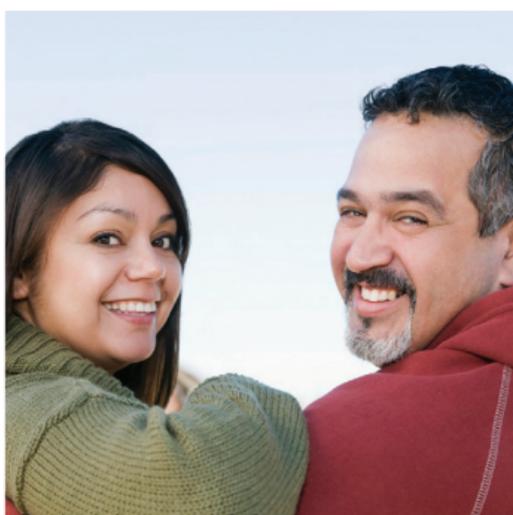


Psoriatic Arthritis



**Causes, diagnosis
and treatments**



**Arthritis
Foundation**SM

What Is Psoriatic Arthritis?

Psoriatic arthritis is a serious joint condition that most often affects people who have the chronic skin disease psoriasis.

Many people who have psoriasis are not aware of the risk of psoriatic arthritis. People with only mild psoriasis, or even those who simply have relatives with psoriasis, can develop psoriatic arthritis.

If you have psoriasis and experience joint pain or any of the other symptoms discussed in this booklet, talk to a doctor as soon as possible.

About Psoriasis

As many as 7.5 million Americans have psoriasis, a chronic (long-lasting) autoimmune disease.

In psoriasis, a person's immune system sends out faulty signals that speed up the growth cycle of skin cells.

The most common symptom of psoriasis is itchy, painful red patches on the skin and a silvery white buildup of dead skin cells.

Although psoriasis most commonly appears on the knees, elbows and scalp, it can occur anywhere on the body, including the fingernails and toenails.

Psoriasis is not contagious. However it's more than just a skin disease. People with psoriasis are more likely to develop other serious health conditions, such as arthritis, diabetes, heart disease and depression.

About Psoriatic Arthritis

Approximately 30 percent of people with psoriasis

Psoriatic arthritis can damage joints and other body systems. However, its effects often can be reduced if it's diagnosed and treated early.

also develop psoriatic arthritis, a chronic autoimmune disease that affects the joints.

The most common symptoms of psoriatic arthritis are:

- Pain and swelling in one or more joints, often the wrists, knees, ankles and/or joints at the ends of the fingers or toes
- Joints that are red, warm to the touch, or tender (painfully sensitive) and stiff
- Swollen fingers and/or toes that have a sausage-like appearance
- Pain in and around the feet and ankles, especially at the back of the heel or the sole of the foot
- Pain in the lower back, above the tailbone
- Changes to the fingernails or toenails, such as small pits in the nails, or the nail separating from the nail bed

Symptoms of psoriatic arthritis can be similar to other kinds of arthritis. For an accurate diagnosis, it's important to see a medical provider who specializes in rheumatology.

Who Gets Psoriatic Arthritis?

Most people who develop psoriatic arthritis already have symptoms of psoriasis on their skin. Sometimes, however, psoriatic arthritis develops before the skin condition or appears at the same time.

Psoriasis and psoriatic arthritis both run in families. People who have relatives with psoriasis should watch for signs of psoriatic arthritis, even if they don't have psoriasis themselves.

- Psoriatic arthritis affects men and women equally.
- It usually develops between the ages of 30 and 55.
- Both psoriasis and psoriatic arthritis are more common among whites than among people of African or Asian descent.
- People whose psoriasis symptoms include changes in fingernails and toenails appear to be more likely to develop psoriatic arthritis.

What Causes Psoriatic Arthritis?

The cause of psoriatic arthritis is not fully known. However, scientists continue to study three key areas:

- **Immune system problems.** In psoriatic arthritis and other types of inflammatory arthritis, the immune system mistakenly attacks the lining of the joints, causing pain and inflammation.
- **Hereditary factors.** Scientists have found certain genes that may indicate if a person is more likely to develop psoriasis or psoriatic arthritis.
- **Environmental factors.** Scientists think that elements in the environment, or an event such as a trauma or virus, may trigger psoriasis and/or psoriatic arthritis in people who have a genetic predisposition; however, more study is needed to determine if this is true.

