



Arthritis in Children

Growing up with arthritis can be challenging. However, with care from a team of rheumatology professionals, most children with arthritis live full and active lives. There are various types of childhood arthritis, which can last from several months to many years. In every instance, early diagnosis and treatment can help avoid joint damage.

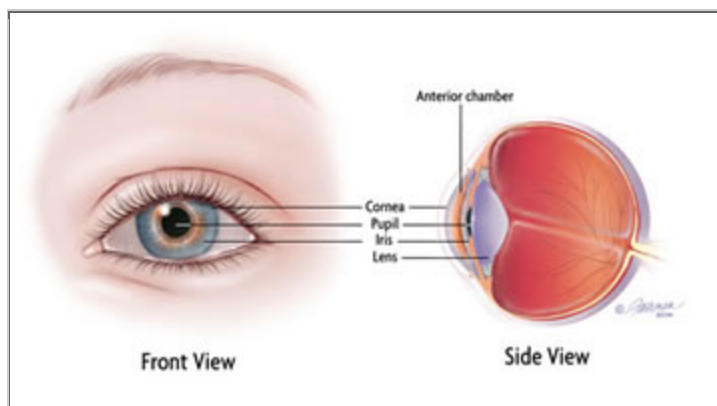
Fast facts

- Juvenile Idiopathic Arthritis (JIA) may involve one or many joints, and cause other symptoms such as fevers, rash and/or eye inflammation.
- Arthritis in children is treatable.
- It is important to seek treatment from health care professionals who are knowledgeable about childhood arthritis.
- Federal and state programs may provide assistance with school accommodations or services.

What is Juvenile Idiopathic Arthritis (JIA)?

There are many terms used to describe a child with chronic arthritis. These include Juvenile Rheumatoid Arthritis (JRA), Juvenile Chronic Arthritis (JCA) and Juvenile Idiopathic Arthritis (JIA). While JIA is used most by specialists in pediatric rheumatology, other terms, especially JRA, are more common in the United States.

Under the JIA heading are several types of JIA, all involving chronic (long-term) joint inflammation. This inflammation begins before patients reach the age of 16, and symptoms last from 6 weeks to 3 months in



Some children with arthritis develop uveitis, an inflammation of the eye.



order to be called chronic. JIA may involve one or many joints, and cause other symptoms such as fevers, rash and/or eye inflammation.

Systemic onset JIA affects about 10 percent of children with arthritis. It begins with repeating fevers that can be 103°F or higher, often accompanied by a pink rash that comes and goes. Systemic onset JIA may cause inflammation of the internal organs as well as the joints, though joint swelling may not appear until months or even years after the fevers begin. Anemia (a low red blood cell count) and elevated white blood cell counts are also typical findings in blood tests ordered to evaluate the fevers and ongoing symptoms. Arthritis may persist even after the fevers and other symptoms have disappeared.

Oligoarticular JIA, which involves fewer than five joints in its first stages, affects about half of all children with arthritis. Girls are more at risk than boys. Older children with oligoarticular JIA may develop “extended” arthritis that involves multiple joints and lasts into adulthood. Children who develop this form of JIA when they are younger than 7 years old have the best chance of having their joint disease subside with time, but are at increased risk of developing an inflammatory eye problem (iritis or uveitis). Eye inflammation may persist independently of the arthritis. Because iritis usually does not cause symptoms, regular exams by an ophthalmologist (eye doctor) are essential to both detect these conditions and identify response to treatment to prevent vision loss.

Polyarticular JIA affects five or more joints and can begin at any age. Children diagnosed with polyarticular JIA in their teens may actually have the adult form of rheumatoid arthritis at an earlier-than-usual age.

With *Psoriatic Arthritis*, children have both arthritis and a skin disease called psoriasis or a strong family history of psoriasis.

Enthesitis Related Arthritis is a form of JIA that often involves attachments of ligaments as well as the spine. This form is sometimes called a spondyloarthropathy. These children more often have joint pain without obvious swelling and may complain of back pain and stiffness.

What causes JIA?

