



DETECTING JUVENILE IDIOPATHIC ARTHRITIS REPORT #2761

BACKGROUND: Juvenile idiopathic arthritis (JIA) is the most common type of arthritis in children under the age of 16. It can cause persistent joint pain, swelling and stiffness. Some children experience symptoms for only a few months, while others experience them for the rest of their lives. Some serious complications are growth problems, joint damage and eye inflammation. Treatment focuses on controlling pain and inflammation, improving function, and preventing joint damage. JIA occurs when the body's immune system attacks its own cells and tissues. It's unclear as to why this happens, but both heredity and environment seem to play a role. Certain gene mutations may make a person more susceptible to environmental factors, such as viruses, that may trigger the disease.

(Source: <https://www.mayoclinic.org/diseases-conditions/juvenile-idiopathic-arthritis/symptoms-causes/syc-20374082>)

DIAGNOSIS AND TREATMENT: Some of the most common blood tests for JIA are erythrocyte sedimentation rate (ESR). The sedimentation rate is the speed at which your red blood cells settle to the bottom of a tube of blood, and an elevated rate can indicate inflammation. C-reactive protein is a blood test that measures levels of general inflammation in the body but on a different scale than ESR. Anti-nuclear antibodies are proteins commonly produced by the immune systems of people with certain autoimmune diseases, including arthritis. X-rays or MRI's may be taken to exclude other conditions like fractures, tumors, infection or congenital defects. Treatment for JIA focuses on helping the child maintain a normal level of physical and social activity. Nonsteroidal anti-inflammatory drugs like ibuprofen (Advil, Motrin IB) and naproxen sodium (Aleve) help reduce pain and swelling. Doctors use disease-modifying antirheumatic drugs when NSAIDs fail to relieve symptoms. Also, medications like prednisone may be used to control symptoms until another medication takes effect. It may be recommended that your child work with a physical therapist to help keep joints flexible and maintain range of motion and muscle tone. In very severe cases, surgery may be needed to improve the position of a joint.

(Source: <https://www.mayoclinic.org/diseases-conditions/juvenile-idiopathic-arthritis/diagnosis-treatment/drc-20374088>)

NEW TREATMENTS OFFER HOPE: More recently, drugs extracted from biological sources have become available to treat polyarticular and systemic JIA. Dr. Nikolay Nikolov, a rheumatologist and clinical team leader at the U.S. Food and Drug Administration, says that different biologics tend to work better for different subtypes of the disease. These medications are typically injected under the skin or given intravenously and are usually taken for years. The treatments target specific molecules in the body that trigger inflammation called cytokines, and other naturally occurring proteins that stimulate the immune system. But biologics are powerful drugs that suppress the immune system and can increase children's risk of serious infections, including tuberculosis.

"These drugs may affect the developing body and immune system in children, and that may warrant changes in the labels to let both health care providers and patients know what are the risks involved, and how to recognize and respond to potential problems," said Nikolov.

(Source: <https://www.webmd.com/arthritis/news/20160720/new-treatments-helping-kids-with-juvenile-arthritis#1>)

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