



Celebrating Cessation

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Tobacco Cessation Program

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Newsletter Spotlight—Arthritis

Smoking Raises Arthritis Risk and Makes It Harder to Treat

Smoking cigarettes can lead to the development of rheumatic diseases and make them harder to treat, according to three new studies presented this week at the 2009 annual meeting of the American College of Rheumatology in Philadelphia.

The first study focused on what happens when people with rheumatoid arthritis light up while being treated for the disease. Researchers looked at the medical records of 1,756 rheumatoid arthritis (RA) patients in Sweden, determined their smoking history or lack thereof and then looked at their response to methotrexate or anti-TNF therapy – two common RA treatments.

At the three months follow-up visit, which is a common time to evaluate the effectiveness of treatment, they found that 40 percent of current smokers did not respond to methotrexate, compared to 28 percent of those who had never smoked. For those on anti-TNF therapy, 40 percent of current smokers did not respond, compared to 25 percent of those who had never smoked. For those who didn't respond to methotrexate, it didn't seem to matter how much they smoked. But for those who didn't respond to TNF-blockers, the more they smoked, the less likely they were to be helped by the medication.

"The findings indicate that RA patients who smoke have increased risk of not getting better on the standard first line treatment for RA, namely methotrexate," explains lead investigator Saedis Saevardottir, MD, PhD, of Karolinska University Hospital in Stockholm, Sweden. "Moreover, those who needed the immunologically designed anti-TNF drugs, which are now the second-line treatment of choice for those who do not respond to methotrexate, also risked having poor effect of this expensive medication if they smoked."

Mark Fisher, MD, MPH, a rheumatologist at Massachusetts General Hospital in Boston says he found this the most impressive study of the three. "There aren't any studies that show smoking has an effect on response to methotrexate and it was a really well done study. So for those reasons I think it's significant," Dr. Fisher says.

A second study found that smoking is associated with organ damage and disease activity in people with systemic lupus erythematosus, a chronic inflammatory disease that can affect the skin, joints, kidneys, lungs, nervous system and other organs. Meenakshi Jolly, MD, a rheumatologist at Rush University Medical Center in Chicago and the lead investigator of the study, says the findings were particularly interesting when they looked at detailed analysis of each affected part of the body. For example, 33 percent of smokers had arthritis, while only 18 percent of non-smokers did.

A third study concluded that smoking may be involved in events that trigger rheumatoid arthritis. This research looked at 172 patients, mostly women with a mean age of 63 at the time of diagnosis, who were part of a self-administered, community-based health survey conducted in Sweden between 1991 and 1996. Participants provided information on lifestyle factors like smoking, diet and education level, and provided blood samples. The research team led found that those who were smoking at the time of the survey were at increased risk for RA, compared to those who weren't smoking. Anti-CCP antibodies, which are specific markers for diagnosis and prognosis of RA, occurred years before the onset of the disease and were associated with former but not current smoking. Even in the absence of those antibodies, smoking increased the risk of developing the disease.

Experts say all of these studies add more support to the idea that cigarette smoking leads to a growing number of health risks.

"It definitely increases our overall understanding of the pathogenesis and perhaps the perpetuation of disease activity in autoimmune diseases," Dr. Fisher says. "I think that's the take-home message. That the impact of some sort of external trigger, in this case smoking, increases risk, increases disease activity and may decrease response to treatment."

- adapted from <http://www.arthritistoday.org/news/clone-of/site/news/smoking-rheumatoid-arthritis-risk012.php#>

Questions or Comments?

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