Malfunctioning of the immune system in JIA targets the lining of the joint, known as the synovial membrane. This causes inflammation. When the inflammation persists, joint damage may occur. (See diagram of normal joint versus inflamed joint below.)

It is not known what causes the immune system to malfunction in JIA. These conditions are not considered hereditary and rarely involve more than one family member. Research suggests that some individuals have a genetic tendency to JIA, but develop the condition only after exposure to an infection or other unknown trigger. Dietary and emotional factors do not appear to play a role in the development of JIA.

Who gets JIA?

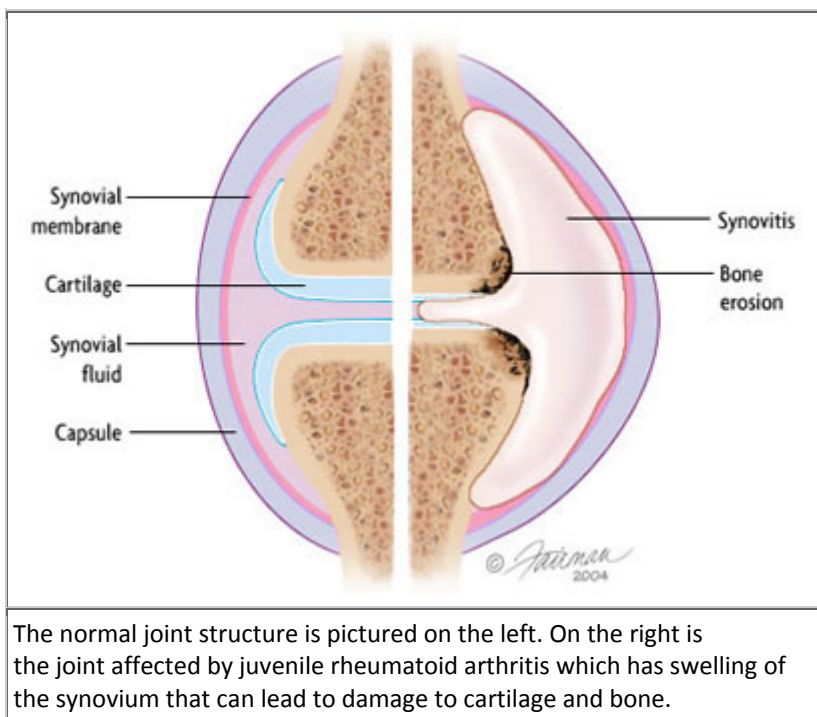


About 1 child in every 1,000 develops some type of juvenile arthritis. These disorders can affect children at any age, although rarely in the first six months of life. It is estimated that around 300,000 children in the US have been diagnosed with JIA.

How is JIA diagnosed?

JIA may be difficult to diagnose because some children may not complain of pain at first, and joint swelling may not be immediately obvious. There is no blood test that can be used to diagnose the condition. As a result, diagnosis of JIA depends on physicals, medical history and the elimination of other diagnoses. Typical symptoms include:

- limping
- stiffness when awakening
- reluctance to use an arm or leg
- reduced activity level
- persistent fever
- joint swelling
- difficulty with fine motor activities



Other conditions that can look like JIA, including infections, childhood cancer, bone disorders, [Lyme disease](#) and [lupus](#) must also be ruled out before a diagnosis of JIA can be confirmed.

How is JIA treated?

Optimal care is tailored for each child with JIA and provided by an experienced team of healthcare providers that should include a pediatric rheumatologist, physical and occupational therapist, social worker and nurse specialist. This core team can coordinate efforts with the child's pediatrician, adult rheumatologists, other physicians (such as an ophthalmologist or orthopedic surgeon) and other health professionals (dentist, nutritionist or psychologist) as well as reach out to schools and additional community resources as necessary to ensure that the child receives the best care possible.

The overall treatment goal is to control symptoms, prevent joint damage and maintain function. Children with polyarticular JIA whose joint swelling persists and who test positive for rheumatoid factor (an antibody found in approximately 80% of adult patients with [rheumatoid arthritis](#)) are more likely to develop joint damage, and may require more aggressive treatments.



