

Rheumatoid Arthritis

Rheumatoid Arthritis (RA) is a form of arthritis characterized by swelling and pain in the joints. If severe enough RA can also affect people's internal organs. RA is considered an autoimmune disease, meaning it's a disease that affects the way the body's immune system works.

The immune system works by releasing antibodies to seek and destroy foreign matter like bacteria, toxins and viruses that have entered the body. A normal immune response helps us to get better when we're sick. In the case of RA the immune system recognizes the synovium, a fluid-like sack in the joints, as the foreign invader and thus attacks it. The result is RA and its myriad of symptoms which are detailed in the Signs and Symptoms section.

RA affects more than 2 million Americans of all different races and ethnicities; 75% of which are women. Typical onset of the disease is anywhere between 20 and 45 years of age. However it usually affects those who are older. Children are also affected by a slightly different form of rheumatoid arthritis known as juvenile rheumatoid arthritis (JRA) - over 200,000 children have JRA.

Signs and Symptoms of RA:

RA is most commonly associated with swelling, pain, redness and lack of mobility in multiple joints throughout the body (also known as flare-ups). RA affects the body symmetrically, meaning if the right hand or elbow is affected, usually the left one is too. RA can affect any joint throughout the body but is most often seen in joints in the hands and feet. Other common symptoms of RA include:

- Fatigue
- Fevers
- Loss of appetite
- Dry eyes and mouth

Another symptom of RA is lumps under the skin in areas of the body where flare-ups are common. These lumps or nodes are known as rheumatoid nodules. Rheumatoid nodules are usually not painful but they can hinder joint mobility.

Causes and Risks:

Many experts believe that people are predisposed to RA based on their genetic make-up. Others believe that exposure to certain bacteria and viruses might trigger the immune system to function inappropriately. Experts are certain however, that RA does run in families. Children who have parents with RA are more likely to develop the disease.

Take Control:

Getting an accurate diagnosis is the first step in taking control of RA. Usually a doctor who specializes in RA (rheumatologist) is most suited to make this diagnosis. It's a good idea to see a doctor if you have pain and swelling in one or more joints on both sides of the body for an extended period of time.

Self-Care

Once a diagnosis is made several things need to happen. The first is your doctor will almost always put you on some sort of medical treatment such as an oral medication(s) or injectable therapy. A doctor is also going to recommend a number of self-care strategies and techniques which should help you manage your RA and help you feel better as a whole. Below are some of those strategies and techniques.

Exercise

Exercise is one of the best things you can do to help relieve pain and stiffness in your joints. Exercise can be as simple as walking, riding a bike or taking an aquatic exercise class. The goal of an arthritis exercise program should be to improve or maintain your range of motion, muscle strength and endurance or stamina.

When you start exercising it's natural for your muscles to be a bit sore. However, your joints should never hurt as a result of exercise. If they do you are either exercising too hard or doing the wrong exercises. Certain exercises can do more damage than good. That's why it's very important to speak to a doctor before starting a new exercise routine.

Nutrition

Good nutrition is an essential part of RA self-care because without it the body and sometimes medications do not work as well they should. Eating a diet that is low in sugar, salt, fat and cholesterol are good starting points. The **food pyramid put out by the U.S. Departments of Agriculture** which is also recommended by the Arthritis Foundation, is a great example of a nutritional and balanced approach to eating. Following this approach to eating is assurance that you are getting your daily allowance of

vitamins and minerals. If you are unable to get your daily vitamins and minerals from the foods you eat, you should talk to your doctor about taking vitamin and mineral supplements.

Joint Protection

When you have RA or other forms of arthritis one of the most important things you can do for yourself is to protect your joints. You can do this by avoiding activities that put pressure on your joints, for example activities that involve heavy lifting. You can also apply ice or cold compresses to your joints after exercising or when your joints flare-up - this reduces inflammation and discomfort. Using heat in a similar fashion is also good for muscle aches, joint stiffness and pain.

Taking your Medications

If you have RA or know somebody that does, you probably know how important it is to take your medication as everyday, as prescribed by a doctor. There are number of devices, containers, etc. that can help manage daily medication needs. No matter what you choose, the key is to find something that works. Skipping doses can have a big impact on the effectiveness of the medicine and its overall ability to manage RA.

Treatment Options or RA:

Medications:

Highly effective medications exist for rheumatoid arthritis (RA). Early treatment is critical in management of RA. It can often mean less joint damage and less pain. The goal of medication treatment is to relieve pain, reduce inflammation, stop or slow joint damage, and improve daily function and overall well-being. A variety of medications are used to help treat Rheumatoid Arthritis. The medications used to treat Rheumatoid Arthritis do not provide a cure, but rather limit the symptoms of the disease and slow the damage.

