

## Fetal cells can increase mother's risk for arthritis

Unborn babies can sow the seeds for rheumatoid arthritis in their mothers – and the dads might be to blame.

A mother exchanges cells with the fetus while it is in the womb. “For most women, shortly after you give birth, the fetal cells clear up,” says Giovanna Cruz, an epidemiologist at the University of California at Berkeley. “But in a subset of women [they actually persist for decades](#).” In these women, the fetal cells are effectively incorporated into their bodies, a process known as [microchimerism](#).

In the largest study to date, Cruz and her colleagues analysed genes associated with arthritis in women with the condition and in family members. They did the same for healthy women who had given birth to at least one child, and unrelated men. In total, they looked at over 5000 individuals.

They found that regardless of the women's own genetic risk, those with the disease were twice as likely to have given birth to children who had high-risk genes – most likely passed down from the father.

But how exactly this triggers arthritis remains a mystery. “We still don't know what these microchimeral cells are doing”, says Cruz, who presented the study at the American Society for Human Genetics meeting in San Diego this week. She speculates that it could be either maternal immune cells reacting to the presence of the fetal cells that triggers the response – in a similar way to a transplant patient's body rejecting a donor organ – or it could be the stowaway fetal immune cells themselves launching the attack.

**Read full original article:** [Fetus's arthritis genes can affect mother](#)