease and joint surgery specialists.

Antifungal medicines may be taken by mouth or given into a vein. Laboratory testing can help identify effective medicines. Treatment commonly lasts longer than for bacterial arthritis because fungi can be difficult to clear from joints and nearby bone.

Do not stop antifungal medicine early unless the prescribing team tells you to. Symptoms may improve before the infection has cleared. Blood tests may be needed to monitor liver or kidney function, medicine interactions, and other unwanted effects.

Removing infected fluid reduces the amount of fungus in the joint. Drainage may use a needle, keyhole surgery, or open surgery. Damaged or infected tissue may be removed in a procedure called debridement.

Artificial-joint infection is more complex because fungi can attach to the implant and form a protective biofilm. Treatment may involve removing the implant, giving antifungal therapy, and inserting a new implant later. If surgery is not possible, long-term medicine may be considered.

Pain relief, temporary joint support, and physiotherapy may help. Movement plans should protect the joint during active infection while limiting later stiffness and weakness.

Complications

Fungal infection can damage cartilage, bone, tendons, and surrounding tissue, causing lasting pain, stiffness, weakness, or reduced movement.

Other complications include:

People with severely weakened immune systems may develop infection in several organs. Bloodstream infection can cause sepsis, the body's dangerous response to infection. Prompt, complete treatment reduces these risks, but recovery may take time.

- Infection in nearby bone, called osteomyelitis
- Infection entering or continuing in the bloodstream
- Infection returning after treatment
- Loosening or failure of an artificial joint
- Loss of function requiring reconstructive surgery

Prevention

Fungal arthritis cannot always be prevented because some fungi live naturally in the environment.

Hospitals use sterile techniques during joint injections, surgery, intravenous line care, and joint replacement. Follow instructions for caring for an intravenous line or surgical wound, and report increasing redness, drainage, or pain.

Take immune-suppressing medicines only as directed. Do not change them yourself to try to prevent infection. If your immune system is significantly weakened, ask your medical team about precautions related to work, travel, and environmental exposure.

Wear gloves and suitable footwear when handling thorny plants, soil, or materials that could puncture the skin. Clean minor wounds and seek care for deep punctures, especially if pain or swelling persists.

Living with it and what to expect

Treatment and recovery often continue for months. The course depends on the fungus, joint damage, general health, and whether surgery is needed.

Pain and swelling may improve before cultures, scans, or blood tests show that treatment is complete. Follow-up appointments check symptoms, joint function, medicine effects, and signs of ongoing infection. Repeat fluid samples or imaging may be needed.

After infection is controlled, stiffness and weakness can persist. Physiotherapy can gradually rebuild movement, strength, and balance. Some people return to previous activities, while others need to adjust work, exercise, or mobility because of permanent joint damage.

Artificial-joint infections may require several operations and longer rehabilitation. If an implant cannot be removed, ongoing antifungal treatment may suppress rather than eliminate the infection.

New swelling, drainage, or increasing pain after improvement should be assessed and not ignored.

When to get medical help

Arrange prompt medical assessment for a persistently painful, swollen, warm, or difficult-to-move joint, particularly if you have an artificial joint, weakened immune system, previous fungal infection, or recent joint surgery.

Contact your treatment team promptly if:

Attend routine follow-up even when you feel better so the team can confirm that treatment remains effective and safe.

Seek emergency care for severe or rapidly worsening joint pain with fever, confusion, faintness, trouble breathing, a very fast heartbeat, or cold and blotchy skin. These may be signs of sepsis or another serious problem. Sudden inability to bear weight or use the joint also requires urgent assessment.

- Joint symptoms worsen or return
- Fluid drains from the joint or surgical wound
- You develop a new fever
- You cannot take or keep down your medicine
- You notice possible medicine side effects
- A dose is missed or treatment is interrupted

Common questions

Is fungal arthritis contagious?

Usually not. Most fungi reach the joint from the environment, another part of the body, a bloodstream infection, or a medical procedure. The condition is not generally spread through ordinary contact.

Can fungal arthritis be cured?

Sometimes. Treatment can clear many infections, especially when the fungus is identified and infected fluid or tissue can be removed. Cure may be harder if an artificial joint remains, the immune system is severely weakened, or nearby bone is infected.

How long does treatment take?

Treatment commonly lasts for months. The duration depends on the fungus, response to treatment, surgery, bone involvement, and immune health.

Why did my first joint-fluid test come back negative?

Fungi may be present in small numbers and can take longer than bacteria to grow. Sampling can also miss an infection. Another aspiration, longer fungal cultures, or a tissue biopsy may be needed.

Is fungal arthritis the same as athlete's foot spreading to a joint?

No. Athlete's foot is usually a surface infection of the outer skin. Fungal arthritis is a deeper infection inside a joint and generally develops through a different route.

Will I need surgery?

Not everyone does, but many people need drainage or removal of infected tissue. Surgery is more likely if medicine cannot clear the joint, tissue is damaged, or an artificial joint is infected.

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