Medications used in the treatment of Rheumatoid Arthritis (RA) can be divided into three groups

- **Symptomatic medications:** These are medications that help reduce joint pain, stiffness and swelling. They do not slow the damage caused by RA. These medications include the NSAIDs (i.e. ibuprofen, naproxen, aspirin and acetaminophen). Also included in this category are the COX-2 Inhibitors (i.e. Celebrex®), narcotic analgesics (i.e. Darvocet®, Lortab® and Vicodin®) and steroids (i.e. prednisone, Decadron®, Medrol®). Narcotic analgesics are usually used when the pain is still not relieved with an NSAID or COX-2 inhibitor at maximum doses. Many of these drugs may be used in combination with each other or with some of the other groups described below.
- **Disease-modifying antirheumatic drugs (DMARDs):** This is a category that includes several unrelated oral medications that have been shown to be effective in RA, by slowing and preventing damage to the joint and thereby preventing disability and discomfort. These medications have been used for a variety of other diseases at higher doses but have been grouped together because of their similar action and positive effects on RA. Some examples of medications in this category include methotrexate, leflunomide (Arava®), penicillamine, sulfasalazine, gold therapy, minocycline, azathioprine (Imuran®), hydroxychloroquine, and cyclosporine (Neoral®).
- **Biological Response Modifiers:** This is a relatively new category of drugs used for the treatment of Rheumatoid Arthritis. They can help reduce inflammation and structural damage of the joints by blocking the action of a substance called tumor necrosis factor or interleukin, which are chemicals found in our body that cause problems in people with RA. All these medications are given by injecting them into the body. Depending on the medications, some can be self injected and others need to be given by your doctor or nurse. These medications are used alone or in combination with DMARDs particularly methotrexate. These drugs include etanercept (Enbrel®), infliximab (Remicade®), adalimumab (Humira®) and anakinra (Kineret®).

You and your physician should review your drug treatment options, assessing the risks and benefits each offers and choosing the best treatment for you. Some people respond better to one drug than another, or have side effects on one and not another. It is important that the choice of treatment be tailored to your specific medical needs.

In addition, treatment most often involves some combination of exercise, weight management, use of heat or cold on joints, rest, joint protection, and physical and occupational therapy. Surgery is available for joints that are damaged and painful. A balance of rest and exercise can help conserve energy and maintain range of motion and use of the joints.

Biological Response Modifiers

These medications are used alone or in combination with other medications (DMARDs such as methotrexate) to reduce the pain, swelling, and difficulty with daily activities caused by rheumatoid arthritis and to stop the disease from causing further damage to joints. Biological response modifiers (BRMs) are an exciting new category of medication what has proven effective for treating the painful inflammation of rheumatoid arthritis. About 70 percent of patients treated with these medications will see some degree of improvement, but continuing use is required to maintain any benefit. They are usually used in patients who have taken other medications to treat their disease and have not gotten better.

Brand Name	Generic Name	Generic Available?
Enbrel	Etanercept	NO
Humira	Adalimumab	NO
Kineret	Anakinra	NO
Remicade	Infliximab	NO

How do they work?

All these medications, except Kineret, are called tumor-necrosis factor (TNF) inhibitors. They work by blocking the activity of TNF, a substance in the body that causes swelling and joint damage in Rheumatoid Arthritis. Kineret is in a class of medications called interleukin antagonists. It works by blocking the activity of interleukin, a protein in the body that causes joint damage. This class of medications helps slow the worsening of the disease.

How do I take these drugs?

The dose of these medications is individualized based on your condition. They can be taken daily, once or multiple times a week or month depending on the medication used. If you are injecting this medicine yourself, use it exactly as directed by your doctor.

Enbrel is usually given twice a week subcutaneously (between the fat layer just under the skin and the muscles beneath). It can be self injected or given to you by another individual. It usually begins to work in about 2 weeks with a maximum benefit in 4 to 12 weeks.

Humira is usually given once every other week, or in some cases, once a week. subcutaneously (between the fat layer just under the skin and the muscles beneath). It can be self injected or given to you by another individual. It usually begins to work in about 2 weeks with a maximum benefit in 4 to 12 weeks.

Kineret is usually given daily by subcutaneous (between the fat layer just under the skin and the muscles beneath) injection. It can be self injected or given to you by another individual. It usually begins to work in about 4 weeks with a maximum benefit in about 12 weeks.

Remicade is given intravenously (through a vein) by your doctor or nurse every 2 months after 3 initial injections. It usually begins to work in about 2 weeks with a maximum benefit in about 4 to 12 weeks.

