

## What is JIA?

Juvenile Idiopathic Arthritis (JIA) is the term used to describe various types of chronic arthritis in children under the age of 16 years. It is also known as Juvenile Chronic Arthritis or Juvenile Rheumatoid Arthritis.

This is a disease of the immune system that affects multiple joints in the body, causing pain, stiffness and swelling in the affected joints.

## What happens to the joints in JIA?

The body's immune system usually fights foreign bacteria, viruses and diseased cells in the body. In JIA, the immune system attacks the joints and their surrounding tissues, which become inflamed. The continual attack by the immune system causes damage to the joints over time. As the condition progresses, the inflammation, pain and stiffness of the joints tend to increase in severity, ultimately leading to deformity of joints and loss of overall mobility.

In the case of juvenile arthritis, the synovial membrane that covers the joints becomes the target of the immune system's attack which leads to destruction of the bone and cartilage of the joint.

## Who gets affected?

Any child can get affected by arthritis. By definition, the symptoms of JIA start before the 16th birthday.

## What are the risk factors for JIA?

Like other autoimmune diseases, JIA is linked to genetic factors associated with an abnormal immune response. A family history of JIA and/or other autoimmune diseases is a risk factor but there is no precise way of predicting how high the risk.

## What are the symptoms of JIA?

Symptoms of JIA include joint pain, swelling, tenderness, warmth and stiffness that last for more than 6 continuous weeks. Stiffness is typically worse in the morning or after a nap. JIA commonly affects the knees and the joints in the hands and feet.

A small group of children have a systemic form of the disease, characterised by fever and rash in addition to arthritis. The rash and fever may appear and disappear very quickly, and may appear before the joint symptoms.

Typically, there are periods when the symptoms of JIA are better or disappear (remissions) and times when symptoms get worse (flares).

## How is JIA diagnosed?

The diagnosis of JIA is best made by taking a detailed history and doing a physical examination to look for signs of joint inflammation. No single test can be used to diagnose or confirm JIA.

Your doctor may perform the following tests nonetheless:

- **Laboratory tests** – blood tests to assess the degree of inflammation, presence of antibodies, muscle enzymes and help to differentiate among the different types of JIA.
- **X rays or MRI scans** – may detect unusual bone development and changes in soft tissue.

## How is JIA treated?

There is no cure yet for JIA. However, there are various treatment strategies to alleviate symptoms, prevent further joint destruction and regain lost muscle strength and mobility.

- **Medication**  
NSAIDs (non-steroidal anti-inflammatory drugs) like ibuprofen, naproxen, diclofenac (voltaren) and indomethacin are often prescribed to reduce pain, swelling and stiffness. These drugs have no long-term effect on the progression of the disease but will enable children with JIA to feel comfortable. Depending on the severity and progression of the disease, DMARDs



(disease-modifying anti-rheumatic drugs) are often prescribed. These include methotrexate and sulphasalazine. Low dose steroids are occasionally used while waiting for the DMARDs to take effect.

A group of drugs called biologic agents can control JIA quickly and effectively. They are given as injections and are expensive. Your doctor is the best judge of which drug is best for your child.

- **Exercise**

Once inflammation is controlled, it is very important to rebuild muscles and ligaments. Exercise helps to build muscle strength which can help to stabilise the joints and recover their range of motion. Splints and other devices are sometimes useful as well. Children should be encouraged to be active as much as possible.

Most children can take part fully in physical activities and selected sports when their symptoms are under control. During a disease flare, limiting certain activities may be necessary. An acutely swollen and painful joint should be rested. Once the flare is over, the child can start regular activities again. Swimming is particularly useful because it uses many joints and muscles without putting weight on the joints.

- **Complementary and alternative therapies**

Although there is little research to support alternative treatments such as acupuncture or massage, some people seem to benefit from them. Let your doctor know if you are using these as well.

## What are the complications of JIA?

Sometimes JIA can involve the eye and cause inflammation. Children with JIA should undergo regular eye checks by an ophthalmologist.

## Can I prevent JIA?

As we don't fully understand the cause of JIA, there is no way to prevent its onset. However, the disabilities caused by JIA can be prevented with early diagnosis and treatment. A healthy balanced diet and regular exercise are also helpful.

## How can the family help a child live well with JIA?

Family members can do several things to help the child physically and emotionally:

- Get the best care possible.
- Treat the child as normally as possible.
- Learn as much as you can about your child's disease and its treatment.
- Ensure that your child takes the treatment.
- Encourage your child to exercise and take physical therapy.
- Work with therapists and other healthcare providers involved in your child's care.

*Information modified from National Arthritis Foundation, Singapore*



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# Juvenile Idiopathic Arthritis



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