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## Arthritis - juvenile

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### Summary

- Juvenile idiopathic arthritis (JIA) is a group of inflammatory joint conditions that affect children and teens under the age of 16.
  - Symptoms of JIA include joint pain, swelling and stiffness.
  - Working closely with your healthcare team will lead to the best outcomes for your child.
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Most people think that arthritis only affects older people. In fact, one in 800 Australian children has a form of juvenile idiopathic arthritis (JIA).

### What is juvenile idiopathic arthritis?

Juvenile idiopathic arthritis is a group of conditions that cause joint pain and swelling in children and teens under the age of 16, for unknown reasons (idiopathic means 'of unknown cause').

Other names for juvenile idiopathic arthritis include 'juvenile arthritis', 'juvenile rheumatoid arthritis', 'juvenile chronic arthritis' and 'Still's disease'.

### Causes of juvenile idiopathic arthritis

We don't really know what causes JIA, but we do know that it occurs as a result of a malfunctioning immune system.

Your immune system is designed to identify foreign bodies (for example, bacteria and viruses) and attack them to keep you healthy. However, in the case of JIA, the immune system mistakenly attacks healthy tissue in and around the joints, causing ongoing inflammation and pain.

### Types of juvenile idiopathic arthritis

There are different types of JIA, including:

- oligoarticular JIA
- systemic onset JIA
- polyarticular JIA
- enthesitis-related JIA
- psoriatic JIA
- undifferentiated JIA.

### Symptoms of juvenile idiopathic arthritis

The symptoms your child experiences will depend on the type of arthritis they have. Common symptoms include:

- pain, swelling and stiffness in one or more joints
- skin over the affected joints may be warm or red
- mental and physical tiredness, or fatigue.

Less common symptoms include:

- fever
  - rash
  - feeling generally unwell
  - eye inflammation (uveitis).
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## **Oligoarticular JIA**

This is the most common form of JIA. Few joints are affected. It's also sometimes called pauciarticular JIA ('oligo' and 'pauci' mean 'not many' or 'few').

The characteristics of oligoarticular JIA include:

- starts between the ages of two and four years
- is more common in girls
- most often affects larger joints such as knees, ankles, wrists or elbows
- there is the risk of an eye condition called uveitis, which involves inflammation of the inner eye.

The two types of oligoarticular arthritis (based on the number of joints involved) are:

- persistent oligoarticular arthritis – no more than four joints are inflamed six months after diagnosis
- extended oligoarticular arthritis – five or more joints are inflamed after six months from diagnosis

## **Polyarticular JIA**

Polyarticular JIA affects five or more joints. 'Poly' means many.

The characteristics of polyarticular JIA include:

- starts between the ages of one and twelve years
- is more common in girls.
- affects small and large joints
- may cause tiredness and feeling generally unwell.

There are two types of polyarticular JIA based on whether rheumatoid factor (RF) is found in the blood. These are:

- polyarticular JIA – rheumatoid factor negative
- polyarticular JIA – rheumatoid factor positive.

## **Systemic JIA**

Systemic JIA can affect many areas of the body, not just the joints. It's the least common type of juvenile idiopathic arthritis.

The characteristics of systemic JIA include:

- affects boys and girls equally
- affects joints and other parts (systems) of the body such as the skin or internal organs
- often causes a fever, tiredness and a skin rash.

## **Enthesitis-related JIA**

Enthesitis means inflammation of the places where tendons attach to bone (entheses). Other names for this type of arthritis include juvenile spondylitis and juvenile spondyloarthropathies.

The characteristics of enthesitis-related JIA include:

- tends to target the large joints of the legs, the spine and the entheses
- is more common in boys than girls
- usually develops in late childhood or adolescence
- associated with red painful eye condition (acute uveitis)

## **Psoriatic JIA**

Children with psoriatic JIA have inflammatory arthritis of the joints, and the skin condition psoriasis.

The characteristics of psoriatic JIA include:

- the psoriasis and arthritis may not develop at the same time
- is more common in girls
- develops in preschool children, or at around 10 years of age
- there may be a family history of psoriasis
- possible pitting of fingernails or toenails
- usually affects fingers, wrists and toes, but may affect other joints too.

### **Undifferentiated JIA**

This is where the condition does not fit any of the other types of juvenile idiopathic arthritis.

### **Diagnosis of juvenile idiopathic arthritis**

Juvenile idiopathic arthritis is diagnosed using a number of tests including:

- medical history
- physical examination
- blood tests – however, most children diagnosed with juvenile idiopathic arthritis do not have rheumatoid factor in their blood, so blood tests do not eliminate juvenile idiopathic arthritis
- x-rays and scans
- eye examination.

### **Treatment for juvenile idiopathic arthritis**

There's no cure for JIA. Working closely with your healthcare team will lead to the best outcomes for your child. Doctors, nurses, physiotherapists, occupational therapists, dietitians, podiatrists, psychologists and social workers may all be a part of your child's healthcare team.

As there are different types of juvenile idiopathic arthritis, and the effects of each are different, treatment needs to be tailored to each child.

### **Medication**

Most children with JIA – regardless of the type – will have to take some form of medication at some time. It depends on the symptoms they're experiencing. There are many different types of medication that work in different ways.

Your doctor will always start with the simplest medications at the smallest doses and work their way up to more complex medications and larger doses depending on how your child's condition responds to the treatments.

The most common types of medications used for JIA are:

- pain-relievers (analgesics) – for temporary pain relief
- creams and ointments – can be rubbed into the skin over a painful joint to provide temporary pain relief
- eye drops – to treat eye inflammation
- non-steroidal anti-inflammatory drugs (NSAIDs) – to control inflammation and provide pain relief
- corticosteroids – used to quickly control or reduce inflammation. They can be taken as tablets or given by injection directly into a joint, muscle or other soft tissue
- disease modifying anti-rheumatic medications (DMARDs) – work on controlling the immune system. These medications help relieve pain and inflammation, and can also reduce or prevent joint damage
- biologics and biosimilar medicines (bDMARDs) – are also a type of disease modifying drug. They also work on controlling the immune system. However unlike other disease modifying drugs, biologics target specific cells and proteins that are causing the inflammation and damage, rather than suppressing the entire immune system.

### **Self-management of JIA**

There are many things you and your child can do to manage their condition such as:

- Follow the plan that your health professionals have developed. That means taking medications as they've

been prescribed, doing the exercises the physiotherapist or occupational therapist have provided, and letting your doctor know of any changes to your child's symptoms and how they're feeling. All of these things give your child a better chance of managing their JIA well and reducing the risk of long-term problems.

- Stay active. Physical activity is the key to maintaining muscle strength, joint flexibility and managing pain. A physiotherapist or exercise physiologist can help design an individual program for your child.
- Learn ways to manage pain. There are many strategies you can use to help your child deal with pain. From heat and cold treatments, distraction, massage and medication, there are many ways your child can manage pain.
- Eat well. While there's no diet that can cure JIA, a healthy and well-balanced diet is the best for good health. Keeping to a healthy weight is also important as extra weight puts added strain on your child's joints, especially load bearing joints such as the hips, knees and ankles.
- Protect joints. Find out about aids, equipment and gadgets that can make tasks easier. An occupational therapist can give you advice.
- Stay at school. It's good for your child's health and wellbeing. Talk to your doctor, allied health professionals and teachers about ways to help your child stay at school, and keep up with school.

### Where to get help

- Your **GP (doctor)**
- Paediatric rheumatologist
- **Musculoskeletal Australia** - formerly MOVE Help Line. Tel. **1800 263 265**

**This page has been produced in consultation with and approved by:**

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