

SCHOOL HEALTH MANUAL

JUVENILE RHEUMATOID ARTHRITIS

MAINE SCHOOL HEALTH ADVISORY COMMITTEE with input from

MAINE DEPARTMENT OF EDUCATION MAINE DEPARTMENT OF

HUMAN SERVICES AND OTHER RELATED ORGANIZATIONS

COMMENTS

The School Health Manual is available electronically. Each section of the Manual is available as a separate electronic file from <http://www.maine.gov/education/sh/index.html>. This will allow for sections to be updated on an ongoing basis. Comments may be given to members of the School Health Advisory Committee or sent to the address below.

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JUVENILE RHEUMATOID ARTHRITIS (JRA): GUIDELINES

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Information in this section has been adapted from "Medical Information Services: Arthritis in Children", Arthritis Foundation, 1987.

JRA affects every child differently, so a child may not have all of the features, and may have only mild problems with some: joint inflammation, joint deformity, joint damage, and altered growth.

JOINT INFLAMMATION, the most common symptom of JRA, causes the heat, pain, swelling, and stiffness in joints that most people think of as arthritis. The lining of the joint, called the synovium (si-NO-vee-um), becomes swollen and overgrown and produces too much fluid. This causes stiffness, swelling, pain, warmth, and sometimes redness of the skin over the affected joints.

JOINT DEFORMITY occurs since it usually hurts to move an inflamed joint, and a child will often hold it still. If the child holds a sore joint in one place for a long time, the muscles around the joint will become stiff and weak. After awhile, the tendons (tissue which connects the muscles to the bone) may tighten up and shorten, causing a deformity called a joint contracture. Doctors usually prescribe an exercise program to help the child keep moving joints fully, and to keep muscles strong.

JOINT DAMAGE control results in long-lasting inflammation damages the joint surfaces. This is called joint erosion, and can result in the crippling in adults. Fortunately, this doesn't happen in many children.

Sometimes joint inflammation either speeds up or slows down the growth centers in bones. This can make the affected bones longer or shorter than normal. If the growth centers in many bones have been damaged by inflammation, a child may stop growing entirely. If no damage has occurred the child will usually continue to grow once the JRA is under.

WHAT ARE THE FEATURES OF EACH TYPE OF JRA?

(Items followed by * are included in the Glossary)

POLYARTICULAR JRA: Polyarticular means "many joints. In this form of JRA, five or more joints are affected. Polyarticular arthritis is like the type of rheumatoid arthritis in adults, and it is the form of arthritis seen most often in children. About 40-50 percent of children with JRA have this form of the disease. Girls get Polyarticular arthritis more often than boys do. Most Common Features •• usually strikes the small joints of the fingers and hands •• can also affect the weight-bearing joints (hips, knees, ankles and feet, neck, and jaw) •• often affects the same joint on both sides of the body.

Other Possible Features •• low fever •• a positive blood test for rheumatoid factor*

- rheumatoid nodules or lumps on an elbow or other point of the body that receives a lot of pressure from chairs, shoes, etc.

PAUCIARTICULAR JRA: Pauciarticular (PHA-see-ar-TICK-u-lar) means "few joints." In this form of JRA, four or fewer joints are affected. Pauciarticular JRA is the second most common form of JRA. It affects about 30-40 percent of children with the disease. Most Common Features

- usually strikes the large joints (knees, ankles or elbows)
- seldom strikes the same joint on both sides of the body.

An Important Possible Complication is an eye inflammation called iridocyclitis. This symptom occurs more often in young girls who get Pauciarticular JRA and who have a positive antinuclear antibody.* In iridocyclitis (EAR-i-doe-sy-KLY-tis), certain tissues in the eyes become inflamed. But this inflammation does not cause any symptoms until it has gone on for a long time. For this reason, it is important for all children with JRA to have their eyes checked by an ophthalmologist. The symptoms of iridocyclitis that might appear include red eyes, eye pain, and failing vision. The ophthalmologist can detect the problem early and start treatment to avoid any serious problems.

B-27 ARTHRITIS*: This form of arthritis was grouped with pauciarticular arthritis, but now appears to be quite different. It occurs mainly in older boys and affects only a few joints - usually in the back and hips. It tends to occur in children who inherit a cell marker called HLA B27.* Unlike pauciarticular arthritis, B-27 arthritis is related to a group of inflammatory diseases including ankylosing spondylitis* and Reiter's disease,* which occur mostly in men between the ages of 20 and 40 years.

Systemic JRA: Systemic JRA affects a child's internal organs as well as the joints. It is the least common form of JRA, and accounts for about 20 percent of children with the disease. Boys and girls are equally likely to get this kind of JRA. Most common features are:

- high fevers usually starting in the late afternoon or evening. The child's temperature may go up to 103 degrees or higher, and then return to normal within a few hours. Chills and shaking often go along with the fever and the child may feel very sick. Periods of fever can last for weeks or even months but rarely go on for more than six months.
- a rash along with the fever. Pale red spots often appear on the child's chest and thighs and sometimes on other parts of the body. This rash comes and goes for many days in a row. It may be present only briefly when the temperature is up.
- inflammation in many joints. Joint problems may begin with the fever or may not start until weeks or even months later. Some children have severe pain in their joints when they have a fever, and then feel much better when their temperature goes down. Joint problems can also go on after the period of fever ends and can be a major long-term difficulty for children with this kind of arthritis.

Other Possible Features

- inflammation of the outer lining of the heart (pericarditis: PARE-i-car-DIE-tis) or the lungs (pleuritis: plur-EYE-tis)
- stomach pain
- severe anemia
- a high level of white cells in the blood

GLOSSARY

Ankylosing Spondylitis - (an-ki-LOW-sing spon-dil-EYE-tis) a type of arthritis, which primarily affects the spine and hips. It is usually seen in males.

Antinuclear Antibody (ANA) - a type of protein found in the blood of some children with polyarticular JRA. ANA is also found in many girls who have pauciarticular JRA and iridocyclitis.

Arthritis - general term meaning inflammation of a joint.

Chronic Disease - an illness which lasts for a long time (months to years), or for the life of the affected individual.

Erythrocyte Sedimentation Rate (called "sed rate" for short) - a blood test which measures how rapidly red blood cells settle to the bottom of a small tube. The red blood cells of a person who has chronic inflammation usually settle more rapidly than normal. This test may be helpful in following the progress of JRA.

Hemoglobin Test - a routine test which measures the amount of hemoglobin in the red blood cells.

HLA-B27 - a protein which can be found on the white blood cells of some people. This protein has been found in many adults who have ankylosing spondylitis. It is also sometimes found in children with JRA, particularly older boys who have arthritis in only a few joints.

Psoriatic Arthritis (sore-ee-A-tick) - a type of arthritis that may occur with the skin condition, psoriasis. (Onset can be sudden and unexplained.)

Reiter's Disease - a form of arthritis that may cause inflammation of the urinary tract, inflammation of the eyelids, mouth ulcers, and anchor skin rash. It is closely related to ankylosing spondylitis.

Rheumatoid Factor - a type of antibody found in the blood of some children with JRA (usually girls with polyarticular JRA).

Rheumatoid Nodule - lump on the elbow or on other points of the body which receive a lot of pressure. These are sometimes seen in children who have polyarticular JRA.

Systemic Lupus Erythematosus (ee-RI-them-a-TOE-sus) a chronic inflammatory disease characterized by fever, rash, and arthritis.