What Are the Effects Of Psoriatic Arthritis?

Persistent warmth and swelling of the membrane lining the joint, called the synovium, can lead to joint damage and deformities. Proper treatment can help prevent or reduce these effects. Most people with psoriatic arthritis lead normal lives.

Psoriatic arthritis can affect any joint, but some joints are affected more than others. Knees, wrists, fingers and toes are the most commonly affected joints.

Early on, arthritis is more likely to occur unevenly in joints on both sides of the body, such as in your right hand and your left knee.

As the disease progresses, symptoms are more likely to occur symmetrically; for example, both knees may be affected.

Some people have swelling at the end joints of the fingers or toes; in others the entire finger or toe may develop painful, sausage-like swelling.

Psoriatic arthritis can also cause pain at the points where tendons and ligaments attach to your bones – especially at the back of the heel (the Achilles tendon) or in the sole of the foot.

Approximately five percent of people with psoriatic arthritis have arthritis only in the spine. This form of psoriatic arthritis, called spondylitis, can lead to pain, stiffness and restricted movement in the lower back, buttock and neck regions.

Some people with psoriatic arthritis have symptoms both in the spine and in other joints.

Psoriatic Arthritis Treatments

How Is Psoriatic Arthritis Diagnosed?

If you have symptoms of psoriatic arthritis, your primary care provider should refer you to a rheumatologist – a doctor specializing in diseases of the joints, muscles and bones.

The rheumatologist will ask about your symptoms and perform a physical examination to see if you have:

- Tenderness, swelling, painful movement or inability to move joints fully
- Evidence of psoriasis on the skin or changes in your fingernails and toenails

Your doctor also may perform some or all of the following tests:

- X-ray, MRI or ultrasound to look for changes in your bones, joint tissue and cartilage
- Blood tests to rule out other diseases, such as rheumatoid arthritis
- Joint fluid tests to rule out gout or infectious arthritis

Treating Two Diseases

Since most people with psoriatic arthritis also have psoriasis, care needs to be coordinated among your primary care doctor, dermatologist and rheumatologist.

Some treatments work on symptoms of both psoriasis and psoriatic arthritis; others work only on skin psoriasis or only on arthritis.

What works for you may be different from what

Early and accurate diagnosis is important. The sooner psoriatic arthritis is diagnosed and treated, the less likely it is to cause permanent damage or disability. Once joint damage is done, it can't be reversed.

works for someone else with psoriasis and/or psoriatic arthritis. Take all medications as directed by your doctor and pharmacist.

You may experience a bad reaction when you take two or more medications together. Tell all your providers about any prescription and over-the-counter (OTC) medications and/or herbal or dietary supplements you are taking for these or any other conditions.

Treating Psoriasis

There are many OTC and prescription treatments for skin psoriasis. If you have psoriasis, talk to a dermatologist about the following treatment options:

- Topical medications applied directly to the skin
- Treatments using sunlight or specialized ultraviolet light
- Medications taken internally that target the skin
- Medications taken internally that target the immune system

The National Psoriasis Foundation maintains up-to-date psoriasis treatment guides as well as a database of dermatologists at www.psoriasis.org.

Goals for Treating Psoriatic Arthritis

If left untreated, the inflammation that accompanies psoriatic arthritis can lead to joint damage. Controlling inflammation may slow down or prevent joint damage.

Treatment of psoriatic arthritis focuses on multiple goals:

- Reducing inflammation
- Relieving pain
- Retaining joint function

Developing Your Psoriatic Arthritis Treatment Plan

The first issues you will face after your psoriatic arthritis diagnosis are treatment decisions. To help make these choices, you need to understand the goals of treatment and how drugs are used to meet these goals.

Why Is It Important to See Your Doctor Regularly?

