



# Tocilizumab (Actemra)

Tocilizumab (*Actemra*) is an agent in the class of drugs known as biologic disease modifiers. It is used to treat adult onset rheumatoid arthritis (RA) and the systemic form of juvenile idiopathic arthritis (JIA). Biologic disease modifiers are genetically engineered drugs that are used to modify imbalances of the immune system in autoimmune disease. Some of these agents block, or modify, the activity of selected cells in the immune system, while others—including tocilizumab—work by blocking certain messenger proteins, known as cytokines, that send signals between those cells. In other words, some medicines directly affect the cells, and others block the communication between cells.

## Fast Facts

- Tocilizumab is an agent in the class of drugs known as biologic response modifiers.
- Tocilizumab is administered as a monthly intravenous infusion.
- The risk of infection with tocilizumab appears to be similar to that of other biologic response modifiers.

## Uses

Tocilizumab has been approved by the Food and Drug Administration for use in patients with rheumatoid arthritis who have active disease despite having been treated with one or more disease modifying anti-rheumatic drugs – also called DMARDs – including other biologic response modifiers such as TNF inhibitors or methotrexate. It is also approved for use in children over 2 years of age with the systemic form of JIA. Studies of the use of tocilizumab in children with systemic JIA showed improvement in fevers, a feeling of well-being, and in blood tests that measure inflammation. The drug is undergoing study in children with other forms of JIA.

## How it works

Tocilizumab works by blocking a cytokine known as interleukin 6, or IL-6, which is believed to be one of the factors that cause inflammation in rheumatoid arthritis. Tocilizumab is an antibody that blocks the spot where IL-6 attaches to the surface of cells. When IL-6 is unable to attach to these cells, it is unable to activate them or turn them on. As a result, the cells are unable to drive inflammation in rheumatoid arthritis. The goal of treatment with tocilizumab is to reduce the symptoms of rheumatoid arthritis, including pain and swelling. Studies have also shown that it slows or prevents the joint damage associated with the disease.

## Dosing

Tocilizumab is given as an infusion into a vein, either in the hospital or in a doctor's office. The infusions, which take about an hour, are repeated every 4 weeks. Although some patients may improve during the weeks after the first infusion, it may take as long as 6 -12 weeks to see results. For children with systemic JIA, dosing can be as frequent as every two weeks. The tocilizumab dose is adjusted according to the patient's weight. The starting dose in adults is 4 milligrams of tocilizumab per kilogram of body weight, but the dose can be increased to 8 milligrams per kilogram if needed to control arthritis. In children, the dose is 8 milligrams per kilogram in those weighing over 30 kilograms (66 pounds) and 12 milligrams per kilogram in those under 30 kilograms. Tocilizumab may be given by itself or in combination with methotrexate or other non-biologic drugs used to treat rheumatoid arthritis. Tocilizumab should not be given in combination with another biologic agent.

## Side effects

Reactions to tocilizumab infusions, including fever and chills, can occur, but these are rare. Perhaps the most concerning potential side effect with regular therapy is the risk of infection, as it is with most biologic therapies. The primary concern is for common bacterial infections. Unusual infections, such as tuberculosis (TB), have not been seen frequently with tocilizumab, but they do remain a concern, and screening for prior exposure to TB is recommended before starting tocilizumab therapy. Screening and monitoring for TB and other important but unusual infections, including fungal infections, is important during treatment with tocilizumab. Overall, the rate of infection seen in clinical trials with tocilizumab was similar to that seen with other biologic drugs used in the treatment of rheumatoid arthritis.

Tocilizumab has been associated with increased cholesterol levels in some patients. After you start taking tocilizumab, your doctor will periodically do blood tests to check your cholesterol level. If your cholesterol level becomes too high, it is possible you may need to start taking a medication to lower it. Tocilizumab also can cause an increase in some liver enzymes or a decrease in the white blood cells important in fighting infections and/or platelets (important for blood clotting); all of these are measured with regular blood tests. Your doctor will check these tests after you start taking tocilizumab and may need to adjust the dose of tocilizumab or other medications you may be taking, such as methotrexate, if any of these problems occur.

Finally, a rare complication seen with tocilizumab use in clinical trials was bowel perforation, or a hole in the bowel wall. If you have any abdominal pain or bloody bowel movements while taking tocilizumab, you should notify your doctor immediately.

## Points to remember

- Tocilizumab is a biologic response modifier for the treatment of rheumatoid arthritis and JIA.
- It has been approved by the FDA for use in patients who have not responded to other DMARDs or other biologic response modifiers, and it may be given with or without methotrexate and/or other non-biologic drugs.
- It has been approved by the FDA for use in children with systemic JIA; it is being studied in other forms of JIA.
- It should not be taken with another biologic agent for the treatment of rheumatoid arthritis.
- Blood tests will be used to monitor for increases in cholesterol or liver enzymes and for reductions in blood cell counts while taking tocilizumab.
- Fever or other symptoms of infection and any significant abdominal pain should be reported immediately to your primary doctor and/or your rheumatologist.

## To find a rheumatologist

[View a listing of rheumatologists in your area](#)

Learn more information about [rheumatologists](#) and [rheumatology health professionals](#)

## For additional Information

The American College of Rheumatology has compiled this list to give you a starting point for your own additional research. The ACR does not endorse or maintain these websites, and is not responsible for any information or claims provided on them. It is always best to talk with your rheumatologist for more information and before making any decisions about your care.

ACTEMRA® tocilizumab

[www.Actemra.com](http://www.Actemra.com)

ACR Patient Fact Sheet – Juvenile Arthritis

[www.rheumatology.org/practice/clinical/patients/diseases\\_and\\_conditions/juvenilearthritis.asp](http://www.rheumatology.org/practice/clinical/patients/diseases_and_conditions/juvenilearthritis.asp)

U.S. Food and Drug Administration approves Actemra to treat rare form of juvenile arthritis

[www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm251572.htm](http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm251572.htm)

*Updated March 2013. Written by Eric Ruderman, MD, and John Tesser, MD, and reviewed by the American College of Rheumatology Communications and Marketing Committee. This patient fact sheet is provided for general education only. Individuals should consult a qualified health care provider for professional medical advice, diagnosis and treatment of a medical or health condition.*

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