

# Rheumatoid Arthritis



**Understanding Symptoms,  
Diagnosis and Treatments**

# About Rheumatoid Arthritis

## What Is Rheumatoid Arthritis?

Arthritis is a general term for inflammation of the joints. There are more than 100 different types of arthritis. Rheumatoid arthritis, or RA, is a chronic (long-term) autoimmune disease involving inflammation in joints and other parts of the body. While there is no cure for RA at present, the search is ongoing and many effective treatments are currently available.

Inflammation in RA causes pain, stiffness and swelling in and around joints. It can also damage joints. In the early stages, however, you may not initially see redness or swelling, but you may experience tenderness and pain. X-rays are needed to identify evidence of joint damage. Prompt diagnosis and proper treatment are key to preventing permanent joint damage from RA.

## What Causes RA?

The cause of RA is not yet fully understood, although doctors do know that a disturbance in the immune system plays a leading role in the inflammation and joint damage that occurs. No one knows for sure why the immune system goes awry, but there is strong scientific evidence that both genetic and environmental factors are involved.

### Environmental Factors and RA

Possible factors that may trigger the autoimmune response include:

- Smoking
- Infections
- Hormones

Damage to joints can occur early. That's why doctors recommend early diagnosis and aggressive treatment to control RA.

## Who Gets RA?

Anyone of any sex or ethnic group can get RA, although it most often strikes adults between the ages of 30 and 60. An estimated 1.5 million adults in the United States have RA. It is the most common form of autoimmune arthritis. Women are two to three times more likely to get RA than men.

## What Happens in RA?

In a healthy person, the body's immune system detects invaders, such as bacteria and viruses, and sends chemicals to fight them. The body sends one set of chemicals to start the attack and another to stop it. That is what's called the immune response, and it is normally well controlled.

RA is an autoimmune disease, which means the immune system mistakes the body's cells for foreign invaders and repeatedly attacks healthy tissues. White blood cells are sent to the synovium – the tissue that lines the insides of the joints and produces synovial fluid, a clear substance that lubricates the joint and helps it move smoothly. The inflammatory process causes the synovium to thicken, making the joint feel puffy and swollen.

If inflammation goes unchecked, it can damage cartilage, the elastic tissue that covers the ends of bones in a joint, as well as the bones themselves. Over time, there is loss of cartilage, and the joint spacing between bones can become smaller. Joints can become loose, unstable, painful and

## Is It Rheumatoid Arthritis?

These signs and symptoms are clues to RA:

- Joint pain, tenderness, swelling or stiffness for six weeks or longer
- Morning stiffness for 30 minutes or longer
- More than one joint is affected
- Small joints (wrists, certain joints of the hands and feet) are affected
- The same joints on both sides of the body are affected
- Fatigue
- Low-grade fever
- Anemia
- Blood tests show signs of inflammation
- Blood tests show antibodies linked to RA

Your primary care physician may suspect RA. If so, you should be referred to a rheumatologist – a specialist with specific training and skills to diagnose and treat RA.

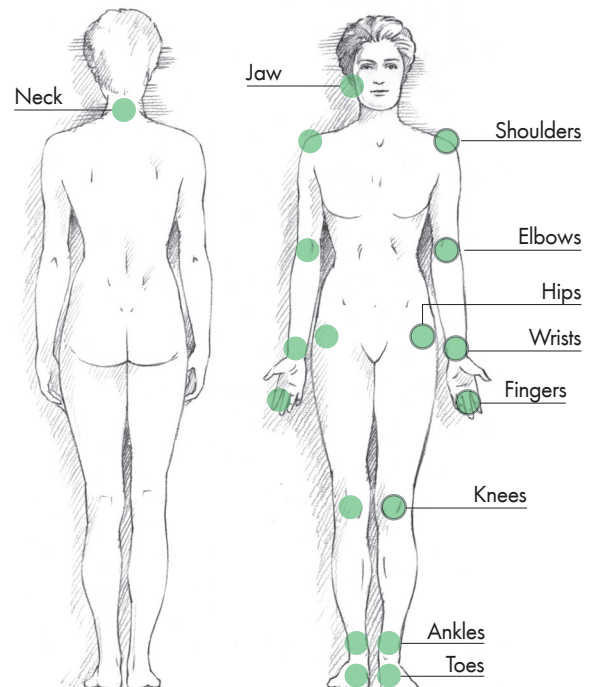
lose their mobility. Joint deformity can occur, too. Joint damage cannot be reversed.