Special patient directions come with each of these medications (Except Remicade which you get in your doctors office or clinic) which are injected. *Read the directions carefully before using the medicine.* Make sure you understand:

- How to prepare the injection.
- Proper use of disposable syringes.
- How to give the injection.
- How long the injection is stable.

If you have any questions about any of this, check with your health care professional.

The more common side effects include: redness, itching, bruising, pain, or swelling in the place you injected, stomach pain, upset stomach, headache, weakness or tiredness, cough, dizziness, fainting, muscle pain, runny or stuffy nose, sore throat, tightness in chest, vomiting and pain or burning in throat.

Most of these symptoms tend to disappear over time. If they continue, become more severe, or cause significant discomfort, be sure to talk them over with your physician.

Less common side effects include: back pain, diarrhea, the corners of mouth, diarrhea, difficult or painful urination, frequent urge to urinate, pain or tenderness around eyes and cheekbones, skin rash, heartburn, loss of appetite, trouble sleeping and loss of energy or weakness.

Remicade may cause chest pain, fever, chills, itching, hives, flushing of face, or troubled breathing within a few hours after you receive it. Check with your doctor or nurse immediately if you have any of these symptoms.

Because injection site reactions (swelling, redness, discoloration, or pain) are relatively common, it is recommended that the sites be rotated according to a schedule provided for you by your physician. In order to avoid infection and other complications, you should report promptly any break in the skin, which may be associated with blue-black discoloration, swelling, or drainage of fluid from the injection site. Your physician will determine whether to continue treatment while the skin lesions are being treated.

There are some important health cautions to consider before beginning treatment with these medications. These medications are designed to suppress certain immune system functions. The immune system is a key part of your body's defense against infections. This means use of these biologic agents can present a serious risk to patients who are prone to infection (e.g. diabetics) or who have an active infection. Before beginning treatment with any of these medications, your doctor will screen you for any infections, including tuberculosis to which you may have been exposed some time in the past. Also, if you develop an

infection while under treatment, check with your doctor on whether you should stop treatment. If the infection requires antibiotic therapy you may be asked to postpone your injections until the antibiotics are finished and the infection has cleared.

If I am pregnant or breast feeding. Is this medication safe for me to take?

These medications not been studied in pregnant women. However, they have not been shown to cause birth defects or other problems in animal studies. Before receiving this medicine, make sure your doctor knows if you are pregnant or if you may become pregnant. It is not known whether these medications pass into breast milk. Because of the possibility of serious unwanted effects in the nursing infant, it is important that you discuss the use of this medicine with your doctor if you wish to breast-feed.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING MEDICATIONS.

NSAIDS

This is the most widely used category in the treatment of pain associated with Rheumatoid Arthritis and it is very effective. There are many generic alternatives available in this category, making these medications more affordable as well. This category of medications has a variety of different types within it. Therefore, just because one medication gives you side effects or won't control your pain, another may work well for you. Talk to your doctor about the right medication for you.

Brand Name	Generic Name	Generic Available?
Anaprox, Anaprox DS	Naproxen	YES
Ansaid	Flurbiprofen	YES
Arthrotec	Diclofenac/Misoprostol	NO
Cataflam	Diclofenac	YES
Clinoril	Sulindac	YES
Daypro	Oxaprozin	YES
Feldene	Piroxicam	YES
Indocin, Indocin SR	Indomethacin	YES
Lodine, Lodine XL	Etodolac	YES
Meclofenamate	Meclofenamate	YES
Mobic	Meloxicam	NO
Motrin	Ibuprofen	YES
Nalfon	Fenoprofen	YES
Naprosyn, EC-Naprosyn	Naproxen	YES
Orudis	Ketoprofen	YES
Relafen	Nabumetone	YES
Tolectin, Tolectin DS	Tolmetin	YES
Voltaren, Voltaren XR	Diclofenac	YES

These medications block the formation of prostaglandins, or natural substances found in the body, which cause inflammation, swelling, stiffness, and the joint pain of osteoarthritis.

Common side effects may include: stomach pain, black stools, blurred vision, chills, constipation, diarrhea, dizziness, fever, gas, increased urination, and vomiting, or weakness.

Less common side effects include: feeling tired, dry mouth, fainting, flushing, high blood pressure, inability to sleep, loss of appetite, rapid heartbeat, rash, sleepiness, blisters or peeling skin around mouth, sweating, swelling (fluid retention), thirst, or yellowed skin and eyes.

These medications can prolong bleeding time (except Mobic). These medications can increase water retention and should be used with caution if you have heart disease or high blood pressure.

Some of these medications can very rarely cause liver problems. If you develop signs of liver disease such as clay-colored stools, yellowing of your skin and eyes, fatigue, itching, loss of appetite, nausea, dark urine, and pain in the upper right part of your stomach, tell your doctor immediately.

