

The following table shows currently used rheumatoid arthritis medications, along with their uses and effects, adverse effects, and monitoring requirements.

Medications Commonly Used to Treat Rheumatoid Arthritis

Medications	Uses/Effects	Adverse Effects	Monitoring
Analgesics and nonsteroidal anti-inflammatory drugs (NSAIDs)	Analgesics relieve pain. NSAIDs are a large class of medications useful in treating pain and inflammation. A number of NSAIDs are available over the counter. More than a dozen others, including a subclass called COX-2 inhibitors, are available only with a prescription.	NSAIDs can cause stomach irritation. Less often, they can affect kidney function. The longer a person uses NSAIDs, the more likely he or she is to have adverse effects, ranging from mild to serious. Many other drugs cannot be taken when a patient is being treated with NSAIDs because they alter the way the body uses or eliminates these other drugs. NSAIDs sometimes are associated with serious gastrointestinal problems, including ulcers, bleeding, and perforation of the stomach or intestine. People older than 65 years and those with any history of ulcers or gastrointestinal bleeding should use NSAIDs with caution.	Check with your health care provider or pharmacist before you take NSAIDs. Before taking traditional NSAIDs, let your provider know if you drink alcohol or use blood thinners or if you have any of the following conditions: sensitivity or allergy to aspirin or similar drugs, kidney or liver disease, heart disease, high blood pressure, asthma, or peptic ulcers.
Acetaminophen	Acetaminophen is a nonprescription medication used to relieve pain. Examples are aspirin-free Anacin,* Excedrin caplets, Panadol, Tylenol, and Tylenol Arthritis.	Usually no adverse effects occur when acetaminophen is taken as directed.	This medication should not be taken with alcohol or with other products containing acetaminophen. It should not be used for more than 10 days unless the patient is directed to do so by a physician.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

Medications	Uses/Effects	Adverse Effects	Monitoring
Aspirin <i>Buffered</i> <i>Plain</i>	Aspirin is used to reduce pain, swelling, and inflammation, allowing patients to move more easily and carry out normal activities. It is generally part of early and ongoing therapy.	Aspirin can cause upset stomach; a tendency to bruise easily; ulcers, pain, or discomfort; diarrhea; headache; heartburn or indigestion; and nausea or vomiting.	Patients who take aspirin on a regular basis should be monitored by a doctor.
Traditional NSAIDs <i>Ibuprofen</i> <i>Ketoprofen</i> <i>Naproxen</i>	NSAIDs help relieve pain within hours of administration in dosages available over the counter (available for all three medications listed here). They relieve pain and inflammation in dosages available in prescription form (ibuprofen and ketoprofen). It may take several days to reduce inflammation.	<i>For all traditional NSAIDs:</i> Abdominal or stomach cramps, pain, or discomfort; diarrhea; dizziness; drowsiness or light-headedness; headache; heartburn or indigestion; peptic ulcers; nausea or vomiting; possible kidney and liver damage (rare).	<i>For all traditional NSAIDs:</i> Before taking these drugs, let your doctor know if you drink alcohol or use blood thinners or if you have or have had any of the following: sensitivity or allergy to aspirin or similar drugs, kidney or liver disease, heart disease, high blood pressure, asthma, or peptic ulcers.
Corticosteroids	Corticosteroids are given by mouth or injection. They are used to relieve inflammation and reduce swelling, redness, itching, and allergic reactions.	Corticosteroids can cause increased appetite, indigestion, nervousness, or restlessness.	Before taking any corticosteroid, let your doctor know if you have any of the following conditions: a fungal infection, a history of tuberculosis, an underactive thyroid, herpes simplex of the eye, high blood pressure, osteoporosis, or a stomach ulcer.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