## RA Symptoms and Effects

RA most commonly affects the joints of the hands, feet, wrists, elbows, knees and ankles. Along with pain, many people experience fatigue, loss of appetite and a low-grade fever. Joint stiffness is usually worse in the morning and may last 30 minutes or longer. The symptoms and effects of RA may come and go. A period of high disease activity is called a flare. Ongoing high levels of inflammation can cause problems throughout the body. Because RA can affect body systems, such as the cardiovascular or respiratory systems, it is called a systemic disease. Here are some examples

of ways RA can affect the body beyond the joint:

- **Eyes:** Dryness, pain, redness and sensitivity to light. Severe inflammation in the eyes can lead to impaired vision
- **Mouth:** Dryness and gum irritation or infection
- **Skin:** Rheumatoid nodules – small lumps under the skin over bony areas
- **Lungs:** Inflammation and scarring can occur in the lungs, leading to shortness of breath
- **Blood Vessels:** Inflammation of blood vessels can lead to damage in the nerves, skin and other organs
- **Blood:** Anemia, a lower than normal number of red blood cells



Some of the joints that may be affected by RA

# Rheumatoid Arthritis Diagnosis

## Diagnosing RA

Getting a firm RA diagnosis is not always easy. In its early stages, RA may resemble other forms of inflammatory arthritis. No single test can confirm RA. An experienced arthritis specialist (rheumatologist) will consider many factors, such as the following:

- **Medical history.** Your doctor will ask about your personal and family medical history; recent and current symptoms (pain, tenderness, stiffness, difficulty moving) – when they started, if they come and go, how severe they are and if anything makes them better or worse. The number and pattern of joints involved can also indicate RA; the disease tends to affect the same joint on both sides of the body. However, it is possible for the disease to develop in a single joint. RA involves large and small joints, but typically starts in small joints, such as those in the hands and feet.
- **Physical exam.** Your doctor will examine each joint, looking for tenderness, swelling, warmth and painful or limited movement. An overall physical exam may reveal other signs, such as rheumatoid nodules or a low-grade fever.
- **Blood tests.** Blood will be drawn for two types of tests. One measures inflammation levels. The other looks for biomarkers such as antibodies (blood proteins) linked with RA.
  - **Inflammation** Erythrocyte sedimentation rate (ESR, or “sed rate”) and C-reactive protein (CRP) level are markers of inflammation. A high ESR or CRP is not specific to RA, but when combined with other clues, such as antibodies, helps make the RA diagnosis.



- **Antibodies** Rheumatoid factor (RF) is an antibody found in about 80 percent of people with RA during the course of their disease. Because rheumatoid factor can occur in other inflammatory diseases, it’s not a sure sign of having RA. But a different antibody – anti-cyclic citrullinated peptide (anti-CCP) – occurs primarily in patients with RA. That makes a positive anti-CCP test a stronger clue to RA. But anti-CCP antibodies are found in only 60 to 70 percent of people with RA and can exist even before symptoms start.
- **Imaging tests.** An X-ray, ultrasound or magnetic resonance imaging (MRI) scan may be done to look for joint damage, such as erosions, a loss of bone within the joint and narrowing of joint space. Their absence doesn’t rule out RA, however. It may mean that RA is in an early stage and hasn’t yet damaged the joints. Early images can be compared to ones taken later to help monitor how well treatment is working.

# Rheumatoid Arthritis Treatments

## Developing a Treatment Plan

Once diagnosed with RA, you may feel uncertain about what's to come. That's understandable. But the good news is there are many effective therapies that help many patients achieve remission, which is when disease activity or inflammation is nearly or fully stopped. Also, developments in RA treatment are moving at a rapid pace. Some researchers are seeking new, more effective and safer treatments for RA. Others are studying ways to prevent and even cure it.

Learn all you can about the disease, treatment options and what to expect over time so that you are able to take control of your RA. This is called self-management, and you can learn more about it on page 14.

## Setting Treatment Goals and Strategies

Some important issues you will face after your RA diagnosis include treatment decisions. To help make these choices, you need to understand the goals of RA treatment and how medications are used to meet these goals.

The goals of RA treatment are to:

- Stop inflammation (put disease in remission)
- Relieve symptoms
- Prevent joint and organ damage
- Improve physical function and overall well-being
- Reduce long-term complications

To meet these goals, your doctor will follow these strategies:

- **Early, aggressive treatment.** The first strategy is to reduce or stop inflammation as quickly as

## Window of Opportunity

Because RA can cause joint damage even at an early stage, initial treatment focuses on quickly controlling disease activity. People who start treatment as soon as possible after RA symptoms start have the best chance of avoiding permanent joint damage and achieving remission.

possible – the earlier, the better. This is different from the way RA was treated 20 years ago. Today, doctors don't wait to see evidence of joint damage before starting drugs that can halt disease activity.

