

The Burden of Rheumatoid Arthritis (RA)

EXECUTIVE SUMMARY

- Rheumatoid arthritis (RA) is a chronic, inflammatory autoimmune disease in which the immune system attacks the tissues of the joints causing inflammation, pain and eventually joint damage and disability.^{1,2}
- Affecting 1.3 million adults in the U.S., RA is a debilitating disease that can impact daily activities.^{2,3}
- Despite many therapeutic advancements to-date, RA continues to carry a substantial disease and economic burden.⁴
- IL-6 is a cytokine in the body that, in excess and over time, can contribute to the inflammation associated with RA.⁵

About Rheumatoid Arthritis

Rheumatoid arthritis – commonly known as RA – is a chronic inflammatory autoimmune disease.⁶ There are more than 100 forms of arthritis, with RA being one of the most common forms.⁷

Prevalence in the U.S.

RA affects approximately 1.3 million Americans.² Women are 2-3 times more likely to develop the condition than men.⁸ RA is also most common in those aged 30-60 years old.⁹

Physical Impact

In RA, the immune system targets the tissues of the joints causing inflammation, pain, stiffness, and restricted movement. RA typically affects the joints of the hands and feet, and can present in small or larger joints, such as knees and hips.^{1,2,10} Eventually, it can cause damage and disability that can impact daily activities.^{1,4}

Daily Life

RA is a debilitating disease that can affect every area of a person's life – limiting their physical function and ability to perform daily activities.³

Economic Burden

RA carries an enormous clinical and economic burden for patients and families. In the U.S., the economic toll of RA amounts to \$20 billion in direct and indirect costs each year, which includes costs related to medical visits, medication, work-loss, caregiving, and changes made to homes to accommodate a person with RA.⁴

The Role of IL-6 in RA

IL-6 is a cytokine in the body that, in excess and over time, can contribute to the inflammation associated with RA.⁵ Additionally, in RA patients, IL-6 levels are the highest in the early morning hours, which is when many RA patients can experience increased pain, stiffness, and functional disability.¹¹

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¹ Mayo Clinic. "Rheumatoid Arthritis." Available at <http://www.mayoclinic.org/diseases-conditions/rheumatoid-arthritis/home/ovc-20197388>. Last accessed May 2017

² American College of Rheumatology. "Rheumatoid Arthritis." Available at: <http://www.rheumatology.org/I-Am-A/Patient-Caregiver/Diseases-Conditions/Rheumatoid-Arthritis>. Last accessed May 2017



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³ Matcham, F, et al. "The impact of rheumatoid arthritis on quality-of-life assessed using the SF-36: A systematic review and meta-analysis." *Seminars in Arthritis and Rheumatism* 2014; 44:123-130

⁴ Birnbaum H, et al. Societal cost of rheumatoid arthritis patients in the US. *Curr Med Res Opin* 2010;26:77–90.

⁵ Wong PK, et al. Interleukin-6 Modulates Production of T Lymphocyte–Derived Cytokines in Antigen-Induced Arthritis and Drives Inflammation-Induced Osteoclastogenesis. *Arthritis Rheum.* 2006;54(1):158-168.

⁶ Gibofsky, A. Overview of Epidemiology, Pathophysiology, and Diagnosis of Rheumatoid Arthritis. *Am J Manag Care.* 2012 Dec;18(13 Suppl):S295-302.

⁷ Arthritis Foundation. "How it Hurts." <http://www.arthritis.org/living-with-arthritis/pain-management/understanding/types-of-pain.php>. Last accessed May 2017

⁸ Centers for Disease Control. "Rheumatoid Arthritis." Available at <http://www.cdc.gov/arthritis/basics/rheumatoid.htm>. Last accessed May 2017

⁹ Arthritis Foundation. "What is Rheumatoid Arthritis?" Available at <http://www.arthritis.org/about-arthritis/types/rheumatoid-arthritis/what-is-rheumatoid-arthritis.php>. Last accessed May 2017

¹⁰ Arthritis Foundation. "Arthritis and Diseases that Affect the Hip." Available at <http://www.arthritis.org/about-arthritis/where-it-hurts/hip-pain/causes/hip-joint-pain.php>. Last accessed May 2017

¹¹ Arvidson NG, et al. Circadian rhythm of serum interleukin-6 in rheumatoid arthritis. *Ann Rheum Dis.* 1994;53:521-4.

