

# Depression and Inflammation Linked to Pain in Rheumatoid Arthritis Patients

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(PhysOrg.com) -- Rheumatoid Arthritis (RA) is a chronic autoimmune disease that causes inflammation of the joints and surrounding tissues. More than 1.3 million adults in the U.S. suffer from RA with 75% of those afflicted being women. Patients with RA experience pain, stiffness, swelling, and deterioration of joints. Severe chronic pain accompanied by progressive joint destruction, disability, and disfigurement is known to increase the risk of experiencing emotional disturbances, with RA patients twice as likely to be depressed as people in the general population. Emotional wellness for persons with RA plays a critical role in disease course and disability.

Researchers at Nagoya City University and Nagoya University Graduate Schools of Medicine in Japan studied the interrelationship between levels of depression symptoms, C-reactive protein (CRP) level, and [pain](#), confirming a significant positive association between depressive symptoms and CRP level in RA. A second study by researchers at the University of British Columbia in Canada further explored depression in spouses of persons with RA, finding that higher levels of spouse depression predicted worse disease course for the person with RA over a 1-year period. Both studies are published in the August issue of *Arthritis Care & Research*, a journal of the American College of Rheumatology.

The Nagoya research team, led by Masayo Kojima, M.D., Ph.D., evaluated 218 RA patients who completed self-administered questionnaires that surveyed their sociodemographic characteristics, smoking and drinking habits, onset year of RA, and current pain, and a well-validated self-report inventory used to assess the severity of depressive symptoms. Blood samples from study participants were taken to measure their CRP levels. CRP is a plasma protein that is produced by the liver and rises during incidents of acute inflammation such as found in RA. RA treatments are often focused on reducing such inflammation.

According to this study, the inflammation and depression each independently increased the likelihood of severe pain. The combined effects of high CRP levels and depression predicted severe pain even more strongly.

"Results of our research demonstrate the potential for clinicians to improve pain control by addressing their patients' psychological symptoms in addition to conducting anti-inflammation therapy," stated Dr. Kojima. The study indicates for those patients reporting severe pain without CRP level elevation, psychotherapy and/or psychotropic medication might have priority. "A clinical approach that takes into account both the body and the mind could have benefits and could enable optimal pain control," recommend the authors.

Anita DeLongis, Ph.D. and colleagues from the University of British Columbia examined the role of spouse mood in the disability and disease course of RA patients. A total of 133 married RA patients completed questionnaires, including the Rheumatoid Arthritis Disease Activity Index and the Disabilities of the Arm, Shoulder, and Hand, assessing RA disease activity and disability at two time points one year apart. Both the patients and their spouses completed the Center for Epidemiologic Studies Depression Scale, a standardized community measure of depression at both time points.

Higher levels of spouse depressive symptoms at the initial assessment predicted worse disease course over a one-year period for their partners with RA, even after controlling for characteristics of the person with RA such as initial levels of depression, disability, disease activity, age, number of years married, education, disease duration, and employment.

"Our findings highlight the key role played by the spouse in disease course of individuals with RA, and point to the importance of including the spouse

in clinical interventions," concluded the authors.

"The mood and mental health of the marital partner or other key members of the family may be critically important to consider in developing more effective and evidence-based treatment for RA patients," added Dr. DeLongis.

More information: "[Depression](#), Inflammation, and Pain in Patients with [Rheumatoid Arthritis](#)," Masayo Kojima, Toshihisa Kojima, Sadao Suzuki, Takeshi Oguchi, Michinari Oba, Hiroki Tsuchiya, Fumiaki Sugiura, Yasuhide Kanayama, Toshiaki A. Furukawa, Shinkan Tokudome, Naoki Ishiguro, *Arthritis Care & Research*, August 2009.  
[www3.interscience.wiley.com/jo ... /122526339/abstract](http://www3.interscience.wiley.com/jo.../122526339/abstract)

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