



RHEUMATOID ARTHRITIS

OVERVIEW

Rheumatoid arthritis (RA) is a chronic, immune-related disease, which causes inflammation in the lining of the joints and can lead to severe pain, loss of function and disability. Frequent flares of disease activity can occur, and RA can affect other organs in the body. One of the most common forms of arthritis, RA affects 2.1 million Americans, or about one percent of the population. Onset usually occurs between the ages of 30 and 50, and about 70 percent of people with RA are women.

CAUSE

While the causes of RA are not fully known or understood, scientists believe that there may be several causes of the disease, including an overactive immune system. Genetics and environmental factors may also play a role in disease development.

- People with the genetic marker HLA-DR4, a marker found in white blood cells that helps the body distinguish between its own cells and foreign bodies, may have an increased risk of developing RA. This genetic marker is found in almost two-thirds of Caucasians, but only 20 percent of the general population.
- RA is not directly transmissible from one person to another, although it does have a strong genetic component associated with its onset. However, just because an individual has RA does not necessarily mean that his or her child will have it.
- People with RA experience an abnormal immune response to their own body. In a healthy immune system, white blood cells produce antibodies that protect the body against foreign substances, but in people with RA the immune system mistakes the body's healthy tissue for a foreign invader and attacks it.
- Although the causes of RA are not completely understood, recent scientific research points to tumor necrosis factor (TNF) as an important part of the inflammatory process associated with RA. TNF is a component of all healthy immune systems, but people with RA overproduce TNF, which is linked to the swelling, pain and joint damage of RA.

SYMPTOMS

RA is a systemic disease and may affect parts of the body other than the joints. The disease commonly begins in the smaller joints of the fingers, hands and wrists and is usually symmetrical, which means patients are likely to experience pain on both sides of the body at once.

RA may be characterized by:

- Joint swelling, tenderness and loss of motion
- Joint malalignment
- Fatigue
- Stiffness or pain in the morning or after prolonged periods of immobility
- Flu-like symptoms, including a low-grade fever
- Loss of appetite, depression, weight loss, anemia, cold and/or sweaty hands and feet
- Decreased production of tears and saliva
- Rheumatoid nodules, or lumps of tissue under the skin, appear in about 20 percent of people with RA

- More severe disease activity is characterized by more joint erosion and damage to cartilage, tendons, ligaments and bone, which may cause deformity of the joints.

DIAGNOSIS

A rheumatologist uses a number of tools to diagnose and evaluate RA symptoms. The most common way to diagnose RA is through a physical exam, taking into account lab tests, x-rays and a person's medical history.

DISEASE PROGRESSION

As RA progresses, overproduction of TNF-alpha leads to joint space narrowing (when the gap between bones closes) and joint erosion (when inflammation causes bones to wear away at the joint).

Joint damage from RA may begin during the early years after the onset of the disease. Because RA is a progressive disease that can damage the joints, it's important for patients to start an effective treatment as soon as possible.

TREATMENT

To avoid permanent disability and maintain a productive lifestyle, early diagnosis and treatment of RA is critical. Studies have shown that early, aggressive treatment of RA can minimize damage to the joints and prevent loss of movement. Even shortly after diagnosis, joint damage can occur quickly and may continue to get worse over time.

Treatment methods aim to relieve pain, reduce inflammation and stop joint damage. Traditional disease-modifying antirheumatic drugs (DMARDs), such as methotrexate, have long been a staple for aggressively treating early RA, but recent studies demonstrate that the combination of methotrexate and biologic therapies may lead to a more effective response.

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