

Rheumatoid arthritis incidence on the rise in women

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The incidence of rheumatoid arthritis (RA) in women has risen during the period of 1995 to 2007, according to a newly published study by researchers from the Mayo Clinic. This rise in RA follows a 4-decade period of decline and study authors speculate environmental factors such as cigarette smoking, vitamin D deficiency, and lower dose synthetic estrogens in oral contraceptives may be the source of the increase.

Details of the study which includes more than 50 years of RA epidemiology data appear in the June issue of *Arthritis & Rheumatism*, a journal published by Wiley-Blackwell on behalf of the American College of Rheumatology.

Between 1 and 2 million Americans suffer the effects of RA, a chronic inflammatory disease that targets joints and which contributes to work-related disability, increased morbidity, and shortened survival. Up to one-half of all RA patients become unable to work within 10-20 years of follow-up and those with the disease have a 60% to 70% higher mortality risk than those in the general population. Furthermore, studies show that RA treatments alone account for \$9 billion in excess health care costs with direct and indirect costs expected to exceed \$39 billion annually.

The current study, led by Sherine Gabriel, M.D., M.Sc., expanded on prior research (1955-1994) from the Mayo Clinic team, by determining RA incidence and prevalence between 1995 and 2007. Researchers screened medical record of 1,761 Olmsted County, Minnesota residents 18 years and older who had received 1 or more diagnoses of [arthritis](#)

(excluding degenerative arthritis or osteoarthritis). After thorough review of all medical records, a diagnosis of RA was made in 466 patients whose mean age at RA incidence was 55.6 years, with 321 females (69%) in the study cohort.

"We observed a modest increase of RA incidence in women during the study period, which followed a sharp decline in incidence during the previous 4 decades," said Dr. Gabriel. Results show that RA incidence in women increased by 2.5% per year from 1995 to 2007, while a decrease of 0.5% was noted for men. Researchers did not find a disproportionate increase in RA incidence in any particular age group over the study period. "As expected we found an increase in RA prevalence during the same time period," added Dr. Gabriel. The overall age- and sex-adjusted prevalence of RA increased from 0.62% in 1995 to 0.72% in 2005.

Prior studies have clearly demonstrated that cigarette smoking is associated with a greater risk for RA development in both sexes. While smoking rates in the U.S. are declining, the rate is significantly slower in women than men, which researchers believe may, in part, explain the modest increase of RA incidence in women. Researchers also note that lower doses of estrogens found in modern [oral contraceptives](#) offer less protection against RA development than at the previously higher doses found in older medications, which they suspect may contribute to the increased RA incidence among women. Furthermore, several studies have shown [vitamin D deficiency](#) to be associated with RA development and coupled with evidence that this deficiency, particularly in women, has risen over the past decades the Mayo team considered it a possible contributor to the upward trend in RA.

In an editorial also published in this month's issue of *Arthritis & Rheumatism*, Dr. Ted Mikuls of the University of Nebraska Medical Center remarked, "Public health measures are already under way to address many of the environmental risk factors that have been

implicated in RA risk, including interventions that encourage smoking cessation and efforts focused at optimizing levels of physical activity, vitamin D intake, and oral hygiene."

Dr. Gabriel concluded, "Reasons for the increase in incidence we found are unknown, but [environmental factors](#) likely play a role and should be further explored."

More information: Article: "Is the Incidence of Rheumatoid Arthritis Rising? Results From Olmsted County, Minnesota, 1955-2007." Elena Myasoedova, Cynthia S. Crowson, Hilal Maradit Kremers, Terry M. Therneau, and Sherine E. Gabriel. *Arthritis & Rheumatism*; Published Online: February 26, 2010 ([DOI: 10.1002/art.27425](https://doi.org/10.1002/art.27425)); Print Issue Date: June 2010.

Editorial: "Rheumatoid Arthritis Incidence: What Goes Down Must Go Up?" Ted R. Mikuls. *Arthritis & Rheumatism*; Published Online: February 26, 2010 ([DOI: 10.1002/art.27432](https://doi.org/10.1002/art.27432)); Print Issue Date: June 2010.

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