- **Targeting remission.** Doctors refer to inflammation in RA as disease activity, and the ultimate goal is to stop it and achieve remission, meaning minimal or no signs or symptoms of active inflammation. One strategy to achieve this goal is called “treat to target.”
- **Tight control.** Getting disease activity to a low level and keeping it there is what is called having “tight control of RA.” Research shows that tight control can prevent or slow the pace of joint damage.

## Why is it Important to See Your Doctor Regularly?

You and your doctor play a role in making sure your RA treatment is as effective and safe as possible. Once treatment starts, your doctor will monitor your disease activity and possible side effects from your medications. The plan will be to get your disease activity as low as possible. Then he or she will use blood tests, imaging tests, joint exams and your symptoms to monitor your progress.

If disease activity starts out high, monitoring may occur monthly. Treatment for mild RA or



stable, well-controlled RA may be monitored every three to six months. It's important to keep all appointments.

Each person may respond differently to certain medications. So it's important to tell your doctor how the medicines are affecting you. It may be helpful to keep a journal to make notes each day so you can share the information with your doctor at every visit.

Sometimes RA drugs work well for a while then stop being as effective. It's not understood why this happens. Frequent monitoring lets your doctor know if treatment needs to change, perhaps adjusting dosages, switching to other medications or adding new ones.

### What to Expect at an Office Visit?

Your doctor will perform a physical exam to check your joints for swelling and tenderness. He or she will also check your range of motion, reflexes and muscle strength. Then together, you will discuss how RA is affecting your daily function and well-being based on a questionnaire you complete, known as a health assessment questionnaire. Blood tests help your doctor determine the level of inflammation as well as liver and kidney function. Imaging tests help determine if there is joint damage, and whether it is worsening. You play an important role in making an office visit as useful as possible. Make sure to take notes during the discussions, ask questions and share your concerns with your doctor. Also make time to talk about other ways to manage your disease such as being active, reducing stress and maintaining or achieving a healthy weight.

### How Are Drugs Used to Treat RA?

There are several medications to treat RA. That's a good thing because what works for one person may not work for another. Your doctor will

recommend a treatment plan based on your disease status and unique risk factors, best evidence and practical issues, such as your insurance coverage and preferences. A thorough discussion should lead to a shared decision about the best treatment approach for you.

Early aggressive treatment to bring RA disease activity under control is key preventing or slow joint damage. Drugs used to treat RA fall into two main groups:

- **Drugs that relieve symptoms.** Nonsteroidal anti-inflammatory drugs (NSAIDs) and analgesics (pain relievers) help relieve symptoms but cannot lower disease activity or prevent joint damage. These medications are available over-the-counter or with a prescription. The prescription-strength versions are stronger and require monitoring by a physician. These medicines can be taken orally or applied in a patch or cream directly to a swollen joint. Be sure to tell your doctor about over-the-counter pain relievers and anti-inflammatory medicines you are taking.
- **Drugs that control disease activity.** Disease-modifying antirheumatic drugs (DMARDs) are used to control disease activity. Traditional DMARDs stop the disease in a variety of ways, many of them not completely understood. Biologics, a subset of DMARDs, are genetically engineered proteins made from genes or from a living organism. They target proteins in the blood (cytokines) that cause inflammation or blood cells that help release cytokines. The newest DMARD, a JAK inhibitor, blocks janus kinase pathways that play a role in the action of cytokines. DMARDs can be taken orally, be self-injected or infused in a vein in a doctor's office. Another class of drugs called corticosteroids work quickly to reduce inflammation. They can affect the course of RA but toxicity of long-term

high doses limits their use. Corticosteroids can be taken orally or be injected into a joint in a doctor's office.

## How Do RA Medicines Affect The Body?


Each person with RA is different, and your medicines may affect you in different ways. Here are some of the more common or important ways the major categories of RA drugs may affect you:

### DMARDs and Biologics

These potent medicines suppress the immune system and increase the risk of serious infections and possibly certain cancers. The elderly are at greatest risk of infections and cancer. Before taking any DMARD or biologic, you should get a blood test to rule out hepatitis, tuberculosis (TB) and other infectious diseases that may be present without symptoms. Drinking alcohol while taking some DMARDs may increase the risk of liver problems. Many of these medicines should not be taken by women or men if they're trying to conceive and are not safe in pregnancy or while nursing. You may also need a complete eye exam and have your vision monitored annually while on some DMARDs.

