

Genetic test to predict early menopause

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The first research from the Breakthrough Generations Study could lead to a test to predict a woman's reproductive lifespan.

The findings, published today in *Human Molecular Genetics*, could have considerable impact on women in the UK and other western countries, where many start having children at a later age. Early [menopause](#) affects one in 20 UK women.

The study from scientists at the University of Exeter Peninsula Medical School and The Institute of [Cancer Research](#) (ICR), funded by The Wellcome Trust, tested four genes associated with the menopause. They compared 2,000 women from the Breakthrough Generations Study who had experienced [early menopause](#) with a matched group of the same number. The four genes each affected risk of early menopause. In combination, they had a larger impact, which goes towards explaining why some women experience early menopause.

The Breakthrough Generations Study is a large and comprehensive study into the causes of [breast cancer](#) and a partnership between Breakthrough Breast Cancer and the ICR. The study will follow the 100,000 UK women participants for the next 40 years to unravel the lifestyle, environmental and genetic factors that cause the disease.

Although early menopause is associated with a decreased risk of breast cancer, women who experience early menopause are susceptible to other health problems including osteoporosis, cardiovascular disease and a reduction in fertility.

The research could help women determine whether they have a [genetic predisposition](#) to early menopause, and therefore predict the time of the end of their reproductive life. They could then make informed family planning decisions on the basis of this knowledge.

Lead scientist Dr Anna Murray, from the University of Exeter Peninsula Medical School, says, "It is estimated that a woman's ability to conceive decreases on average ten years before she starts the menopause.

Therefore, those who are destined to have an early menopause and delay childbearing until their 30s are more likely to have problems conceiving.

"These findings are the first stage in developing an easy and relatively inexpensive genetic test which could help the one in 20 UK [women](#) who may be affected by early menopause."

Provided by The Peninsula College of Medicine and Dentistry

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