WHAT IS INFECTIOUS ARTHRITIS?

As the name implies, infectious arthritis is arthritis (joint inflammation) caused by infection. There are two major types of infection that can lead to arthritis – bacterial (caused by bacteria) and viral (caused by a virus). In rarer cases, arthritis can be caused by infection with other organisms such as parasites or fungi.

HOW CAN INFECTIONS CAUSE ARTHRITIS?

Infections can cause arthritis either directly or indirectly. With direct infection, the infectious agent develops in the joint. In most cases, the infection begins in another area of body and travels through the bloodstream to the joint. In other cases, the infection can enter the joint directly through an injury to the joint or rarely during surgery or joint injections. Once the infection enters the joint, white blood cells – cells of the body’s immune system designed to rid the body of infection – gather, causing joint inflammation.

In other situations, such as rheumatic fever, antibodies the body makes to fight the streptococcal bacteria infection mistakenly attack the joint tissue, resulting in arthritis. In arthritis related to viral infections, immune complexes that form as a result of the body’s attempt to rid itself of the virus, rather than the viruses themselves, may be deposited in the joints and result in arthritis.

WHAT ARE THE SIGNS OF INFECTIOUS ARTHRITIS?

Signs of infectious arthritis differ depending on the type of infection involved. Bacterial infections, for example, most often affect a single joint – typically a large joint such as the knee. Symptoms of bacterial arthritis include joint pain, and the affected joint is swollen, red and warm to the touch. Any movement of the joint is extremely painful. Such symptoms often come on quickly and may be accompanied by fever and chills.

The symptoms of viral arthritis depend largely on the particular virus involved. Most types come on gradually, causing widespread aching joints, rather than specific arthritis in one or a few joints. Others, however, including hepatitis C, can cause sudden, severe arthritis in several joints – most often the knee and joints of the hands.
WHO GETS INFECTIOUS ARTHRITIS?
Infectious arthritis can occur in people of any age from infancy on, but about half of the cases are in people over age 60. Risk factors include the presence of another form of arthritis and having a coexisting disease, such as diabetes mellitus, chronic liver disease or any condition in which the immune system is suppressed.

Rheumatoid arthritis (RA) is a major risk factor. Other risk factors include IV drug abuse and skin infections. Arthroscopic surgery or joint replacement surgery also increase the risk of joint infections by bacteria. Joint injections are rarely complicated by infection.

WHAT ARE SOME OF THE MOST COMMON BACTERIA AND VIRUSES THAT CAUSE ARTHRITIS?
Common bacterial causes include gonococcus, the bacterium that causes the sexually transmitted disease gonorrhea; Streptococcus, the “strep” in strep throat and the cause of rheumatic fever; Staphylococcus (staph), a common cause of sinus and skin infections; pneumococcus, a common cause of bacterial pneumonia; and B. burgdorferi, the spiral-shaped bacterium that is carried by deer ticks and causes Lyme disease.

Common viruses associated with arthritis include parvovirus B19, the virus behind the childhood illness erythema infectiosum, or fifth disease; the Epstein-Barr virus, which causes infectious mononucleosis; hepatitis B and hepatitis C viruses; and the human immunodeficiency virus (HIV) responsible for AIDS.

Bacterial Versus Viral

The infectious agent that causes arthritis influences the symptoms you may experience.

Bacterial and viral infections are different from each other in the following ways:

**Bacterial infection**
- Generally located in one joint or a few joints
- May cause joints to become hot, red and swollen
- Usually accompanied by fever and shaking chills
- Usually begins suddenly
- Usually cured by antibiotics

**Viral infection**
- Generally affects joints throughout the body
- Often felt as joint achiness, rather than joint swelling, redness or tenderness
- Usually accompanied by a mild fever
- Often begins gradually following viral infection
- Not cured by antibiotics; usually goes away on its own

HOW DO DOCTORS DIAGNOSE INFECTIOUS ARTHRITIS?
With all forms of arthritis, the first and most important steps in diagnosis are a medical history and physical examination. Often the specific symptoms a person is experiencing can lead the doctor to a particular diagnosis.