You and your doctor each play a role in making sure your treatment is as safe as possible. Once treatment starts, it's monitored with regular office visits and blood tests. If disease activity is high, monitoring may occur monthly. Someone with mild psoriatic arthritis might be monitored every three months.

Tips for Talking to Your Doctor

- **Keep all appointments.** Even if you're feeling well, it's important to continue to see your doctor.
- **Side effects matter.** Always mention medication side effects you are experiencing to your doctor. If the side effects outweigh the medication's benefits, it might be time to talk to your doctor about changing your regimen.

- **Follow up on your lab work.** Just because you haven't heard from your doctor doesn't mean that you shouldn't know what's in your lab results. Your first evaluation will establish a baseline – levels against which future tests will be measured. It's important for you to monitor your levels.
- **Follow directions.** Take your medicine as prescribed. Skipping doses – even just one – can cause your disease to flare.
- **Ask first.** Before you start a new exercise routine, drug or vitamin regimen, talk to your doctor. Certain drugs and supplements can interact in unhealthy ways.

Drugs That Control Psoriatic Arthritis

Early, aggressive treatment of psoriatic arthritis is achieved with a category of drugs called disease-modifying antirheumatic drugs (DMARDs). This category includes:

- Nonbiologic or “traditional” DMARDs that have broad immune-suppressing effects
- Biologic response modifiers or biologics that target specific cytokines – proteins in the blood that cause inflammation – or block blood cells that help release cytokines
- Targeted DMARDs that affect different inflammatory pathways than biologics

DMARDs, biologics and targeted DMARDs all reduce disease activity, slow the progression of psoriatic arthritis and prevent or slow joint damage. However, biologics and targeted DMARDs work faster than traditional DMARDs .

Before taking any DMARD, you should receive blood tests to rule out liver problems – some medications can adversely affect the liver. A flu vaccine may be recommended as well. Before

taking biologics, you may have a skin test and chest X-ray to rule out tuberculosis.

Nonbiologic DMARDs

Methotrexate was originally developed as a cancer treatment. It has long been a first-line treatment for many types of arthritis, including psoriatic arthritis. However, clinical trial data regarding its effectiveness for psoriatic arthritis has been inconclusive. It has been shown to improve psoriasis skin symptoms. Methotrexate is given weekly, either orally as a liquid or pill, or by injection.

Side effects may include nausea, vomiting, mouth sores, diarrhea, low white blood cell count, liver function abnormalities and pneumonia. Methotrexate can cause birth defects or miscarriage if taken during pregnancy, so women of childbearing age should use an effective means of birth control while taking the drug. You should not drink alcohol if you take methotrexate.

Leflunomide has been shown in studies to be comparable to methotrexate for relieving symptoms of psoriatic arthritis.

Side effects may include nausea, diarrhea, skin rash, liver toxicity, high blood pressure, headache and hair loss. Leflunomide can cause birth defects. Men and women should use effective birth control while on leflunomide and for three months after discontinuing it. The pill is taken once a day.

Sulfasalazine may relieve the joint pain and swelling associated with psoriatic arthritis according to clinical studies. However, people who are allergic to medications containing sulfa should not take sulfasalazine. Side effects may include gastrointestinal problems, loss of appetite, skin rash, sunlight sensitivity, dizziness, headache, liver abnormalities, lowered blood count and low sperm count. The pill is taken twice a day.

Cyclosporine has been used to treat skin psoriasis and psoriatic arthritis. Side effects may include nausea, vomiting, diarrhea, gum inflammation, high blood pressure, itching, excessive hair growth, liver function abnormalities and kidney abnormalities. Cyclosporine may cause birth defects, so women of childbearing age should use an effective means of birth control while on this medication. The pill or liquid is taken twice a day.

Azathioprine suppresses the immune system and may relieve joint pain, stiffness and swelling in psoriatic arthritis. Side effects may include stomach irritation, inflammation of the pancreas, rash and low blood count. Azathioprine may cause birth defects, so women of childbearing age should use an effective means of birth control while on this medication. The tablet is taken once or twice a day.

Biologics and Your Immune System

These medications suppress the immune system and may make you more vulnerable to infections.

