

Arthritis: not just your grandmother's disease

Public awareness about what it really means to have arthritis is slowly growing, but a significant amount of work remains to be done to implement the Alliance for the Canadian Arthritis Program (ACAP)'s priority standard number one: all Canadians must be aware of arthritis. This means that the public must understand that arthritis is not just the inevitable aches and pains of growing old; rather, it is a disease with many faces.

Arthritis can be deadly or mild; devastating or just inconvenient; agonizing or uncomfortable; heartbreaking or hardly noticeable.

In this issue of JointHealth monthly, we present two very different disease spotlights, on osteoarthritis and juvenile idiopathic arthritis. We have grouped these forms of arthritis together precisely because they are so very different. In fact, these types of arthritis differ on almost every level: age of people most likely to be affected, symptoms and treatment. Each of these forms of arthritis can be mild or very severe. What they have in common is this: they are both arthritis.

Our challenge as a community is to help the public, our elected representatives and our governments understand that arthritis has many faces, takes many forms and affects many people. The next time someone tells you that arthritis is a disease of the elderly, show them this issue of JointHealthTM monthly, and tell them the true story of arthritis.

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Spotlight on osteoarthritis

Osteoarthritis is by far the most common type of arthritis. It is estimated to affect more than 3,200,000 Canadians—about 1 in 10.

Osteoarthritis is caused by the breakdown in cartilage in the joints. Cartilage is a protein substance that acts as a cushion between bones in joints, allowing joints to function smoothly.

Osteoarthritis can affect any joint, but hands and weight-bearing joints—including the spine, hips and knees—are most often affected. Other joints, like shoulders, elbows and ankles, are less likely to be affected unless the joint has been damaged by injury.

Unlike some other forms of arthritis where women are most affected, women and men are equally likely to be affected by osteoarthritis. It strikes most commonly after the age of 45,

Spotlight on juvenile idiopathic arthritis

Juvenile idiopathic arthritis (JIA) is chronic inflammatory arthritis developing in children under the age of 16. Previously called juvenile rheumatoid arthritis (JRA), juvenile idiopathic arthritis strikes up to 1 in 250 children and is one of the most common chronic diseases among children.

Autoimmune diseases generally occur when the body's immune system begins to malfunction and attack healthy tissue in various parts of the body, causing inflammation and damage. In JIA, joints are attacked by inflammation and become stiff, painful and swollen. Some children with JIA develop inflammation involving their eyes as well; in some severe subtypes of JIA, organs such as the heart or lungs can be involved.

Spotlight on osteoarthritis *continued*

but people of all ages—from children to senior citizens—are at risk. Contrary to popular belief, it is not a disease of the elderly; in fact, more than 3 in 5 people diagnosed with arthritis are under the age of 65. While osteoarthritis has no known cure, treatments do exist to minimize pain and damage and protect joint function.

Diagnosis of osteoarthritis

Risk factors for osteoarthritis include a family history of the disease, excess body weight, joint injury, repeated overuse of joint and age.

There are several warning signs for osteoarthritis. These include:

- Pain and/or stiffness in or around a joint lasting for more than two weeks
- Swelling in joints, especially in hands and feet
- Reduced strength and mobility in a joint or joints

If you think you may have osteoarthritis, visit your doctor. Osteoarthritis is most easily diagnosed

by performing a physical examination and sometimes an x-ray exam. There is no blood test for osteoarthritis, though in some cases doctors may do tests to rule out other types of arthritis.

As is the case with most forms of arthritis, early diagnosis of osteoarthritis can be a key factor in preventing disability and deformity. There are things you can do to slow the progression of joint damage and reduce the potential for future disability, and getting a diagnosis is the crucial first step in an osteoarthritis treatment plan.

Treatment for osteoarthritis

Depending on the severity of the case, there are a number of different treatment options for osteoarthritis. These include lifestyle interventions, exercise, medications and joint surgery.

Weight loss and lifestyle changes are vitally important for mild, moderate and severe

osteoarthritis. Before reaching for a pill, people with osteoarthritis must exercise appropriately and, if needed, lose weight.

In mild to moderate cases of osteoarthritis, joint pain may be sufficiently treated with an over the counter pain reliever, like acetaminophen (Tylenol®). Acetaminophen can be effective in reducing pain, but is not an anti-inflammatory medication and cannot stop joint damage.

If a pain reliever like acetaminophen is not enough, doctors may prescribe a non-steroidal anti-inflammatory drug (NSAID). Examples of NSAIDs available without a prescription include ibuprofen (Motrin® or Advil®) and acetylsalicylic acid (Aspirin®). Some more powerful NSAIDs require a prescription. These include naproxen (Naprosyn®). These are potent medications which can reduce joint inflammation and pain, but do not work to prevent joint damage. It is important to note that NSAIDs can rarely cause serious

Spotlight on juvenile idiopathic arthritis *continued*

Overall, JIA affects girls slightly more often than boys. JIA can affect children of any age, from infancy to 16 years. While it has no known cure, there are effective treatments for JIA which can often lead to remission and prevent permanent joint damage and disability.

