

Rheumatoid Arthritis: What You Need to Know

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Rheumatoid arthritis (RA) is a disease that affects your immune system. Normally your immune system keeps you from getting sick. But if you have an autoimmune disease your body attacks itself and weakens your ability to fight off infections and diseases. RA is the most common type of inflammatory arthritis. It causes inflammation in the tissue lining of joints and then spreads to the whole joint.

Women are 2 to 3 times more likely to get RA than are men. While the disease usually begins between the ages of 40 to 60 years, RA can occur at any age. It is important to understand the nature of the RA disease process and how it causes symptoms and potential consequences for affected joints.

A joint is defined as the union between bones where motion occurs (see drawing). Typically, the first place that RA begins is in the lining (synovium) of joints. The synovium produces the fluid that nourishes joint cartilage and assists in joint lubrication. Abnormalities in the synovium and fluid can injure the cartilage and the underlying bone.

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The precise reason that an inflammatory process begins in the synovium in people with RA is not known, although a genetic predisposition may play some role, meaning your genes may somehow increase your chances of getting RA. Inflammation is a normal and important healing reaction in the body that occurs in response to injury or to certain foreign bodies, such as infection. In the inflammatory response, a variety of cells come to the affected area through the blood and attempt to heal the area. These cells, which

inflammatory reaction lessens. At times though, such as in the case of a person with RA, the process continues and can cause damage to the joint and other body tissues.

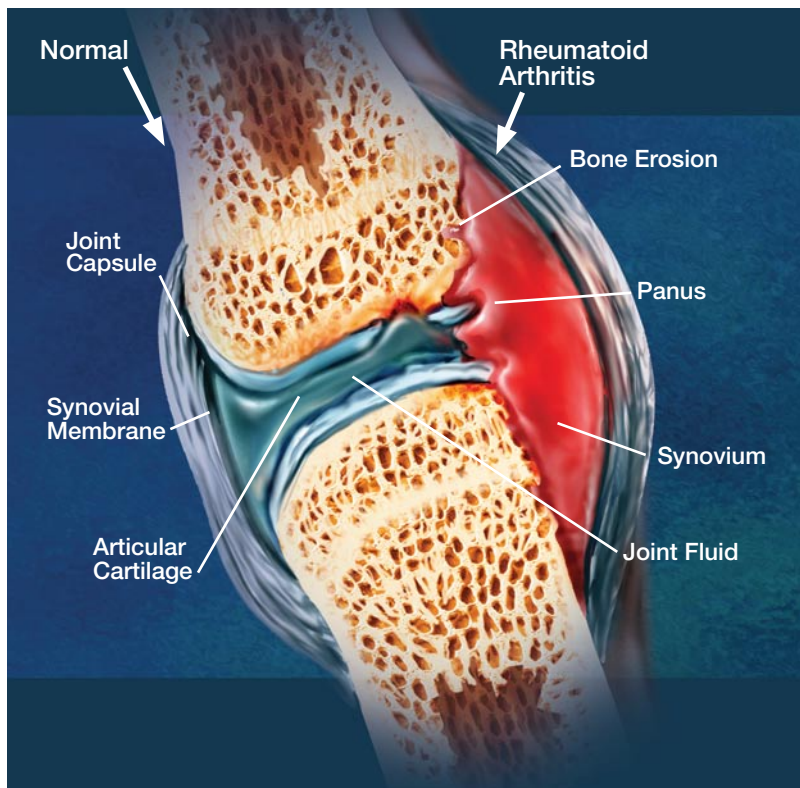
The signs of joint inflammation include pain, swelling, and warmth. These are warning signals that indicate that there is irritation in the body. Joint pain in RA results from the inflammatory process involving the synovium and the tissues around the joints (muscles, tendons, joint capsule, ligaments, and bones). These tissues have

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are part of the body's immune system, produce a number of substances called inflammatory mediators, including cytokines, prostaglandins, and enzymes that participate in the inflammatory process. Cytokines, such as tumor necrosis factor-alpha (TNF- α) and interleukins (ILs), are one of the ways that cells communicate. Prostaglandins are released from cell walls and can act on a variety of tissues, including blood vessels, causing them to expand and contract. They can cause swelling and increased temperature. Normally, as healing occurs, the

a nerve supply that sends information to the brain. In addition, the inflammatory reaction causes accumulation of fluid in the tissues, which gives the feeling of stiffness. Joint stiffness is often greatest in the morning because during sleep the inactive tissues accumulate fluid. The length of time that morning stiffness lasts is a good indicator of the level of the inflammatory reaction. In addition, the presence of morning stiffness helps identify which joints are affected in RA.

As a result of the joint pain and swelling, there can be sig-



nificant limitations in activities of daily living. Damage to joints and muscle weakness that can accompany the inflammatory reaction can make lifestyle problems worse. Routine tasks

RA and are important to recognize and understand in order to effectively manage the disease.

The symptoms of RA often begin slowly. Many patients

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such as dressing and bathing can be impacted as well as one's job activities. In addition to the effects on joints, inflammation can cause generalized symptoms, including fatigue and weakness.

Because of the pain and functional impairment, there can be significant emotional responses—possibly frustration, anger, denial, and depression. These responses are common in

are unable to identify the exact starting date. The knuckles and middle joints of the fingers, the wrists, and the balls of the feet are the usual joints affected first, along with larger joints, such as knees and shoulders. However, in a quarter of cases large joints are involved before the joints of the hands and feet. Although there is variability in the intensity of inflammation in different

joints, once a joint is affected, the inflammation there usually persists. The typical course of RA is subtle, with the joint symptoms not being much different from one day to the next. Yet, there is a great tendency for RA to gradually progress if untreated. Also, there are frequently “ups and downs” of the inflammation that can be related to activity level and stress on the joints. At times, the explanation for a flare-up is not easily identified. Pacing daily activities is important in order to control the disease and to understand the amount of joint stress that can aggravate the inflammation. One must carefully balance activities and rest and pay thoughtful attention to joint protection.

The likelihood of remission without treatment is small. Much of the damage that can be detected on an X-ray has occurred during the first few years of the disease. Effective management of RA requires a team approach, involving you, your doctors, and the appropriate selection of medications, which includes disease-modifying antirheumatic drugs. There have been major advances in understanding the inflammatory reaction and the development of medications that specifically target the inflammatory mediators, including TNF- α and ILs. Disease-modifying antirheumatic drugs are essential in the treatment of RA and can change the course of the disease by decreasing inflammation, reducing joint damage, and improving quality of life.