If these medications are taken with certain other drugs, the effects of either drug could be increased, decreased, or altered. It is especially important to check with your doctor or pharmacist before combining it with your other medications. Do not take with aspirin or over-the-counter Motrin, Aleve, or ibuprofen unless told to by your doctor or pharmacist.

If I am pregnant is this medication safe for me to take?

The effects of these medications during pregnancy have not been adequately studied. If you are pregnant or plan to become pregnant, inform your doctor immediately.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THESE MEDICATIONS.

COX-2 Inhibitors

This category of medications relieves pain the same as the NSAIDs (i.e. Motrin or Naprosyn) and has a variety of different types within it. Therefore, just because one medication gives you side effects or won't control pain, doesn't mean the same will happen when you take a different one. Talk to your doctor about the right medication for you. These medications, unlike aspirin, do not offer any protection in reducing your risk of having a heart attack or stroke. If you have had stomach problems on NSAIDs or have a history of ulcers, these medications may be better. If you do take an aspirin a day for your heart, tell your doctor. Aspirin takes away the positive effects of these medications on the stomach. Do not stop taking the aspirin until you talk with your doctor.

Brand Name	Generic Name	Generic Available?
Celebrex	Celecoxib	NO

Similar to NSAIDs, these medications block the formation of prostaglandins which cause inflammation, swelling, stiffness, and the joint pain of Rheumatoid Arthritis. However, unlike the NSAIDs, they do not affect the prostaglandins that protect the stomach (therefore they may cause fewer ulcers than the NSAIDs). This effect is reduced if you take these medications with aspirin, so consult your doctor or pharmacist for advice.

The dose of these medications is individualized based on your condition and can be taken once or twice a day, depending on the medication used. To minimize stomach upset and related side effects, your doctor or pharmacist may recommend taking this medicine with food, milk, or an antacid. If you have had a rash or trouble breathing when you take sulfa medications, you should not take Celebrex or Bextra-- they might cause a severe allergic reaction. Do not take any of these medications if you have had a rash or trouble breathing when you take aspirin or Motrin-like medications.

Unwanted side effects cannot be predicted. If any develop or change in intensity, inform your doctor as soon as possible. Only your doctor can determine if it is right for you to continue therapy.

Common side effects include: stomach pain, indigestion, diarrhea, headache, nausea, sinus pain, dizziness, gas, rash, sore throat, or swelling.

Less common side effects include: trouble sleeping, back pain, blister in mouth and eyes, constipation, coughing, dry mouth, dry skin, or blurred vision.

If I am pregnant is this medication safe for me to take?

The effects of these medications during pregnancy have not been adequately studied. If you are pregnant or plan to become pregnant, inform your doctor immediately.

ALWAYS CONSULT WITH YOUR DOCTOR OR PHARMACIST IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT USING THESE MEDICATIONS.

Surgery:

Damage done to joints from constant, long-term swelling can be quite severe – severe enough to require surgery. Surgery may involve:

- Replacing an entire joint with an artificial joint
- Reconstructing the tendons usually in the hands to improve movement)
- Removing swollen synovium from an affected joint (this done in combination with tendon reconstruction)

Surgery is not for everybody and in most cases is reserved for those with severe damage to their joints. A rheumatologist can tell you if you are a good candidate for any of the above procedures.

Talking With Your Doctor about RA:

Having a good relationship with your doctor is essential for getting the most out of your care. A good patient-doctor relationship is based on your ability to speak openly to your doctor, ask any question that concerns you, and to ask why your doctor recommends a certain procedure or treatment over another.

Another helpful way to improve communication with your doctor is to bring a list of prepared questions to your appointment. Doing this accomplishes two things. First, it lets the doctor know you are serious about your care. Second, it ensures the doctor addresses your major questions or concerns. Here are some sample questions you might ask your doctor:

- Is RA life threatening?
- How severe is my RA? Will I become disabled?
- How will I know if my RA will affect my eyes and other body organs?
- Will medications/therapies reduce my flare-ups and make me feel better?
- What treatment options are available to me?
- What are the side effects - short and long-term?
- Can I pass RA on to my children?
- Can I still lead a normal life?

Additional Information about RA:

There is a wealth of information about rheumatoid arthritis on the Internet. Be careful, though. Stick to the Websites that are sponsored by well-known organizations and agencies, such as the ones listed below. Note: these links take you from the Maxor Website to Websites not operated or maintained by Maxor. Maxor is not responsible for the content of those websites.

Arthritis Foundation- <http://www.arthritis.org>

National Institute of Arthritis and Musculoskeletal and Skin Diseases- <http://www.niams.nih.gov>