### Corticosteroids

These medicines can have serious side effects, especially if they are taken at high doses for prolonged periods of time. They can cause thinning of the bones (osteoporosis) and increased risk of fractures. Corticosteroids also can increase the risk of serious infection and cause weight gain.

 Get detailed information about the medications used to treat RA, and use the MyMedtracker online tool to help you track your medications and questions you have for your doctor at [arthritis.org/drugguide](http://arthritis.org/drugguide).

## When Is Surgery Considered?

Surgery may never be needed, but it can be an important option for people with permanent damage that limits daily function, mobility and independence.

Joint replacement surgery can relieve pain and restore function in joints badly damaged by RA. The procedure involves replacing damaged parts of a joint with metal and plastic parts. Hip and knee replacements are most common. However, ankles, shoulders, wrists, elbows, and other joints may be considered for replacement.

### NSAIDs and Analgesics

NSAID side effects can include ulcers or stomach bleeding. They may also cause heart and kidney problems. It's important not to exceed 3,000 mg of acetaminophen per day, as high doses of acetaminophen can lead to liver damage.

Your doctor can help you weigh medication risks and benefits. For most people, the dangers of untreated RA far outweigh the risks of the drugs used to treat it. All medicines have potential side effects, but not everyone experiences side effects. Some side effects are rare or uncommon. Side effects may go away if you change the dosage or frequency of the drug or switch to a different one. However, never change or stop taking your medicine without talking to your doctor.

## What If Medications Stop Working?

With the treat-to-target strategy, doctors monitor and adjust therapy, every three to six months until joints are no longer painful or swollen and disease activity is as low as possible. If your current therapy isn't effective, your doctor may add another drug or switch to another medication.

# Living with RA

## Be a Self-Manager

Living with a chronic disease may be a lot to handle, at least at first. But rest assured, you can do it. One of the best ways to cope is to take a proactive role in your own treatment and maintain a good quality of life – a process called self-management.

Learn all you can about your condition from your rheumatologist – and from trusted sources such as the Arthritis Foundation ([arthritis.org](http://arthritis.org)).

Maintain a positive attitude and lead a healthy lifestyle by eating well, engaging in physical activity and finding a way to work through any emotional issues surrounding your diagnosis.

Take charge of your treatment plan by keeping track of symptoms, medications, side effects and pain levels so together with your doctor, you can determine what works best for you.

Maintain an open line of communication with your physician. Ask questions and share your concerns.

Build your healthcare team. Other health professionals such as a physical or occupational therapist, mental health counselor, nutritionist, personal trainer or massage therapist can show you ways to protect your joints, manage pain, exercise safely, develop coping skills, use assistive devices and maintain a healthy weight.

Finally, develop a network of friends, family members and co-workers you can count on for emotional support. In addition to people you already



For fitness exercise demonstration videos and tips, go to [arthritis.org/physicalactivity](http://arthritis.org/physicalactivity).

know, don't be afraid to go online to talk about your arthritis with other people who have it. The Arthritis Foundation has a Facebook page and an online community. Knowing that you aren't alone and that others understand something about the challenges you face can be very helpful.

## Smart Ways To Manage RA

**Eating well.** While there is no specific “diet” for RA, researchers have identified certain foods that are rich in antioxidants and can help control inflammation. Many of them are part of the so-called Mediterranean diet, which emphasizes fish, vegetables, fruits and olive oil, among other healthy foods.

It's also important to eliminate or significantly reduce processed and fast foods that fuel inflammation. According to the U.S. Food and Drug Administration, approximately two-thirds of your diet should come from fruits, vegetables and whole grains, and the other third should include fat-free or low-fat dairy products and lean sources of protein. Find more information at [www.myplate.gov](http://www.myplate.gov).

**Balancing activity with rest.** Rest is important when RA is active and your joints feel painful, swollen or stiff. Rest helps reduce inflammation and fatigue that can come with a flare. Lighten your schedule and obligations and ask for help when you need to. Taking breaks throughout the day conserves energy and protects joints.





## Benefits of Exercise in RA

Regular physical activity can:

- Ease stiffness, improve flexibility and increase range of motion
- Strengthen muscles that help support and move your joints
- Help you sleep better and give you more energy
- Release brain chemicals that reduce pain and boost your mood
- Help you get to and stay at a healthy weight
- Lower your risk of heart disease
- Improve overall fitness

**Being physically active.** For people with RA, physical activity is important. In fact, exercise is so beneficial it's considered a main component of RA treatment. Your exercise program should emphasize low-impact aerobic conditioning, muscle strengthening and flexibility. The program should be tailored to your fitness level and capabilities. It also needs to take into account any joint damage you may have. A physical therapist can help you design – and stick to – an exercise program that works for you.


