

Menopausal hormone therapy associated with ovarian cancer risk

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The results of the [meta-analysis](#) published in *The Lancet* suggest that the increase in risk associated with [hormone replacement therapy](#) (HRT) is a significant one.

"For women who take HRT for 5 years from around age 50, there will be about one extra [ovarian cancer](#) for every 1,000 users and one extra ovarian cancer death for every 1,700 users," states study author Prof. Sir Richard Peto from the University of Oxford in the UK.

HRT for the [menopause](#) was increasingly used during the 1990s before use rates were abruptly halved the following decade after a large [randomized trial](#). However, HRT use stabilized during the 2010s, with an estimated 6 million women taking HRT in the US and the UK combined.

The menopause can cause some women's [estrogen](#) and [progesterone](#) levels to drop significantly. In such cases, HRT boosts hormone levels in order to reduce certain menopausal symptoms, such as hot flashes, urinary problems and vaginal discomfort.

In 2002, the Women's Health Initiative (WHI) randomized trial called the therapy into question, suggesting that there was a slight increased risk of [breast cancer](#) after 5 years of HRT use. Some experts have argued that the WHI study has flaws making it harder to establish a causal link.

At present, HRT guidelines vary with regards to ovarian cancer. The US Food and Drug Administration's (FDA) statement does not mention the disease and is based solely on

the WHI findings, which recorded few incidences of ovarian cancer.

For the study, the University of Oxford in the UK organized the Collaborative Group on Epidemiological Studies of Ovarian Cancer, involving over 100 researchers from across the world working together to assess individual participant data from previous studies.

Researchers reviewed 52 epidemiological studies, both published and non-published, representing virtually all the existing evidence collected on ovarian cancer and HRT use. A total of 21,488 women with ovarian cancer - predominantly from North America, Europe and Australia - featured in the studies.

Risk increase 'directly relevant to today's patterns of use'

The group found a significantly increased risk of developing ovarian cancer for women who were current or recent users of HRT - those who had used the treatment within the previous 5 years. Despite the risk of ovarian cancer falling over time after stopping HRT, women who had taken HRT for at least 5 years were still at an increased risk of ovarian cancer 10 years later.

An increased risk of ovarian cancer was found with both the two main forms of HRT - estrogen-only preparations and preparations containing estrogen and a progestogen. Several other factors, including the age at which HRT began, tobacco use, hysterectomy and family history of [cancer](#), did not affect the proportional increase in risk.

However, the increase in risk was only found for serous and endometrioid ovarian cancers - the two main types of ovarian cancer. The risks for the two less common forms, mucinous and clear cell ovarian cancers, were not found to increase with HRT.

More than half of the statistical information utilized in the analysis came from prospective studies. An important strength of these studies was that participants were recruited before they knew they would develop ovarian cancer, making the results robust and protected from certain forms of bias.

Distinctly similar relative risks observed across the various studies lead the authors to state that their findings strongly suggest a causal relationship between HRT and an increased overall risk of ovarian cancer.

"The definite risk of ovarian cancer even with less than 5 years of HRT is directly relevant to today's patterns of use - with most women now taking HRT for only a few years - and has implications for current efforts to revise UK and worldwide guidelines," concludes study author Prof. Dame Valerie Beral.

Last month, *Medical News Today* reported on a new mouse model of ovarian cancer that had enabled [researchers to identify two genes](#) behind one of the most severe forms of the disease.

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