Resource

JIA Medication

JIA is an auto-immune condition, so the main drugs used to control it are drugs called ‘immunosuppressants’, which help to get the immune system under better control. Other drugs, such as painkillers and anti-inflammatories will also often be given to help control the symptoms.

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Why are medicines important?

Early treatment with effective medication gives the best long-term outlook for children and young people with JIA. It can prevent damage and can maximise long-term outcomes.

The aim of treatment is to put JIA into remission, which means that JIA is no longer active and isn’t causing damage to the joints. The medicines that are used to treat JIA are very effective at minimising disease activity.

It is important to understand that JIA cannot be put into remission without medication. Diets or ‘complementary’ therapies alone are ineffective treatments for JIA. There’s more on this later.

In order to be effective, JIA medicines need to be taken regularly, as prescribed, and usually for a long time. There are many different medicines in use, so if one becomes less effective over time, which can happen, there are many other options available that can help.

The JIA Medicines Directory (below) contains a comprehensive listing of all the medications currently used to treat JIA in the UK. Your child will not take all of them all the time, but typically one or two, depending on which joints are involved, the extent of their JIA and their response to medications they have taken previously. The type of JIA may have some bearing, too, but is less important on a day-to-day level than previously thought.

How JIA medication works

Because JIA is an autoimmune disease, the medication used to treat it works by affecting the body’s immune system in different ways.

The immune system

The immune system is the body’s natural defence against infection and viruses, etc. It is a highly complex network of cells, chemicals, tissues and organs.

Imagine that the human body is a building, and that the immune system is the security system, designed to protect it from external threats. The immune system, however, is not one, single mechanism, like an alarm system that can be switched on or off as needed. Rather, it is a complex network of different processes that have evolved over millions of years to become a highly sophisticated, integrated system which can identify intruders, attack and destroy them and can also heal. In JIA, the immune system is triggered into behaving badly – it over-reacts and doesn't 'switch off'.

The complexity of the immune system, unique to each individual, is why we cannot predict which joint will be involved in JIA or how each child will respond to a medicine over time.

How JIA medicines affect the immune system

JIA medicines influence the working of the immune system, to dampen down the inflammation that can damage the joints. Some older medicines suppress the entire immune system. But most of the medicines in use today are targeted, so that they suppress just one part of it. The aim is to nudge the excess response of the immune system that causes inflammation in JIA whilst preserving the ability of the body to fight off infection and control other processes.

Immunosuppression

Steroids are immunosuppressant drugs. They are synthetic versions of cortisol, a hormone naturally produced by the body. Cortisol is produced in times of stress, such as when you have an infection. Its production is naturally regulated by the body, so that it is not over-produced. This is not the case when it is used as a medication. High doses of steroids over long periods can cause excess suppression of many parts of the immune system. This immunosuppression occurs in children when on steroids at moderate to high doses for more than a month. It may lead to a few more infections than usual.

Immunomodulation

Other medicines have a more subtle effect on the immune system: they modulate – change or adapt – the excess inflammation associated with JIA, but do not suppress all immune functions. How much this results in excess or harmful infections in children is not fully known but the risk is probably very low. Each drug is different, but, overall, paediatric services do not see lots of patients admitted with infections. A major European registry following large numbers of children with JIA has not shown more infections than in the normal population.

Medicines and the different types of JIA

There are six types of JIA. It is not clear exactly how the immune system is affected in each different type, and there is some debate about how helpful it is to think of JIA in this way. But as things stand, your child will be diagnosed with one of the six types and that may determine which treatment they receive.

Oligoarticular and Polyarticular JIA

These two types of JIA affect the majority of children and young people with the condition.

Some patients with oligo-JIA have just one or two joints affected – often the knees – and they may respond fully to a single joint injection, without need for other medication. They often have a very good outcome.

The rest of those with oligo-JIA and poly-JIA respond well to methotrexate. Any changes in treatment are better determined by the type of joint involved, whether hips, jaw, wrists or feet. These patients may need a biologic medication for a good response.