The first line of treatment involves a non-steroidal anti-inflammatory drug ([NSAID](#)), such as ibuprofen (such as *Motrin* or *Advil*) or naproxen (*Naprosyn*), administered in a dose appropriate for the child. Younger children may be given liquid preparations or medications that require less frequent use. Because NSAIDs can cause gastrointestinal distress, such as stomachaches, they should be taken with food.

Disease modifying drugs (DMARDs) are added as a second-line treatment when arthritis does not respond to NSAID therapy. DMARDs include [hydroxychloroquine](#) (*Plaquenil*), [sulfasalazine](#) (*Azulfidine*), [methotrexate](#) (*Rheumatrex*), and more recently developed medications known as biologics. The biologics include “anti-TNF agents” such as etanercept (*Enbrel*), infliximab (*Remicade*), and adalimumab (*Humira*) as well as *abatacept* (*Orencia*) and *anakinra* (*kineret*). Each of these medications can cause side effects that need to be monitored and discussed with the rheumatologist. Some of these medications have been FDA-approved only for adults, but [clinical trials](#) are under way to test their effectiveness and safety in children. In addition, new treatments are being developed.

Where only a single joint is involved, a steroid preparation can be injected into the joint before any additional medications are given. Oral steroids such as prednisone (*Deltasone*, *Orasone*, *Prelone*, *Orapred*) may be used in certain situations, but only for as short a time and at the lowest dose possible. The use of long-term steroid is associated with unacceptable side effects such as weight gain, poor growth and risk of infection.

Prevention

Because it is not known what causes JIA, it is not known how to prevent these conditions.

Children living with arthritis

Children with JIA should attend school, participate in extra-curricular and family activities, and live life as normally as possible. To foster a healthy transition to adulthood, adolescents with JIA should be allowed to enjoy independent activities, such as taking a part-time job and learning to drive.

A positive outlook and continued physical activity will help. Physical and occupational therapy can increase joint motion, reduce pain, improve function, and increase strength and endurance. Therapists may construct splints to prevent permanent joint tightening or deformities, and work with school-based therapists to address issues at school.

Opportunities for the child to interact with other children who have arthritis may be available in or near your community. The rheumatology team may be able to provide information about summer camps and other group activities.

Parents should be familiar with Federal Act 504, which may provide children with JIA special accommodations at school. Families with children with rheumatic diseases may be eligible for assistance through state agencies or services such as vocational rehabilitation. They may also benefit from information and activities available through the American Juvenile Arthritis Organization, listed below under resources.



Points to remember

- Arthritis in children consists of several diseases that may present in different ways.
- In spite of their diagnosis, most children with arthritis can expect to live normal lives.
- Ask the rheumatology team about summer camps and opportunities to meet other children with arthritis.

The rheumatologist's role in the treatment of arthritis in children

The best care for children with arthritis is provided by a pediatric rheumatology team that has extensive experience, and can diagnose and manage the complex needs of the child and family most effectively. The core team may consist of a pediatric rheumatologist, physical and occupational therapist, social worker, and nurse specialist. These professionals can coordinate care with the child's pediatrician, adult rheumatologists, other physicians and health professionals, as well as schools and community resources to ensure the child's best long-term physical and psychological health.

To find a rheumatologist

For more information about rheumatologists, [click here](#).

For a listing of rheumatologists in your area, [click here](#).

For more 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 Web sites, 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.

The Arthritis Foundation

<http://www.arthritis.org>

The American Juvenile Arthritis Organization (a council of The Arthritis Foundation)

http://www.arthritis.org/communities/juvenile_arthritis/about_ajao.asp

National Institute of Arthritis and Musculoskeletal and Skin Diseases Information Clearinghouse

<http://www.niams.nih.gov>

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Written by Leslie S. Abramson, MD, and reviewed by the American College of Rheumatology Patient Education Task Force.

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2200 Lake Boulevard NE • Atlanta, GA 30319

Phone: (404) 633-3777 • Fax: (404) 633-1870

www.rheumatology.org • info@rheumatology.org

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