Medications	Uses/Effects	Adverse Effects	Monitoring
<i>Methylprednisolone</i> <i>Prednisone</i>	These steroids are available in pill form or as an injection into a joint. Improvements are seen from several hours to up to 24 hours after administration. These steroids have the potential for serious adverse effects, especially at high doses. They are used for severe flare-ups and when the disease does not respond to NSAIDs and disease-modifying drugs.	These steroids can cause osteoporosis, mood changes, fragile skin, easy bruising, fluid retention, weight gain, muscle weakness, onset or worsening of diabetes, cataracts, increased risk of infection, and hypertension (high blood pressure).	Monitoring by a doctor for continued effectiveness of the medication and for adverse effects is necessary.
Disease-modifying antirheumatic drugs (DMARDs)	DMARDs are common arthritis medications. They relieve painful, swollen joints and slow joint damage. Several DMARDs may be used over the disease course. They take a few weeks or months to have an effect and may produce significant improvements for many patients. Exactly how they work is still unknown.	Adverse effects vary with each medicine. DMARDs may increase risk of infection, hair loss, and kidney or liver damage.	Monitoring by a doctor allows the risk of toxicities to be weighed against the potential benefits of individual medications.
<i>Azathioprine</i>	Azathioprine was first used in higher doses in patients undergoing chemotherapy for cancer and organ transplantation. It is used in patients who have not responded to other drugs and in combination therapy.	Azathioprine can cause cough or hoarseness, fever or chills, loss of appetite, lower back or side pain, nausea or vomiting, painful or difficult urination, and unusual tiredness or weakness.	Before taking this drug, tell your doctor if you use allopurinol or have kidney or liver disease. Azathioprine can reduce your ability to fight infection, so call your doctor immediately if you develop chills, fever, or a cough. Persons taking this drug need regular blood and liver function tests.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

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<i>Cyclosporine</i>	Cyclosporine was first used in patients undergoing organ transplantation to prevent rejection. It is used in patients who have not responded to other drugs.	Cyclosporine can cause bleeding, tender, or enlarged gums; high blood pressure; increase in hair growth; kidney problems; and trembling and shaking of hands.	Before taking this drug, tell your doctor if you have one of the following: sensitivity to castor oil (if receiving the drug by injection), liver or kidney disease, active infection, or high blood pressure. Using this drug may make you more susceptible to infection and certain cancers. Persons taking this drug should not receive live vaccines.
<i>Hydroxychloroquine</i>	It may take several months to notice the benefits of hydroxychloroquine, which include reducing the signs and symptoms of rheumatoid arthritis.	Hydroxychloroquine can cause diarrhea, eye problems (rare), headache, loss of appetite, nausea or vomiting, and stomach cramps or pain.	Monitoring by a doctor is important, particularly if you have an allergy to any antimalarial drug or a retinal abnormality.
<i>Gold sodium thiomalate</i>	Gold sodium thiomalate was one of the first DMARDs used to treat rheumatoid arthritis.	Gold sodium thiomalate can cause redness or soreness of the tongue; swelling or bleeding gums; a skin rash or itching; ulcers or sores on the lips, mouth, or throat; and irritation on the tongue. Joint pain may occur for 1 or 2 days after receiving the injection.	Before taking this drug, tell your doctor if you have any of the following conditions: lupus, skin rash, kidney disease, or colitis. Periodic urine and blood tests are needed to check for adverse effects.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