There is a rare form of ‘poly-JIA with positive rheumatoid factor’, which is distinctly different. Children and young people with this variant do not get the eye condition, uveitis, and appear to respond extremely well to biologics.

Enthesitis-Related JIA

This type of JIA is most often seen in older children. It tends to be a grumbling, sometimes painful, arthritis. It responds well to medication that blocks a chemical called TNFa, part of the immune system’s signalling mechanism, especially if the spine is affected. Such drugs include adalimumab and etanercept.

Psoriatic JIA

Patients with psoriatic arthritis, with or without a rash, have an unpredictable immune system and response to medication is highly individual.

Systemic onset JIA

This type of JIA, marked by a fever or rash at the outset, has a particularly distinct immune mechanism and only occasionally responds to methotrexate or TNF-blockers such as etanercept. Instead, an excellent response is achieved by blocking the immune system proteins IL or IL-6.

Undifferentiated JIA

‘Undifferentiated’ here means ‘not sure which form’. Treatment will vary from child to child.

Directory of medications

Article

Painkillers and anti-inflammatories

Analgesics (painkillers) and Non Steroidal Anti-Inflammatory Drugs (NSAIDs, or anti-inflammatories) help to manage the symptoms of pain and swelling.

i-Rheumatic Drugs (DMARDs)

Article

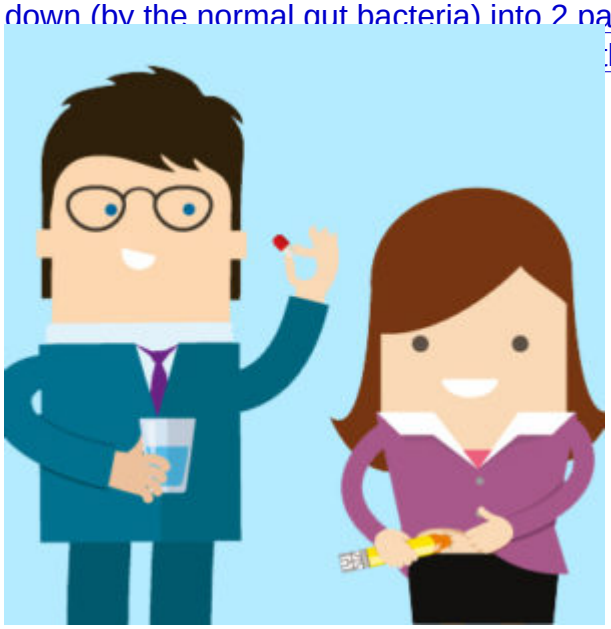
Methotrexate

rd disease modifying anti-rheumatic drug (DMARD) to

Article

Sulfasalazine

Sulfasalazine is known as a disease modifying anti-rheumatic drug (DMARD). In the gut it is broken down (by the normal gut bacteria) into 2 parts, 1 part a sulphonamide antibiotic which kills harmful

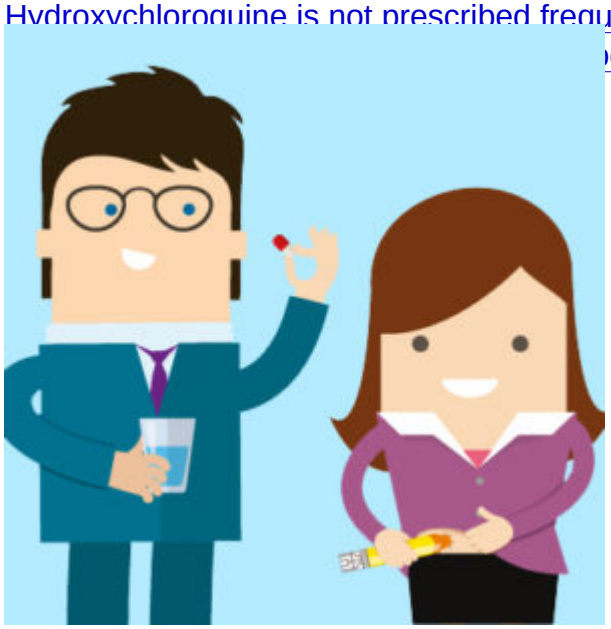


he process driving inflammation as well as helping to

Article

Hydroxychloroquine

Hydroxychloroquine is not prescribed frequently for the treatment of juvenile idiopathic arthritis (JIA),

