

Rheumatoid Arthritis Medicines

A Guide for Adults



Fast Facts

- Medicines for rheumatoid arthritis (RA) can slow down the disease and reduce damage to joints. They can relieve pain and make it easier to do everyday tasks.
- Most people can find an RA drug that works.
- If one RA drug isn't working well enough, you have other options. Switching to a different RA drug or adding another kind of RA drug can help.
- Steroids are often used along with other RA drugs. They help with joint pain and swelling. But using them for a long time can cause side effects.
- RA drugs can increase the chance of infections and other side effects. Regular checkups and blood tests are ways to catch these problems early.

What does this guide cover?

This guide can help you work with your doctor or nurse to find a medicine for rheumatoid arthritis (RA). It is a lifelong condition. RA causes inflammation (swelling, redness, and pain) that can damage the joints. No treatment can cure RA. But the drugs in this guide can slow down the disease and help you feel better.

This guide is based on a government-funded review of research about RA medicines.

Besides helping you learn about what happens with RA, this guide explains the benefits, risks, and costs of RA drugs.

What is not covered in this guide?

This guide does not cover all the ways to manage RA. It does not cover pain relievers, like acetaminophen (Tylenol®), ibuprofen (Advil®, Motrin®), and morphine. It also does not cover older drugs for RA that are not used much any more. This guide does not deal with other ways to help you feel better, like a good mix of exercise, rest, and healthy eating.



Learning About Rheumatoid Arthritis (RA)

What causes RA?

No one knows for sure what causes RA. It's an auto-immune problem. That means the body's defense system (called the immune system) attacks its own joints and organs. This can cause swelling of the synovium (pronounced sih-NO-vee-um), the tissue that lines the joint.

What happens without treatment?

Without treatment, RA can slowly destroy the joints. The swelling of the synovium damages the cartilage, bone, and tendons. The joints become more and more painful, swollen, and stiff. This can make it hard to do everyday tasks. RA can also affect the eyes, blood vessels, and the lining of the heart. It can also cause low red blood cell counts, weak bones, and scarring in the lungs.

Learning About Medicines for RA

Medicines are the main treatment for RA. They reduce joint swelling and relieve pain. Most people need to keep taking RA medicines for life. This guide talks about two kinds of RA medicines, DMARDs (pronounced DEE-mards) and steroids (pronounced STAIR-oyds).

DMARDs

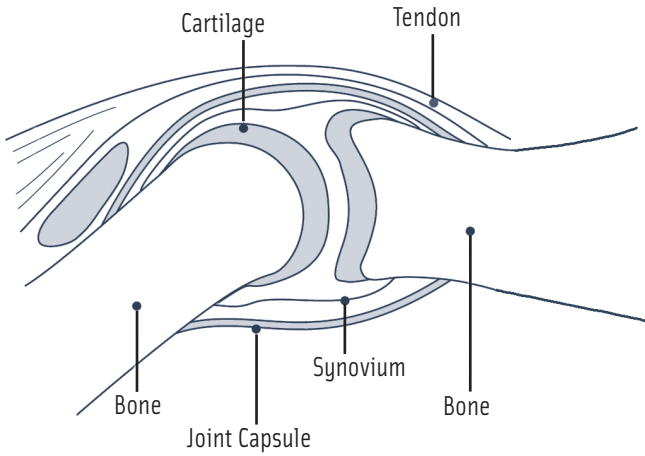
The drugs that work best for RA are called DMARDs. DMARD stands for Disease-Modifying AntiRheumatic Drug. These medicines don't just relieve pain. They slow or stop the changes in your joints.

DMARDs come in two groups. Some are pills. The others are given by shot or IV. Both suppress the immune system. That means they slow down the body's attack on itself.

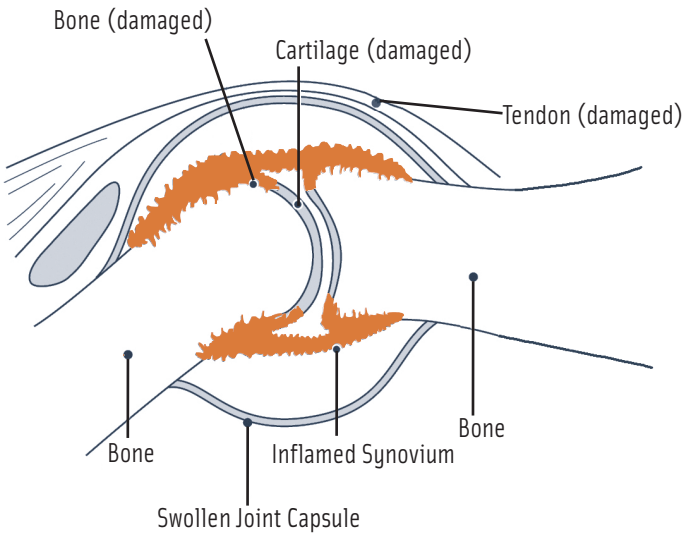
Steroids

Steroids help with joint pain and swelling, but it is not known if they can slow down the disease. Prednisone is the name of a steroid often used for RA.

