

Juvenile Idiopathic Arthritis (JIA)

What Is Juvenile Idiopathic Arthritis?

Juvenile idiopathic arthritis (JIA) refers to chronic joint inflammation in someone 16 or younger that lasts at least six weeks. Left untreated, this inflammation can permanently damage joints. The most common form of childhood arthritis, JIA affects more than 50,000 children in the United States.

Types of JIA

There are many categories of juvenile idiopathic arthritis. However, the three most common types are oligoarticular, polyarticular and systemic.

Oligoarticular arthritis

The most common type of arthritis in children, oligoarticular arthritis affects four or fewer joints—usually large joints such as knees, ankles or elbows. It often affects a particular joint on one side of the body. It affects more girls than boys.

Young children who develop oligoarticular arthritis might have greater risk of eye inflammation (called iritis). Iritis doesn't usually cause noticeable symptoms, but if untreated it can cause permanent damage. As a result, kids with this form of arthritis should have regular eye exams.

Polyarticular arthritis

Polyarticular arthritis affects five or more joints, often the same joint on both sides of a child's body. Typical affected areas include weight-bearing joints such as:

- Knees.
- Ankles and feet.
- Neck.
- Jaw.

Systemic arthritis

Sometimes known as Still's disease, systemic arthritis affects many areas of the body, including joints and internal organs. It's the least common form of the top three types, and it affects roughly 10 to 20 percent of children who have juvenile arthritis. Systemic arthritis generally causes spiking fevers and a rash of pale red spots, often on the

trunk or limbs. It affects boys and girls equally, and rarely causes eye inflammation.

What Causes JIA?

Juvenile idiopathic arthritis is an autoimmune disease. That means it turns the immune system against the body's own cells and tissues, instead of limiting its attacks to infections and tumors. No one knows why some people develop autoimmune diseases.

Experts have identified many of the genes that regulate the immune system and make some children more likely to develop arthritis. It's also clear that trauma, infections and excessive wear or stress on joints can make pediatric arthritis worse. Unfortunately, it's impossible to predict who will develop juvenile idiopathic arthritis.

JIA Symptoms and Effects

Joint inflammation is a key symptom of active arthritis. When the lining of a joint produces too much fluid, the joint swells, causing warmth, pain and stiffness. Although symptoms of juvenile idiopathic arthritis vary depending on type and level of seriousness, warning signs from your child can include:

- Stiffness in the morning or after a nap.
- Limping.
- Complaints of pain.
- Lingering fever, rash, or swollen glands.
- Holding a joint still, or refusing to use an arm or leg.
- Fatigue and noticeably reduced energy level.

As with other forms of arthritis, symptoms of JIA can at times get worse (during flare-ups) or disappear (during remission). Every child experiences JIA differently. Some children might have only one or two flare-ups in their entire lives. Others might experience many flare-ups, or even have permanent symptoms.

Associated Complications

Children who have juvenile idiopathic arthritis can also be at greater risk of several associated issues. Eye inflammation (called iritis), occurs more frequently in children who have arthritis. Because iritis can be difficult to detect (sometimes it causes no discomfort) children who have JIA should have regular eye exams.

Because joint inflammation also changes how quickly bones grow, certain bones might become longer, shorter, bigger or smaller than normal. Atypical bone and muscle development can affect a child's walking pattern (also known as gait), reducing their ability to participate in social activities. Growth usually improves or normalizes once the arthritis is under control.

JIA Diagnosis and Treatment

Because symptoms are different for each child, JIA can be difficult to diagnose. If your pediatrician suspects the condition, they might refer your child to a pediatric rheumatologist at Gillette Children's Specialty Healthcare. Here, rheumatology experts will evaluate, diagnose and create a treatment plan for your child.

Diagnosis

The Gillette rheumatology team uses a series of tests to rule out other diseases with symptoms similar to those of JIA, such as:

- Viral infections.
- Bacterial infections such as Lyme disease.
- Inflammatory bowel disease.
- Lupus.
- Dermatomyositis.
- Some forms of cancer.

The tests to diagnose JIA often include **X-rays** or **MRI** exams to confirm or rule out fractures, tumors, infections and congenital disorders. Your child might have blood tests to:

- Rule out other illnesses.
- Classify a particular type of arthritis.
- Predict the likelihood that a child will develop the eye inflammation that sometimes accompanies the condition.

If test results lead to a diagnosis of juvenile idiopathic arthritis, our pediatric rheumatologists will work with you and your child to develop an effective treatment plan.

Treatment

Once your child is diagnosed with JIA, we begin treatment with anti-inflammatory or immune-suppressive medicines to relieve pain and block inflammation. Your child will get medicines delivered directly into the affected joint, or by IV infusion into the bloodstream.

Depending on your child's needs and the seriousness of their arthritis, we might use other treatments and interventions including:

- **Physical** and **occupational therapy** to stretch joints and strengthen muscles for improved mobility and range of motion.
- **Braces (also called orthoses)**, shoe inserts or splints to support affected joints and relieve pain.
- Exercise and physical activity to reduce joint pain and stiffness.
- Proper nutrition to help with weight control, minimizing joint strain.

- Massage to relax the muscles surrounding inflamed joints.
- Surgery, in extreme cases, to release tissue causing joint tightness and to remove inflamed tissue.

With proper diagnosis and treatment, juvenile idiopathic arthritis can be successfully managed. Our pediatric rheumatology experts can minimize the impact of JIA on everyday life, helping to reduce—or even eliminate—your child’s symptoms.

Integrated Care

For children who have JIA, joint pain and lack of mobility can make daily life feel stressful and overwhelming.

You and your child will meet with specialists who understand the connection between JIA and other conditions, such as issues with physical growth and joint pain. We treat children who have a broad range of rheumatic conditions, helping them manage these conditions while developing emotionally and physically.

As a regional referral center, Gillette treats hundreds of kids from Minnesota and the Midwest region every year. We also collaborate with the University of Minnesota and the Mayo Clinic to learn more about the cause of juvenile arthritis and other rheumatic conditions, which affect the joints and muscles.

In addition to pediatric rheumatologists, your child might also work with specialists in the following areas:

- [Assistive technology](#).
- [Child life](#).
- [Nutrition and feeding](#).
- [Psychology](#).
- [Radiology and imaging](#).
- [Rehabilitation therapies](#), including [physical therapy](#) and [occupational therapy](#).
- [Rheumatology](#).
- [Therapeutic recreation](#).

From Juvenile Arthritis to Miss Teen Minnesota

Nicole Doyle shares her Gillette experience in “From Juvenile Arthritis to Miss Teen Minnesota” on Kids Health Matters.

[Previous Article](#) [Next Article](#)

1 / 5

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If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](#).