Diagnosis of juvenile idiopathic arthritis

There are seven subtypes of juvenile idiopathic arthritis, defined by the ILAR international criteria:

- **Oligoarticular**—the most common form of the disease. About half of children with juvenile idiopathic arthritis are diagnosed with the oligoarticular form. Generally, one to four joints are affected. Most common joints include knees, ankles or wrist. Up to 20% of children diagnosed with the oligoarticular form of juvenile idiopathic arthritis will develop uveitis (inflammation in the eyes).
- **Extended oligoarticular**—approximately 30% of children whose JIA starts in fewer than 4 joints will develop arthritis in many joints at some point in their disease; this is called 'extended'.
- **Polyarticular (rheumatoid factor positive and rheumatoid factor negative)**—JIA affecting five or more joints. Any joint can be involved, and usually the arthritis is symmetric (the same on both sides of the body). Children who have a positive rheumatoid factor (RF) have a more persistent and severe type of

polyarticular disease.

- **Enthesitis related arthritis**—this form of JIA occurs more commonly in school aged or older children, boys more than girls. Arthritis can affect large joints such as the hips, knees, ankles, as well as the back and neck. Some of these children have inflammation of ligament and tendon attachments, called enthesitis. A small percentage of these children go on to develop ankylosing spondylitis.
- **Psoriatic arthritis**—children may have arthritis and psoriasis, or arthritis and a strong family history of psoriasis. This form of arthritis can affect any joint.
- **Systemic onset**—the most severe form of the disease, affecting about 10% of children diagnosed with juvenile idiopathic arthritis. Children with systemic onset JIA present quite ill with high fevers, rash and inflammation of organs in addition to inflammation in the joints.

The most common complaint of children at the time they develop juvenile idiopathic arthritis is joint pain, accompanied by swelling or stiffness. Other warning signs which may be present at the onset of disease include:

- Change in ability to keep up with normal activities, such as sports or school work because of physical joint pain
- Irritability, especially in a young child who is in pain

- Refusal to walk, limping, or a child who knows how to walk may return to crawling
- Because the symptoms of juvenile idiopathic arthritis at the outset of the disease are similar to many other diseases, such as infections, cancer, other bone problems, and other inflammatory illnesses, doctors must exclude these other possibilities before a diagnosis of juvenile idiopathic arthritis is possible.

In addition to a full physical examination and medical history, doctors may order several different types of tests in order to exclude other possibilities and confirm a tentative diagnosis of juvenile idiopathic arthritis. It is important to recognize, however, that there are no blood tests which can confirm the diagnosis of JIA.

Treatment for juvenile idiopathic arthritis

While there is no cure for juvenile idiopathic arthritis, treatment advances are allowing more children to live normal lives. Medications have been developed that can reduce pain and even slow or stop the inflammation that causes devastating joint damage. As well, physical and occupational therapy can help to allow children to participate in normal activities, and to prevent long-term disability.

Once a diagnosis of juvenile idiopathic arthritis is suspected, the child should be referred to a pediatric rheumatology team, a group which includes a pediatric rheumatologist, nurses, pediatric physiotherapist, pediatric occupational

cardiovascular, kidney or gastro-intestinal side effects, like stomach ulcers; for this reason, it is vital to speak with your doctor before adding an NSAID to any treatment plan for osteoarthritis.

Cox-2 inhibitors are a newer class of NSAID, which work to reduce inflammation but do not carry the same risk of gastro-intestinal side effects. Celecoxib (Celebrex®) is an example of a cox-2 inhibitor. It is important to note that, while cox-2 inhibitors cause fewer gastro-intestinal side effects, research has shown that they have the same or higher risk of cardiovascular (heart) side effects compared to traditional NSAIDs.

Sometimes, an injection of corticosteroid (sometimes called 'cortisone') into the affected joint can help to reduce the inflammation of advanced osteoarthritis. Cortisone injections can help in situations where mobility is impacted or pain is severe, but it is important to note that these injections should only be done

intermittently (less than three per year) into each affected joint, as multiple corticosteroid injections may actually weaken the cartilage, causing further joint damage. Corticosteroid injections are not a long-term treatment, but rather something to be used very occasionally when pain and inflammation is particularly bad.

As with many forms of arthritis, maintenance of a healthy body weight is a very important part of a well-rounded treatment plan for osteoarthritis. Osteoarthritis often affects load-bearing joints, like the hips and knees, and research has shown that being overweight, by even 10 to 20 lbs, can significantly increase the risk of knee damage. One of the best things a person with osteoarthritis can do to improve their arthritis is work to achieve and maintain a healthy body weight.

Exercise is another important component of a plan to treat osteoarthritis. The key is

to participate in the right kinds of exercise. Generally, exercises that put less stress on joints, like swimming and other water-based types of exercise, are ideal.

Many people find it difficult to get started on an exercise program because of their pain. In this case, many doctors recommend taking a pain reliever (such as acetaminophen or Tylenol®) about 30 minutes prior to starting exercise. Depending on a person's joint complaint, using ice or heat, according to one's preference, is a non-medicinal treatment that may be effective at helping people with osteoarthritis exercise effectively—and with enjoyment.

