

# HRT increases likelihood of hip and knee replacement

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(PhysOrg.com) -- Having more children and using hormone replacement therapy (HRT) increases the likelihood that women will have joint replacement surgery, a large Oxford University-led study has shown.

The findings, published in the *Annals of the Rheumatic Diseases*, are based on a study of 1.3 million middle-aged women. The Million

Women Study has tracked the health of women from their mid-50s onwards and aims to answer many outstanding questions about the factors affecting women's health in this age group.

The women were asked about how old they were when they had their first and last periods, how many children they had given birth to, and whether they had used oral contraceptives and HRT.

They were followed to see how likely they were to have a knee or a hip replacement as a result of the inflammatory joint disease osteoarthritis. Osteoarthritis, particularly of the knee, is more common among women than it is among men.

On average, they were monitored for six years, during which time more than 12,000 of them had a hip replacement and just under 10,000 a knee replacement.

Each successive birth increased the risk of a hip replacement by 2%, and that of a knee replacement by 8%. Compared to older ages, starting menstruation at or before the age of 11 increased the probability of hip replacement by 9% and knee replacement by 15%.

Although previous use of oral contraceptives did not affect the risk of joint surgery, current use of HRT compared to never using HRT boosted the chances of a hip replacement by 38% and of a knee replacement by 58%.

‘We found that early puberty, having more children and using HRT increased the likelihood of having a hip or knee replacement for the inflammatory joint disease osteoarthritis,’ says Dr Bette Liu of the Cancer Epidemiology Unit, Oxford University. ‘These findings, along with other evidence, strongly suggest that the female sex hormone, oestrogen, plays a role in the development of osteoarthritis of the hip and

knee and the subsequent need for joint replacement.'

However the link between HRT use and joint replacement surgery may also be explained by increased use of health services among women who use HRT say the authors.

'There is currently not enough evidence to recommend women change their use of HRT because they may be worried about developing osteoarthritis or having a joint replacement,' adds Dr Liu. 'However the study highlights the need for further research into how oestrogens affect osteoarthritis.'

Provided by Oxford University

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