Medications	Uses/Effects	Adverse Effects	Monitoring
Leflunomide	Leflunomide reduces signs and symptoms of arthritis and slows structural damage to joints caused by arthritis.	Leflunomide can cause bloody or cloudy urine; congestion in the chest; cough; diarrhea; difficult, burning, or painful urination or breathing; fever; hair loss; headache; heartburn; loss of appetite; nausea and/or vomiting; skin rash; stomach pain; sneezing; and sore throat.	Before taking this medication, let your doctor know if you have any of the following conditions: active infection, liver disease, known immune deficiency, renal insufficiency, or underlying malignancy. You will need regular blood tests, including liver function tests. Leflunomide must not be taken during pregnancy because it may cause birth defects in humans.
Methotrexate	Methotrexate can be taken by mouth or by injection and results in rapid improvement (it usually takes 3 to 6 weeks to begin working). It appears to be very effective, especially in combination with infliximab or etanercept. In general, it produces more favorable long-term responses compared with other DMARDs such as sulfasalazine, gold sodium thiomalate, and hydroxychloroquine.	Methotrexate can cause abdominal discomfort, chest pain, chills, nausea, mouth sores, painful urination, sore throat, and unusual tiredness or weakness.	Doctor monitoring is important, particularly if you have an abnormal blood count, liver or lung disease, alcoholism, immune-system deficiency, or active infection. Methotrexate must not be taken during pregnancy because it may cause birth defects in humans.
Sulfasalazine	Sulfasalazine works to reduce the signs and symptoms of rheumatoid arthritis by suppressing the immune system.	Sulfasalazine can cause abdominal pain, aching joints, diarrhea, headache, sensitivity to sunlight, loss of appetite, nausea or vomiting, and a skin rash.	Monitoring by a doctor is important, particularly if you are allergic to sulfa drugs or aspirin, or if you have a kidney, liver, or blood disease.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

Medications	Uses/Effects	Adverse Effects	Monitoring
Biologic response modifiers	Biologic response modifiers selectively block parts of the immune system that play a role in inflammation. Long-term efficacy and safety are uncertain.	Biologic response modifiers can cause increased risk of infection, especially tuberculosis, increased risk of pneumonia, and listeriosis (a foodborne illness caused by the bacterium <i>Listeria monocytogenes</i>).	It is important to avoid eating undercooked foods (including unpasteurized cheeses, cold cuts, and hot dogs) because undercooked food can cause listeriosis for patients taking biologic response modifiers.
Tumor necrosis factor inhibitor <i>Etanercept</i> <i>Infliximab</i> <i>Adalimumab</i> <i>Golimumab</i>	These medications are highly effective for treating patients with an inadequate response to DMARDs. They may be prescribed in combination with some DMARDs, particularly methotrexate. Etanercept is given in one or two subcutaneous (beneath the skin) injections per week. Infliximab is taken intravenously during a 2-hour procedure and is administered with methotrexate. Adalimumab requires injections every 2 weeks. Golimumab is given once a month by subcutaneous injection. It is administered with methotrexate.	<i>Etanercept</i> : Pain or burning in the throat; redness, itching, pain, and/or swelling at injection site; a runny or stuffy nose. <i>Infliximab</i> : Abdominal pain; cough; dizziness; fainting; headache; muscle pain; runny nose; shortness of breath; sore throat; vomiting; wheezing. <i>Adalimumab</i> : Redness; rash; swelling; itching; bruising; sinus infection; headache; nausea. <i>Golimumab</i> : Respiratory infection; sore throat; nasal congestion.	Long-term efficacy and safety are uncertain. Monitoring by a doctor is important, particularly if you have an active infection, exposure to tuberculosis, or a central nervous system disorder. Evaluation for tuberculosis is necessary before treatment begins.
Interleukin-1 inhibitor <i>Anakinra</i>	Anakinra requires daily injections.	Anakinra can cause redness, swelling, bruising, or pain at the site of injection; headache; upset stomach; diarrhea; runny nose; and stomach pain.	Monitoring by a doctor is required.

Medications Commonly Used to Treat Rheumatoid Arthritis (continued)

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Selective costimulation modulator <i>Abatacept</i>	Abatacept is given intravenously in a 30-minute infusion. It may be given alone or with DMARDs.	Abatacept can cause cough, dizziness, headache, infections, and a sore throat.	Monitoring by a doctor is required.
CD20 antibody <i>Rituximab</i>	Rituximab is used for people whose rheumatoid arthritis has not responded to other biologic agents. It is given by two intravenous infusions 2 weeks apart and is given with methotrexate.	Rituximab can cause abdominal pain, chills/shivering, fever, headache, infection, and itching.	Monitoring by a doctor is required.

*NOTE: Brand names included in this table are provided as examples only; their inclusion does not mean that these products are endorsed by the National Institutes of Health or any other government agency. Also, if a particular brand name is not mentioned, this does not mean or imply that the product is unsatisfactory.