## Other Things You Can Do to Manage RA

There are other ways to care for painful joints, reduce stress and improve function. Try one or more of these methods:

- **Heat and cold treatments.** Heat treatments, such as heat pads or warm baths, tend to work best for soothing stiff joints and tired muscles. Heat is especially good for getting your body

limber and ready for exercise or activity. Cold is best for acute pain, numbing painful areas and reducing inflammation. Tip: Bags of frozen vegetables, such as peas, make excellent, easily moldable cold packs.

- **Relaxation techniques.** Train your muscles to relax and slow down anxious thoughts with techniques such as deep breathing, guided imagery and visualization, among others.
- **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 NSAIDs, salicylates or capsaicin, which help reduce pain.
- **Acupuncture.** Acupuncture is the practice of inserting fine needles into the body along special points called “meridians” to relieve pain. If you don't like needles, you may consider acupressure, which involves applying pressure, instead of needles, at acupuncture locations.
- **Supplements.** Studies have shown that tumeric and omega-3 fish oil supplements may help with rheumatoid arthritis pain and morning stiffness. However, you should talk with your doctor before taking any supplement to discuss side effects and potential interactions.
- **Positive attitude.** Many studies have demonstrated that resilience, an ability to “bounce back,” encourages a positive outlook. It can help you cope with life changes and pain.

 Check out **Track + React**, an easy-to-use app and online tool from the Arthritis Foundation. Visit [arthritis.org/TrackAndReact](https://www.arthritis.org/) to monitor your daily activities and symptoms. You can print a report to discuss with your doctor.



# The Arthritis Foundation is the Champion of Yes.

We lead the fight for the arthritis community and help you conquer your everyday battles through life-changing information and resources, access to optimal care, advancements in science and community connections.

**Go to [www.arthritis.org](http://www.arthritis.org)  
or call 800-283-7800.**

## Acknowledgements

The Arthritis Foundation appreciates the contributions of and reviews by the following:

**Eric Matteson, MD, MPH**, professor of medicine and chair, Division of Rheumatology, Mayo Clinic

**David Pisetsky, MD, PhD**, professor of medicine and immunology, Duke University Medical Center

**Ariel Tietel, MD**, clinical associate professor of medicine, NYU Langone Medical Center



Additional Review Provided by



**Our goal is to help you:**



**Learn, be inspired and connect.**

Subscribe to **Arthritis Today** magazine to get information on everyday life with arthritis, the latest health news, tools to help you chart a winning course and much more. Go to [arthritis.org/subscribe](http://arthritis.org/subscribe).

**Contact your local office about resources and events** going on where you live. Go to [arthritis.org](http://arthritis.org), click the **Local Offices** tab at the top and enter your ZIP code.

**Raise funds to conquer arthritis** in our annual events, Walk to Cure Arthritis and Jingle Bell Run. Visit [arthritis.org/events](http://arthritis.org/events).

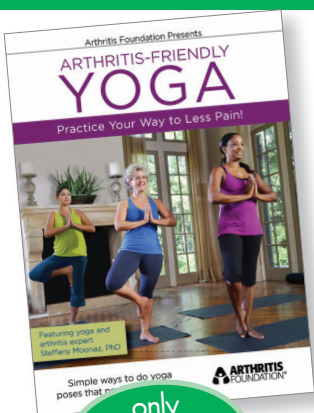
**Talk about your condition.** You're not alone when you connect with our community. Visit [arthritis.org/community](http://arthritis.org/community).

**Make your voice be heard.** Go to [arthritis.org/advocate](http://arthritis.org/advocate) and become an Arthritis Foundation Advocate for better access to health care.



# YOGA

DESIGNED FOR YOU!



only  
**\$24.95**

This DVD offers easy-to-follow poses that are gentle on joints to help ease pain, increase strength and flexibility and improve well-being naturally.

- 60-minute full practice that includes a variety of poses
- Modification demonstrations for poses to protect joints
- Sun Salutation and more!

Use Promo Code: **AFYOGA**

**TO ORDER  
CALL 800-283-7800 OR  
VISIT WWW.AFSTORE.ORG**

Engage with the Arthritis Foundation community on Twitter, Facebook, Pinterest and YouTube.



---

This brochure is published by the Arthritis Foundation and reviewed by independent medical experts.

---

The Arthritis Foundation thanks AbbVie for its generous support in underwriting the printing of this brochure.

**abbvie**