- Contact your doctor if you develop signs of infection (fever, sore throat, chills, cough) while on a biologic.
- You should also be tested for tuberculosis (TB) infection before starting a biologic, and you should not receive any live virus vaccines while taking one.
- Tell your doctor if you are pregnant, nursing or plan to become pregnant before taking a biologic.



Biologics

Biologics are used if moderate to severe disease activity can't be controlled with non-biologic DMARDs. Emerging evidence suggests that biologics may be appropriate as a first-line treatment for some patients with psoriatic arthritis. They may be used alone but more often are used with methotrexate and other DMARDs. Two biologics shouldn't be used together.

Because biologics suppress the immune system, they may raise the risk of infection. If the drug is injected, you may also experience pain and swelling at the injection site. If it's infused, you may have an infusion reaction (difficulty breathing, rapid or weak pulse, nausea, vomiting). Another side effect is headache.

What Biologics Treat Psoriatic Arthritis?

Biologics target specific parts of the immune system to help block or slow inflammation.

Each biologic plays a different role in stopping the inflammatory process. Two categories used to treat psoriatic arthritis include tumor necrosis factor (TNF) and interleukin (IL) inhibitors. These drugs work by reducing signals sent by TNF or IL-12 and IL-23 cytokines. Cytokines are

substances secreted by specific cells of the immune system that carry signals locally between cells and have an effect on other cells.

Six biologics are currently approved by the Food and Drug Administration (FDA) to treat psoriatic arthritis – adalimumab, certolizumab pegol, etanercept, golimumab, infliximab and ustekinumab. Five are delivered by injection. One is delivered by infusion in a doctor's office.

Targeted DMARDs

Apremilast is approved for the treatment of plaque psoriasis and psoriatic arthritis. This drug blocks selective phosphodiesterase 4 (PDE4), an enzyme involved in inflammation. Common side effects include diarrhea, headache and nausea. Apremilast also may cause unintentional weight loss and increase the risk of new or worsening depression and other mood changes. The pill is taken twice a day.

Drugs That Treat Psoriatic Arthritis Symptoms

Nonsteroidal Anti-Inflammatory Drugs

(NSAIDs) can help reduce joint pain and swelling. They work by blocking the production of substances called prostaglandins at the site of inflammation.

- NSAIDs are available over the counter (OTC) and by prescription. OTC NSAIDs include aspirin, ibuprofen and naproxen sodium and are available in lower strengths than prescription versions. The OTC doses may control pain but typically are not strong enough to reduce inflammation.
- NSAIDs may interact with other medications; talk with your doctor about whether it is safe to take OTC medications in addition to those prescribed for you.

- Long-term use of NSAIDs can cause stomach problems, a decline in kidney function and increase the risk of heart attack or stroke. The prescription medication *celecoxib*, a type of NSAID called a COX-2 selective inhibitor, was designed to be safer for the stomach but may pose an increased risk of heart attack and stroke.

Talk to your doctor about the risks and to decide what medications are right for you.

Corticosteroids – drugs such as prednisone and methylprednisolone – are man-made versions of hormones that occur in the body. These drugs can quickly reduce high levels of inflammation and may be used as a cream, taken as pills or injected into a joint or vein. They work to reduce swelling, stiffness, tenderness and pain related to joint inflammation. However, they have less potential to impact the course of psoriatic arthritis.



When Is Surgery Considered?

Most people with psoriatic arthritis will never need joint replacement surgery. However, if your joints are severely damaged by the disease, or if other treatments don't lessen the pain, your doctor may recommend surgery to reduce pain and improve function.

Doctors use them in a few different ways:

- **Short-term oral therapy.** At high doses, corticosteroid pills can help reduce inflammation and relieve symptoms in a person with new-onset, severe psoriatic arthritis. A moderate dose of corticosteroids may be prescribed at the start of DMARD therapy to control symptoms. Once DMARD therapy begins working, the corticosteroid dose is gradually lowered, then the drug eventually is stopped.
- **Injection during a flare.** If a single joint is flaring, the injection may be administered directly into the joint. In these cases, the existing psoriatic arthritis treatment regimen isn't usually changed.
- **Low-dose, ongoing oral therapy.** A tiny daily dose of corticosteroid in pill form may be combined with one or more DMARDs. However, most rheumatologists try to avoid ongoing treatment with corticosteroids if possible.