For example, arthritis caused by gonococcal infection is often accompanied by genital discharge, red streaks along the tendons of the hand and small pus-filled blisters. The arthritis of Lyme disease often follows a bulls-eye-shaped rash at the tick bite site and other Lyme disease symptoms, including fever, malaise, inflammation of the heart and neurological symptoms such as severe headaches.

Often, doctors can confirm or rule out infectious arthritis through blood tests or by sampling joint fluid and examining it for infection.
If the infection is caused by a bacterium, joint fluid tests can identify the particular bacterium, and thus, the appropriate antibiotic to treat it.

**HOW IS INFECTIOUS ARTHRITIS TREATED?**

Treatment, like symptoms, depends on the cause and other factors. If the infection is caused by bacteria, treatment is generally with intravenous (delivered directly into a vein) antibiotics sometimes followed by high-doses of oral (taken by mouth) antibiotics, depending on the response. More severe cases may require frequent draining of the joint or surgery to remove infected joint fluid or tissues.

Nonsteroidal anti-inflammatory drugs (NSAIDs) and other analgesic agents, such as acetaminophen and tramadol (*Ultram*), may be prescribed to ease symptoms. Selective COX-2 inhibitors, such as celecoxib (*Celebrex*) are a subcategory of NSAIDs that may be safer for the stomach. All NSAIDs, including COX-2 inhibitors, occasionally can cause a decline in kidney function.

Treatment also includes resting and protecting the joint during the acute phase. Splints limit movement and help reduce pain and tissue damage. Once the infection is under control, doctors often recommend physical therapy to build muscle strength and increase the range of motion (the normal amount your joints can be moved in certain directions) of affected joints.

At present, viral infections are rarely treated with specific antiviral agents. NSAIDs are used to reduce symptoms. However, as technology improves virus identification and as new antiviral medications are developed, specific treatment for arthritis related to viral infections may become more common.

**Caution**

If your doctor prescribes an antibiotic for infectious arthritis, it’s important that you take the full course of medication – even if the arthritis appears to be gone. Even if symptoms disappear, the bacteria may still be present and, unless completely destroyed, can re-infect the joint.

**WHAT IS THE LONG-TERM PROGNOSIS OF INFECTIOUS ARTHRITIS?**

The most important factor in the success of treatment of bacterial arthritis is the time factor. For people who receive early and proper treatment for bacterial arthritis, complete recovery is possible – even likely. Other factors that can affect treatment success are age, infection severity, response to antibiotics and the health of the joint structure prior to infection.

Most cases of virus-related arthritis resolve with time – often, in a matter of weeks – leaving no permanent damage.

**FOR MORE INFORMATION**

Contact your local Arthritis Foundation chapter for a complete list of free brochures about different forms of arthritis, treatment options and self-management techniques. The following services also may be available in your area:

- **Arthritis Self-Help Course** – Learn how to take control of your own care in this six-week (15-hour) class for people with arthritis or a related condition.
- **Warm-water exercise program** – Join in the fun of a six- to 10-week exercise program in a heated pool.
• Land exercise programs – Move easier in several levels of exercise classes, or exercise at home by purchasing an Arthritis Foundation exercise videotape.

THE ARTHRITIS FOUNDATION

The mission of the Arthritis Foundation is to improve lives through leadership in the prevention, control and cure of arthritis and related diseases.

The Arthritis Foundation supports research with the greatest potential for advances and has invested more than $320 million in these efforts since its inception in 1948. Additionally, the Arthritis Foundation supports key public policy and advocacy efforts at a local and national level in order to make a difference on behalf of 70 million people living with arthritis.

As your partner in taking greater control of arthritis, the Arthritis Foundation also offers a large number of programs and services nationwide to make life with arthritis easier and less painful and to help you become an active partner in your own health care.

Contact us at (800) 283-7800 or visit us on the Web at www.arthritis.org to become an Arthritis Advocate or to find out how you can become involved.

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For more information: The Arthritis Foundation offers a wide variety of books, brochures and videos about different forms of arthritis, treatment and self-management techniques to help you take control of your arthritis. To order any of these products, become an Arthritis Foundation member or to subscribe to the Arthritis Foundation's award-winning consumer health magazine, Arthritis Today, call (800) 283-7800. Call or visit our Web site (www.arthritis.org) to find out how you can take control of your arthritis and start living better today!

MISSION STATEMENT:
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