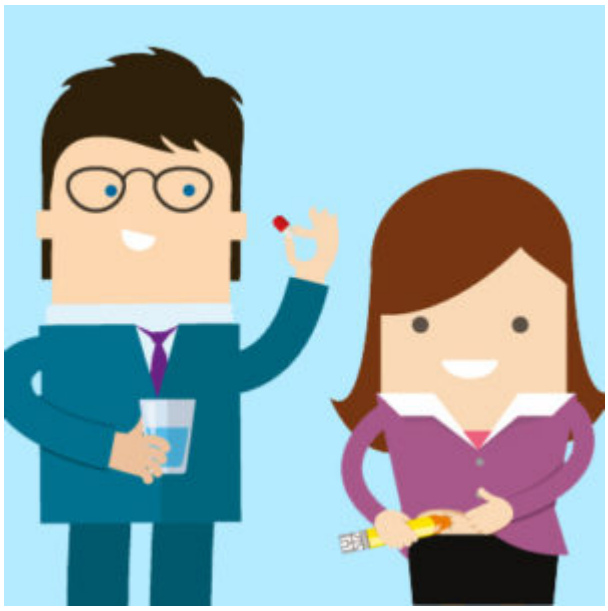


gramme alongside one or two other disease modifying anti-

Article

Leflunomide

Leflunomide is sometimes used as a valuable alternative to methotrexate, especially when there is methotrexate-associated nausea.



Article

Etanercept

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Article

Adalimumab

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Article

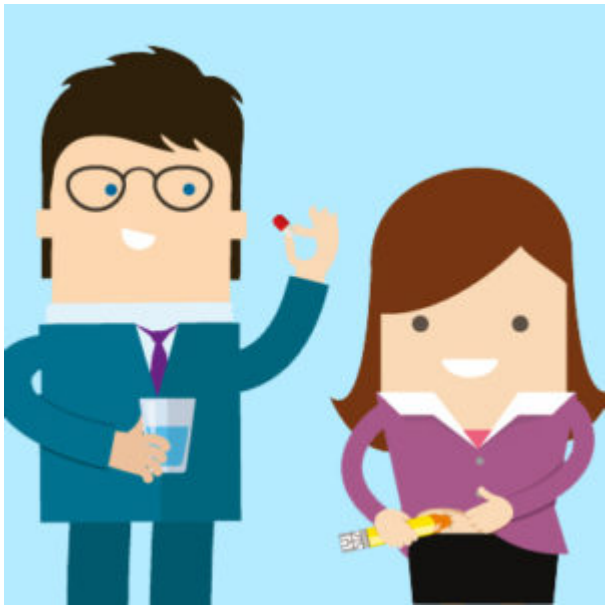
Tocilizumab

Tocilizumab is a ‘biologic’ drug. Biologic drugs are often referred to as ‘targeted therapies’ because they work on specific cells of the immune system. Tocilizumab works on the inflammatory chemical interleukin-6 (IL-6).

Article

Steroids

Steroids are known as corticosteroids or glucocorticoids. Steroids are used to help control many forms of arthritis.



Article

Mycophenolate mofetil

Mycophenolate is used to control uveitis and often in addition to another medication such as methotrexate or a biologic drug. It is not used for control of arthritis.

Article

Research and drug trials

Research helps us to understand all aspects of JIA better, whether it’s through getting more and potentially better treatments for the condition or having a better understanding of the causes and risk factors for JIA.

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