Normal Joint



Joint Damaged by RA



Learning About the Benefits

Research shows that DMARDs work. They can slow down the disease and relieve pain. But it's hard to predict which drug will work best for any one person. About 65 out of 100 people need to change their RA drug. Some people switch because their drug isn't working well enough. Others switch because of side effects.

Some of the medicines have been compared with each other in research studies. Here's what we know from this research.

Starting your first RA drug

- Methotrexate (Rheumatrex[®], Trexall[®]) is a DMARD pill that is often used. It works as well as a DMARD given by shot or IV.
- Two other DMARD pills, leflunomide (Arava[®]) and sulfasalazine (Azulfidine[®], Sulfazine[®]), work as well as methotrexate (Rheumatrex[®], Trexall[®]).
- Adalimumab (Humira[®]), etanercept (Enbrel[®]), and infliximab (Remicade[®]) all work about the same.

Changing and combining RA drugs

- If methotrexate (Rheumatrex[®], Trexall[®]) isn't working well enough, you have options. Adding a DMARD given by shot or IV works better than methotrexate by itself.
- Combining prednisone with hydroxychloroquine (Plaquenil[®]), methotrexate (Rheumatrex[®], Trexall[®]), or sulfasalazine (Azulfidine[®], Sulfazine[®]) works better than any of these DMARD pills by themselves.

Some do not work as well

- Anakinra (Kineret[®]) is a DMARD shot that does not work as well as the other shots.
- Combining methotrexate (Rheumatrex[®], Trexall[®]) and sulfasalazine (Azulfidine[®], Sulfazine[®]) does not work any better than either DMARD pill by itself.

Talking With Your Doctor or Nurse About RA Drugs

Benefits

DMARDs reduce swelling and make it easier to do everyday tasks. They also help prevent joint damage and long-term disability. Most people can find a DMARD that works for them. Ask your doctor or nurse these questions.

Do I need a shot or can I take a pill?

- Most people can start with a DMARD pill. Many people get good results when they start with methotrexate (Rheumatrex®, Trexall®). It can work as well as the DMARDs given by shot or IV.

How long before I feel better?

- DMARDs do not start working right away. They can take weeks or months to start working.
- Your doctor or nurse may prescribe a pain reliever until the DMARD starts to work.

What if the first drug does not work or stops working?

- Switching to another DMARD can help.
- Adding a second kind of DMARD may work for you. If you are taking methotrexate (Rheumatrex®, Trexall®), adding a DMARD given by shot or IV can help.
- Adding prednisone to a DMARD pill is also an option.

DMARDs

Generic Name	Brand Name	Generic Name	Brand Name
Pills		Shots (under the skin)	
Hydroxychloroquine	Plaquenil®	Adalimumab	Humira®
Leflunomide	Arava®	Anakinra	Kineret®
Methotrexate	Rheumatrex® Trexall®	Etanercept	Enbrel®
Sulfasalazine	Azulfidine® Sulfazine®	Given by IV	
		Abatacept	Orencia®
		Infliximab	Remicade®
		Rituximab	Rituxan®

Learning About Risks

Infections

- RA drugs weaken the body's defenses. That means that serious infections, like pneumonia (pronounced new-MOW-nyuh), are more likely with these drugs. A serious infection needs antibiotics and often must be treated in a hospital.

Other serious problems

- Methotrexate (Rheumatrex[®], Trexall[®]) can cause liver and kidney problems. It can also cause low red blood cell counts and painful mouth sores.
- Steroids like prednisone can weaken bones, raise blood sugar, and cause weight gain. That is why steroids are often prescribed in low doses and for a short time.

Needle reactions

- DMARD shots can cause redness, itching, rash, and pain at the spot where the shot is given. More people taking anakinra (Kineret[®]) have these reactions than people taking other DMARD shots.
- About half of the people getting DMARDs by IV have a reaction. They get chills, dizzy, or sick to the stomach. But only about 2 out of 100 people stop their medicine because of reactions.
- It's rare, but DMARDs given by IV can also cause a serious reaction, like a seizure.

Risks of serious birth defects

- Methotrexate (Rheumatrex[®], Trexall[®]) and leflunomide (Arava[®]) can cause serious birth defects.
- Both **men and women** taking these DMARD pills should talk with their doctor or nurse before planning a pregnancy.
- Be sure to use two forms of birth control while taking these DMARD pills. For example, you could use birth control pills and a condom each time you have sex.

Reducing Your Risks

See your doctor or nurse for regular checkups and blood tests.

- Checkups and blood tests will help catch infections and other problems early.

Stay away from people who are sick.

- Call your doctor or nurse right away if you have signs of infection, like fever or cough.

Make sure your flu shot and pneumonia shot are up to date.

- These shots can help you fight off infections. Check with your doctor or nurse before getting any other vaccines.

Be sure to get enough calcium and vitamin D.

- RA weakens the bones. You can help keep your bones healthy by getting enough calcium and vitamin D. Milk, yogurt, and green leafy vegetables are high in calcium. You can also take calcium and vitamin D pills.