Joint surgery is an option if joint damage progresses to the point where mobility is seriously compromised. The most common type of joint surgery for osteoarthritis is joint replacement; knees and hips are the most common joints to be treated with joint replacement surgery. ◀

therapist and social worker. These specialists will work together to confirm a diagnosis, design the best treatment plan for the child and work together with the parents and child to carry out the treatments. A pediatric rheumatologist is a doctor with specialized training in pediatrics, and then pediatric rheumatology.

Children with JIA may need to see other pediatric specialists; for example, they should have regular full eye exams from an ophthalmologist (eye specialist) to check for uveitis (eye inflammation).

A well-rounded treatment plan for juvenile idiopathic arthritis includes medication, education, physiotherapy and occupational therapy and a healthy diet.

There are a variety of medications commonly used to treat juvenile idiopathic arthritis.

- The "first line" treatments are non-steroidal anti-inflammatory drugs (NSAIDs). Naproxen (Naprosyn®) is the most common NSAID used for treating JIA, but others are used as well.
- The "second line" treatments are called disease-modifying anti-rheumatic drugs (DMARDs). Examples of these include hydroxychloroquine (Plaquenil®), sulfasalazine (Azulfadine®), leflunomide (Arava) and most commonly methotrexate (Rheumatrex®). DMARDs actually work to slow or halt the inflammation and disease progression that can cause devastating joint damage and disability.

Many children have an excellent response to one, or a combination, of these medications.

- For some children, traditional DMARDs alone will not be enough to control their disease. In these cases, a biologic response modifier may be used. Biologics are the newest, most powerful medications to treat inflammatory arthritis. Examples of these medications are etanercept (Enbrel) and infliximab (Remicaide). Newer biologic medications are currently being studied in children with JIA. Biologics are often used in combination with traditional DMARDs. Many parents of children with juvenile idiopathic arthritis note that giving medications is one of the most difficult parts of coping with the disease. This is why education is such a critical part of a treatment plan for juvenile idiopathic arthritis. Like many inflammatory arthritis diseases, early aggressive treatment is vitally important. Parents who have received all of the necessary information are much more likely to be able to help create and implement a well-rounded, effective treatment plan. It is important to remember that children who are treated quickly and effectively have the very best chance of recovering fully. The pediatric rheumatology team, especially the nurse, is usually a great support for parents as they learn about how best to treat their child.

Physiotherapy and occupational therapy are very important treatment plan components for

every child with JIA. The physiotherapist and occupational therapist will work on regaining range of motion in stiff joints, providing techniques for pain relief, splinting when required, and once disease is controlled, an exercise plan.

Exercise is a key component of a well-rounded treatment plan for juvenile idiopathic arthritis, and should be carefully balanced with adequate rest. Exercise can help to keep joints strong and flexible, and rest can help relax joints. Children with JIA are encouraged to participate in usual activities, such as sports and PE, to the best of their abilities. Many children with JIA are outstanding athletes!

Children and teens with JIA are encouraged to return to their regular physical activities as soon as they are able. As much as possible, children with juvenile idiopathic arthritis should continue to participate in normal activities of childhood, like attending school. It is rare that a child or teen with JIA should be missing school due to their arthritis.

The outcome for children with JIA has improved over the past years, especially if the disease is recognized and treated effectively in the early stages of the disease process. However, despite these advances, most children with JIA will continue to have some form of arthritis into adulthood. ◀

Arthritis Consumer Experts

Who we are

Arthritis Consumer Experts (ACE) provides research-based education, advocacy training, advocacy leadership and information to Canadians with arthritis. We help empower people living with all forms of arthritis to take control of their disease and to take action in health care and research decision making. ACE activities are guided by its members and led by people with arthritis, leading medical professionals and the ACE Advisory Board. To learn more about ACE, visit

www.arthritisconsumerexperts.org

Guiding principles and acknowledgement

Guiding Principles

Health care is a human right. Those in health care, especially those who stand to gain from the ill health of others, have a moral responsibility to examine what they do, its long-term consequences and to ensure that all may benefit. The support of this should be shared by government, citizens, and non-profit and for-profit organizations. This is not only equitable, but is the best means to balance the

influence of any specific constituency and a practical necessity. Any profit from our activities is re-invested in our core programs for Canadians with arthritis.

To completely insulate the agenda, the activities and the judgments of our organization from those of organizations supporting our work, we put forth our abiding principles:

- ACE only requests unrestricted grants from private and public organizations to support its core program.
- ACE employees do not receive equity interest or personal "in-kind" support of any kind from any health-related organization.
- ACE discloses all funding sources in all its activities.
- ACE identifies the source of all materials or documents used.
- ACE develops positions on health policy, products or services in collaboration with arthritis consumers, the academic community and health care providers and government free from concern or constraint of other organizations.
- ACE employees do not engage in any personal social activities with supporters.
- ACE does not promote any "brand", product or program on any of its materials or its web site, or during any of its educational programs or activities.

Thanks

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