

Contraceptive pill linked to lowered risk of rheumatoid arthritis

August 17 2017

Taking the contraceptive pill, particularly for seven or more consecutive years, is linked to a lowered risk of developing rheumatoid arthritis, finds research published online in the *Annals of the Rheumatic Diseases*.

But no significant link was found for breastfeeding—a practice that has been associated with a protective effect—after accounting for various potentially influential factors, the findings show.

Because rheumatoid arthritis is two to three times as common in women as it is in men, it is thought hormonal and reproductive factors may partly explain this gender difference. But the research to date has produced equivocal results.

In a bid to look at these issues in more depth, the researchers looked at the possible link between the development of the disease and use of the Pill and/or breastfeeding among <u>adult women</u> who had at least one child.

They drew on data from the Swedish Epidemiological Investigation of Rheumatoid Arthritis (EIRA), which included women aged 18 and above, living in a defined area of Sweden between 1996 and 2014.

During this timeframe, 2809 women were diagnosed with rheumatoid arthritis, and 5312 women, randomly selected from the general population and matched for age, acted as a comparison group.



Blood samples were taken from all the participants to check for antibodies (ACPA) to rheumatoid arthritis, and the women were quizzed in depth about their contraceptive and reproductive histories; their lifestyle; whether they had breastfed their kids; and their educational attainment.

In all, 2578 women with arthritis and 4129 women from the comparison group were included in the final analysis. Of these, 884 with rheumatoid arthritis and 1949 from the comparison group had breastfed at least one child between 2006 and 2014.

Women who had used an oral contraceptive at any time had a lower risk of developing rheumatoid arthritis than those who had never done so.

The risk was 15% lower in current users of the Pill and 13% lower in past users. And the association was significant for women who tested positive for ACPA antibodies, even after taking account of tobacco and alcohol consumption, compared with women who had never used an oral contraceptive.

Nine out of 10 people who test positive for ACPA (anti-citrullinated protein) antibodies will have rheumatoid <u>arthritis</u>, and the presence of these antibodies may indicate more serious disease.

Using the Pill for more than seven years—the average length of use among the study participants—was associated with a 19% lower risk of developing <u>rheumatoid arthritis</u>, and this was the case for those who tested positive and negative for ACPA.

Although a lower risk was also found among women who had breastfed at least one child, this was not significant after potentially influential factors were accounted for.



This is an observational study so no firm conclusions can be drawn about cause and effect, added to which the researchers were unable to glean any information about the dose or type of oral contraceptive the <u>women</u> used.

But the number of participants was large, and a wide range of potentially influential factors was looked at, the researchers point out.

More information: Oral contraceptives, breastfeeding and the risk of developing rheumatoid arthritis: results from the Swedish EIRA study, *Annals of the Rheumatic Diseases* (2017). ard.bmj.com/doi/10.1136/annrheumdis-2017-211620

Provided by British Medical Journal

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