Corticosteroids have many side effects, some potentially serious. For example, they can cause thinning of the bones (osteoporosis) and can increase the risk of serious infection. Other side effects include weight gain, facial swelling known as “moon face” and thin skin/easy bruising, among others. To reduce the risk of side effects, the lowest possible dose of corticosteroid should be used for the shortest period of time.

Living with Psoriatic Arthritis

The Benefits of Self-management

One of the best ways to cope with a chronic disease is to take a proactive role in your own treatment and, by extension, your own life – a process called self-management.

First, make a conscious decision to maintain a positive attitude and lead an overall healthy lifestyle by eating well, engaging in physical activity and finding a way to work through any emotional issues surrounding your diagnosis. Learn all you can about your condition from your doctor or health care professional – and from trusted sources such as the Arthritis Foundation (www.arthritis.org).

Maintain an open line of communication with your physician and keep track of symptoms, medication regimens, side effects, pain levels, etc. Consider seeing an occupational therapist, who can teach you how to reduce strain on your joints and provide assistive devices such as braces, splints and canes to give your joints a rest. Finally, develop a network of friends, family members and even co-workers you can count on for emotional support.

Lifestyle Changes That Can Help Manage Psoriatic Arthritis

Rest and physical activity. Rest is important when psoriatic arthritis is active and your joints feel painful, swollen or stiff. Rest helps reduce inflammation and fights fatigue that can come with a flare. When disease activity is low, physical activity becomes important. Your exercise program should emphasize low-impact aerobic conditioning, muscle strengthening and flexibility. A physical therapist can help you design – and stick to – an exercise program that works for you.

Nutrition. Eat a balanced diet, which, according to the U.S. Food and Drug Administration, should

be centered on plant-based foods. Approximately two-thirds of your diet should come from fruits, vegetables and whole grains. The other third should include fat-free or low-fat dairy products and lean proteins. Get details at www.choosemyplate.gov.

Stress management. Stress has been shown to have a major impact on psoriasis and is linked to inflammation. Some ways to relieve stress include:

- Regular exercise
- Practices like yoga, tai chi and meditation
- Spending time with family and friends

Other Ways to Manage Psoriatic Arthritis

Tackling the pain that comes with psoriatic arthritis may seem impossible when you're first diagnosed. Your doctor will likely prescribe medication, but there are other ways to control pain – and improve your daily life. Try one or more of these:

- **Hot and cold treatments.** Heat improves blood circulation, helping to reduce joint stiffness and muscle spasms. Cold helps reduce swelling by constricting blood vessels.
- **Relaxation techniques.** Train your muscles to relax and slow down your thoughts with techniques such as deep breathing, guided imagery and visualization.
- **Massage.** Research shows massage can help ease arthritis pain, improve joint function and ease stress and anxiety.
- **Topical treatments.** Applied directly to the skin over the painful muscle or joint, these may contain salicylates or capsaicin, which decrease sensitivity to pain.
- **Acupuncture.** Acupuncture is the practice of inserting fine needles into the body along special points called “meridians” to relieve pain.



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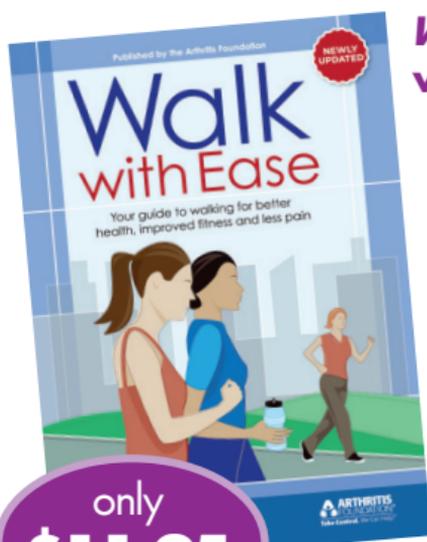


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