Cost

Use the chart on page 8 to compare the prices of drugs. Some DMARDs come as generics, which cost less. If your health plan covers prescriptions, check with them about the cost. If you need help paying for RA drugs, there may be a program for you. The Partnership for Prescription Assistance can tell you about these programs. Web site: www.pparx.org. Phone: 1-888-477-2669.

Dose and Price of DMARDs and Steroids

Generic Name ¹	Brand Name	Dose ²	Price for 1 Month ³		
			Generic	Brand	
DMARD Pills					
Hydroxychloroquine	Plaquenil®	400 mg once a day	\$70	\$125	
Leflunomide	Arava®	10 mg once a day	\$495	\$570	
		20 mg once a day	\$495	\$570	
Methotrexate	Rheumatrex®, Trexall®	7.5 mg once a week	\$40	\$45	
		15 mg once a week	\$80	\$90	
		20 mg once a week	\$105	\$120	
Sulfasalazine	Azulfidine®, Sulfazine®	500 mg twice a day	\$15	\$30	
		1,000 mg twice a day	\$30	\$60	
		1,500 mg twice a day	\$45	\$85	
	Azulfidine EN-tabs®	1,000 mg once a day	\$25	\$35	
		2,000 mg once a day	\$45	\$70	
		3,000 mg once a day	\$70	\$100	
DMARD Shots (under the skin)					
Adalimumab	Humira®	40 mg every 2 weeks	NA	\$1,585	
Anakinra	Kineret®	100 mg once a day	NA	\$1,445	
Etanercept	Enbrel®	25 mg twice a week	NA	\$1,585	
		50 mg once a week		\$1,585	
DMARDs Given by IV					
Abatacept	Orencia®	500 mg every 4 weeks		\$1,080	
		750 mg every 4 weeks	NA	\$1,620	
		1,000 mg every 4 weeks		\$2,160	
Infliximab	Remicade®	210 mg every 8 weeks ⁴		\$730	
		420 mg every 8 weeks ⁴	NA	\$1,465	
		700 mg every 8 weeks ⁴		\$2,440	
Rituximab	Rituxan®	1,000 mg total of 2 doses	NA	\$1,015 ⁵	
Steroids					
Prednisolone (liquid)	Various brand names	5 mg once a day	\$15	\$25	
		7.5 mg once a day	\$25	\$40	
		10 mg once a day	\$30	\$55	
Prednisone (pills)	Various brand names	5 mg once a day	\$2	\$3	
		7.5 mg once a day	\$3	\$5	
		10 mg once a day	\$3	\$6	

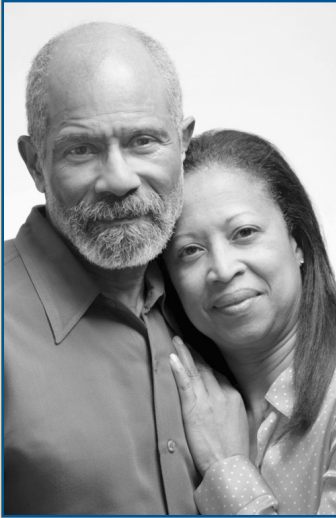
¹These drugs were included in the research studies. ²Doses are similar to those in the research studies or typical for rheumatoid arthritis. ³Average Wholesale Price from *Drug Topics Red Book*, 2007. Price listed does not include IV expenses. ⁴Dose varies by body weight. Dose calculated for a 154-pound person.

⁵Price (\$12,180) averaged over 12 months.

DMARDs=disease-modifying antirheumatic drugs, EN=extended release, IV=intravenous, NA=not available as generic.

What is still not known?

- Research can't tell us yet how DMARD pills, other than methotrexate (Rheumatrex®, Trexall®), compare with the DMARDs given by shot or IV.
- Research can't tell us yet how abatacept (Orencia®) and rituximab (Rituxan®) compare with other DMARDs.



Where can I get more information?

For an electronic copy of this guide and materials about comparing treatments and medicines for other conditions, visit this Web site:

www.effectivehealthcare.ahrq.gov

For a free print copy call:
The AHRQ Publications Clearinghouse
(800) 358-9295

Ask for AHRQ Publication Number 08-EHC004-2A

For more information about rheumatoid arthritis,
visit the Medline Plus Web site:
www.nlm.nih.gov/medlineplus/rheumatoidarthritis.html

What is the source of this guide?

The information in this guide comes from a detailed review of 156 research reports. The review is called *Comparative Effectiveness of Drug Therapy for Rheumatoid Arthritis and Psoriatic Arthritis in Adults* (2007) and was written by the RTI-University of North Carolina Evidence-based Practice Center.

The Agency for Healthcare Research and Quality (AHRQ) created the Eisenberg Center at Oregon Health & Science University to make research helpful for consumers. This guide was prepared by Sandra Robinson, M.S.P.H., Martha Schechtel, R.N., Christina Dahlstrom, B.A., Roger Chou, M.D., Monica Goei, M.D., Theresa Bianco, Pharm.D., Valerie King, M.D., and David Hickam, M.D., of the Eisenberg Center. People with rheumatoid arthritis helped the Eisenberg Center write this guide.