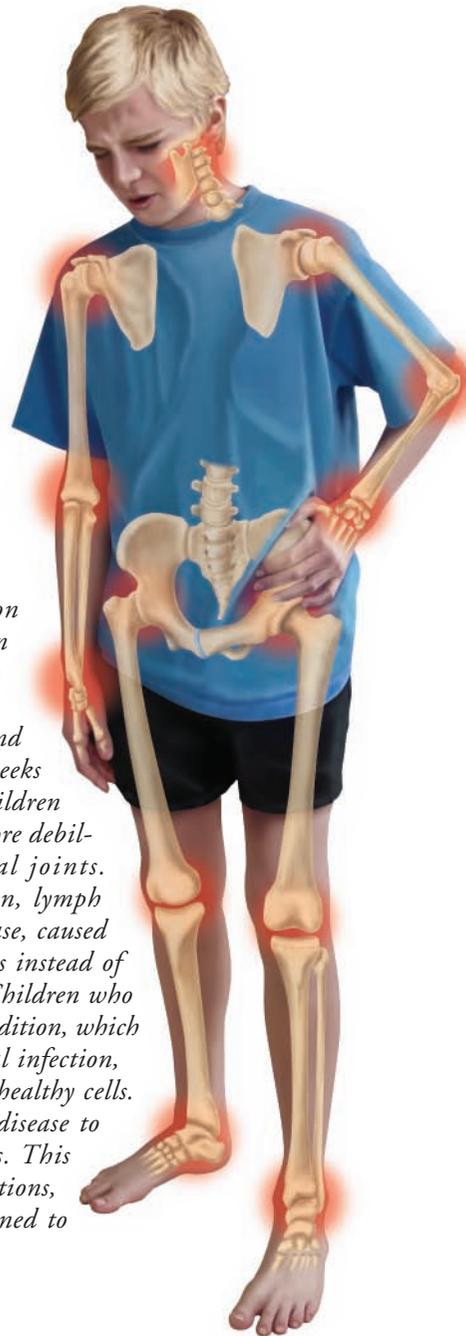


Juvenile Rheumatoid Arthritis

Inflamed Joints Cause Pain and Swelling

Juvenile rheumatoid arthritis (JRA), which affects children 6 weeks to 16 years old, is the most common type of childhood arthritis. When arthritis develops in children, joints usually become inflamed, causing pain and swelling in the area. JRA is diagnosed when a child has suffered arthritis symptoms (inflammation and stiffness) in one or more joints for a minimum of six weeks and no other cause can be found. Although many children have only mild arthritic symptoms, others may have more debilitating disease, with swelling and pain in several joints. Rheumatoid arthritis can even affect the heart, spleen, lymph nodes, and iris of the eye. JRA is an autoimmune disease, caused by the immune system attacking its own healthy tissues instead of fighting off harmful invaders, as it is designed to do. Children who develop JRA may have a genetic predisposition to this condition, which is triggered by an event outside the body such as a viral infection, causing the immune system to wrongly attack its own healthy cells. The goal of treatment is to allow children with this disease to grow up normally, without pain or growth problems. This requires controlling inflammation, usually with medications, and following physical therapy exercise programs designed to allow for full movement of the arthritic joints.



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Physical therapy is important to keep joints moving and muscles strong in patients with JRA. All children with JRA should be encouraged to follow a healthy diet with enough calcium and vitamins to keep bones strong.

JRA Is an Autoimmune Disorder

In JRA, the joints may contract or stiffen, usually after a nap or first thing in the morning. Eventually, these changes can cause damage to the joint and affect its normal growth. With arthritic joint changes, muscles can weaken due to decreases in activity. All these symptoms, which differ in severity, do not appear in all children diagnosed with the condition.

Diagnosis: The diagnosis is not made by any test but is given to a child who has suffered arthritis symptoms in one or more joints for a minimum of six weeks. Other diseases must be ruled

out, however, since there are several causes of joint problems in children, including infections, other autoimmune diseases, and cancers. A thorough physical exam, detailed history of the symptoms, x-rays, and several blood tests are used to confirm the diagnosis. After the diagnosis is made, the patient may be sent to a rheumatologist who specializes in treatment of JRA.

Types of JRA: In about 40% to 50% of patients, four or fewer joints are symptomatic and the diagnosis is called pauciarticular JRA. These patients are often girls younger than 8. Inflammation of the iris of the eye is seen in about 20% of these children, but all children with JRA should have periodic eye examinations. If five or more joints are affected, which happens in about 40% of patients, the condition is known as polyarticular JRA. The symptoms of polyarticular JRA are often seen in the same joint on both sides of the body. Joints that can be affected include those in the fingers, hands, knees, hips, ankles, neck, and jaw. Several medications may be needed to control this type of JRA since so many joints are inflamed. In children with the least common type, systemic JRA, swelling of at least one joint, along with a high fever, light rash, and inflammation of organs including the heart, liver, lymph glands, and spleen occurs. This form can lead to chronic joint problems. Systemic JRA may go into remission, when symptoms disappear, and flare up, when symptoms worsen, especially after a viral infection.

Treatment Goal: The main goal is to minimize symptoms, prevent complications, and allow a normal life. This means doctors, parents, pharmacists, physical therapists, and teachers must all work together. In up to 75% of cases, there will be a complete remission of symptoms as patients grow into adulthood. The most common medications used to relieve pain and control the swelling are nonsteroidal anti-inflammatory drugs, such as ibuprofen, indomethacin, naproxen, diclofenac, and tolmetin. These medications are safe and effective in young patients with JRA. Although aspirin has been used as an anti-inflammatory medicine, it is not used as often now due to the potential to cause Reye's syndrome in children. Glucocorticoids (corticosteroids, or steroids) are also used in certain patients to control inflammation when other types of medication fail to relieve arthritic symptoms. They may be given at the beginning of treatment along with slower-acting medicines that take more time to work. Glucocorticoids, which include prednisone, dexamethasone, and methylprednisolone, can cause serious long-term effects and are used with caution and in the lowest dose possible. If anti-inflammatory drugs are not effective in controlling the symptoms, medications known as disease-modifying antirheumatic drugs (DMARDs) are an option. Methotrexate is a DMARD used safely in children in very small doses with few side effects. Hydroxychloroquine and cyclosporine are other examples. New biologic agents, such as etanercept, work by blocking the high concentrations of inflammatory proteins in patients with JRA. Many more biologic agents are being studied to determine their activity in JRA.