

Rheumatoid Arthritis



What is Rheumatoid Arthritis?

Rheumatoid arthritis (RA) is an immune-mediated disease in which the body's immune system mistakenly attacks joints and other parts of the body, creating inflammation that causes the tissue lining the inside of the joints (synovium) to thicken, resulting in swelling and pain.¹



Symptoms of Rheumatoid Arthritis

For many patients with rheumatoid arthritis, signs and symptoms of the disease occur in the joints that attach the fingers to the hands and/or the toes to the feet.²

Symptoms may include:²



Tender, warm, swollen joints



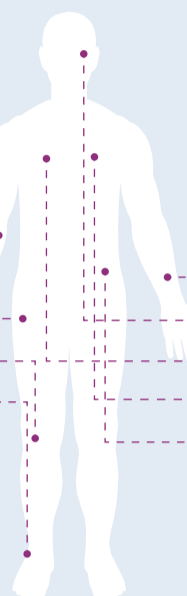
Joint stiffness that is usually worse in the mornings and after inactivity



Fatigue, fever and loss of appetite

As the disease progresses, symptoms often spread to:²

shoulders
elbows
wrists
hips
knees
ankles



Approximately **40 percent** of patients also experience non-joint related symptoms, including symptoms in the:²

skin
eyes
lungs
heart
kidneys

Patients with rheumatoid arthritis may experience ongoing disease symptoms, or have episodes of symptom-free remission, which can be followed by relapse or flares.²



Prevalence & Effect on Quality of Life

Rheumatoid arthritis has been shown to affect more than **1.3 million** Americans, and as much as **one percent** of the worldwide population.³

The disease usually begins between the ages of **30 and 60** but can present at any age. Women are up to **three times** more likely to develop rheumatoid arthritis than men.¹

Rheumatoid arthritis is a chronic disease that can affect physical, psychological and social functioning, including:^{4,5}



Physical setbacks, such as difficulty performing or maintaining a job with physical demands, trouble driving and limitations with sports



Stress or anxiety related to potential effects of the disease



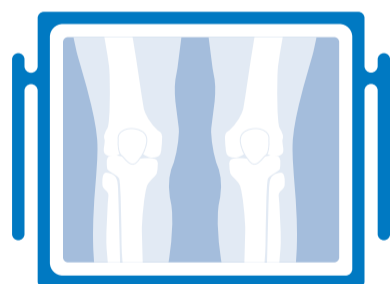
Poor body image



Diagnosis & Treatment

Rheumatoid arthritis can be difficult to diagnose in its early stages, as symptoms can mimic those of other diseases.¹

No single blood test can confirm a rheumatoid arthritis diagnosis; however, physicians may test for elevated erythrocyte sedimentation rate (ESR) or C-reactive protein (CRP), as this may indicate the presence of increased inflammation in the body.¹



A physician may also recommend X-rays, MRI or ultrasound tests to track the disease severity over time, or tests to look for ongoing immune response or markers of genetic predisposition.⁶

Further, physicians may test for autoantibodies that can play a predictive role in the development of rheumatoid arthritis. Patients who test positive for rheumatoid factor (RF) or anti-cyclic citrullinated peptide (anti-CCP) may experience worse outcomes; therefore, early identification of these biomarkers can help physicians detect the disease earlier and develop personalized care plans for patients.



There is no cure for rheumatoid arthritis. Current treatment options include:¹

- Nonsteroidal anti-inflammatory drugs (NSAIDs)
- Corticosteroids
- Disease-modifying antirheumatic drugs (DMARDs)

Bristol-Myers Squibb is committed to identifying and pursuing new treatment options and innovative development approaches to help deliver transformational medicines for patients with rheumatoid arthritis and other immune-mediated diseases.



1. The Arthritis Foundation. "What is Rheumatoid Arthritis?" <https://www.arthritis.org/about-arthritis/types/rheumatoid-arthritis/what-is-rheumatoid-arthritis.php>. Accessed April 19, 2019. 2. Mayo Clinic. "Rheumatoid Arthritis." <https://www.mayoclinic.org/diseases-conditions/rheumatoid-arthritis/symptoms-causes/syc-20353648>. Accessed April 19, 2019. 3. Rheumatoid Arthritis Support Network. "RA Facts: What are the Latest Statistics on Rheumatoid Arthritis?" <https://www.rheumatoidarthritis.org/ra/facts-and-statistics/>. Accessed May 10, 2019. 4. G. J. Tjhuis, Z. de Jong, A. H. Zwinderman, W. M. Zijderduin, L. M. A. Jansen, J. M. W. Hazes, T. P. M. Vliet Vlieland. The Validity of the Rheumatoid Arthritis Quality of Life (RAQoL) Questionnaire. *Rheumatology* 2001; 40 (10): 1112-1119. <https://doi.org/10.1093/rheumatology/40.10.1112>. 5. Everyday Life with Rheumatoid Arthritis. Institute for Quality and Efficiency in Health Care (IQWiG)2013; <https://www.ncbi.nlm.nih.gov/books/NBK384458/>. 6. Yarwood A, Huizinga TW, Worthington J. "The genetics of rheumatoid arthritis: risk and protection in different stages of the evolution of RA." *Rheumatology (Oxford)*. 2016; 55(2):199-209. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4710800/pdf/keu323.pdf>