

Using the pill protects women from developing rheumatoid arthritis



Reproductive hormones may play a role in disease development in rheumatoid arthritis.

INTRODUCTION

Rheumatoid arthritis is a chronic inflammatory disease that affects a person's joints, causing pain and disability. It can also affect internal organs. Rheumatoid arthritis affects people of all ages, including young adults, adolescents and children, and it affects women more frequently than men. A lot of women with rheumatoid arthritis are diagnosed when they are in their childbearing years.

It is thought that there might be a link between both using oral contraceptives (often just known as “the pill”) and breastfeeding on the risk of developing rheumatoid arthritis. This has been studied before, but no firm conclusions have been reached.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to find out whether women who have used the pill or those who have breastfed their babies were less likely to go on to develop rheumatoid arthritis than women who had not used the pill or had children who they breastfed. They also wanted to find out if there was a difference in the antibodies that the different groups of women had in their blood. Antibodies are part of the body's immune system, and are normally made in response to infections. The antibodies that the authors were interested in are called anticitrullinated protein antibodies (often shortened to ACPA) and are linked to rheumatoid arthritis.

WHO WAS STUDIED?

The study looked at 2641 women with rheumatoid arthritis. Everyone was over the age of 18 years and had been living in Sweden between 1996 and 2014. These women were then matched with 4251 women without rheumatoid arthritis who were randomly selected from Sweden's medical records.

HOW WAS THE STUDY CONDUCTED?

This study was based on data from a study called the *Swedish Epidemiological Investigation of RA* (EIRA), which is looking into the causes and patterns of rheumatoid arthritis. Everyone completed a questionnaire about their lifestyle and their environmental exposures, including whether they had ever used the pill, and if they had ever breastfed any children. Blood samples were taken to check everyone's ACPA status. The authors then used statistical analyses to see if there were any links between the information collected.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The main finding was that women who had ever used a type of pill containing a combination of hormones called estrogen and progesterone had a decreased risk of developing rheumatoid arthritis. The link was significant for women with rheumatoid arthritis who tested positive for ACPA, and in those who had been using a combined pill for longer than 7 years. This suggests that using a combined pill protects women from developing rheumatoid arthritis. There were no significant results for types of pills that contained only estrogen.

The authors also found that women who smoked and who had not used the pill were more likely to go on to develop ACPA-positive rheumatoid arthritis than those who had never smoked, or those who had smoked, but who had also used the pill.

No link was found between breastfeeding and rheumatoid arthritis, although there is some evidence there could be an association, and more studies are needed to look at this.

ARE THESE FINDINGS NEW?

Previous reports have suggested that using the pill can protect against rheumatoid arthritis, but they have not shown a statistically significant link, probably because they did not include enough people.

The authors believe that this is the largest population-based case-control-study, which means that they have been able to look at the questions more thoroughly than has been possible before.

WHAT ARE THE LIMITATIONS OF THE STUDY?

One of the limitations is the high numbers of women in the study group who had used the pill or breastfed at any point. This could have affected the overall results if the numbers were not as high in the control group, because it would have been hard to compare the two groups. However, the authors found that both breastfeeding and use of the pill in the women in the control group was very similar to that reported in the Swedish population, meaning that this group was representative.

Another limitation is that there was no detailed information on which types or brands of the pill women had taken, or at which doses.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

How rheumatoid arthritis develops is very complex, and the process is not completely understood. These findings may add a piece to the puzzle. They are interested in further investigations into the potential effects of hormones on the disease.

WHAT DOES THIS MEAN FOR ME?

If you are taking the pill, this might reduce your chances of getting rheumatoid arthritis in the future. However, you should not take it for this reason alone, since it does carry other risks. If you are concerned about this, you should talk to your doctor.

If you want to make sure you keep your joints healthy, there are other steps you can take – for example, stopping smoking, eating healthily, and taking regular exercise.

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Date prepared: November 2017

Summary based on research article published on: 9 October 2017

From: Orellana, C. *et al.* Oral contraceptives, breastfeeding and the risk of developing rheumatoid arthritis: results from the Swedish EIRA study. *Ann Rheum Dis* 2017;76:1845–1852. doi: 10.1136/annrheumdis-2017-211620

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