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Hysterectomy With Bilateral Oophorectomy May Increase Risk of Stroke

Despite conflicting results of previous studies, a new meta-analysis reveals an 18% higher risk of stroke for women having a hysterectomy with bilateral oophorectomy and a 5% higher risk for hysterectomy alone

CLEVELAND, Ohio (Sept 3, 2025) – Given the seriousness and increased frequency of strokes, many studies have been conducted to assess the relationship between hysterectomy and/or bilateral oophorectomy and the risk of stroke with varying results. A new study suggests women having a hysterectomy and/or bilateral oophorectomy have higher risks of stroke compared with those who did not have surgery. Results of the study are published online today in *Menopause*, the journal of The Menopause Society.

Stroke is the third dominant cause of death and the fourth dominant cause of disability around the world, representing a significant public health challenge. Therefore, ongoing prevention efforts that address modifiable risk factors are essential to reduce the burden of this disease.

Estrogen levels play a major role. Women of reproductive age have a lower stroke risk, whereas postmenopausal women are roughly two times more likely to have a stroke within a decade of menopause. Both hysterectomy and oophorectomy significantly affect estrogen levels. Hysterectomy may result in lower ovarian sex steroid levels, resulting in earlier menopause. An oophorectomy can reduce premenopausal serum estradiol by up to 80% and androgen levels by about 50% in both premenopausal and postmenopausal women.

Although multiple studies have previously been conducted around the relationship between surgery and stroke risk, results have been mixed. This latest study using data from the National Health and Nutrition Examination Survey (NHANES) included more than 21,000 women, with an average of 8.3 follow-up years, documenting 193 stroke-related deaths. The analysis of these results found an increased risk for hysterectomy with bilateral oophorectomy but not for hysterectomy alone or hysterectomy with unliteral oophorectomy. A pooling analysis of this study's results with other cohorts, however, revealed an 18% higher risk of stroke for hysterectomy with bilateral oophorectomy, and a 5% higher risk of stroke for hysterectomy alone.

Although the new study lacked surgical indication data, meta-analysis studies show that there is no connection between a benign or malignant diagnosis when determining the associated risk of surgery. Similarly, current evidence does not differentiate the amount of risk based on specific indications (ie, endometriosis, adenomyosis, fibroids, abnormal uterine bleeding, prolapse, or other rare conditions).

Additional studies with a large sample size and longer follow-up period are needed to address the disparities of type of stroke, age at surgery, surgical techniques, and menopause status on the association between stroke risk and hysterectomy and/or bilateral oophorectomy.

Survey results are published in the article "Stroke risk in women with or without hysterectomy and/or bilateral oophorectomy: evidence from the NHANES 1999-2018 and meta-analysis."

"The results of this study demonstrate increased stroke risk related to hysterectomy and/or bilateral oophorectomy, highlighting that these common procedures carry longer-term risks. They also call attention to an opportunity for more careful assessment of cardiovascular risk and implementation of risk reduction strategies in women who undergo these surgeries," says Dr. Stephanie Faubion, medical director for The Menopause Society.

For more information about menopause and healthy aging, visit www.menopause.org.

The Menopause Society is dedicated to empowering healthcare professionals and providing them with the tools and resources to improve the health of women during the menopause transition and beyond. As the leading authority on menopause since 1989, the nonprofit, multidisciplinary organization serves as the independent, evidence-based resource for healthcare professionals, researchers, the media, and the public and leads the conversation about improving women's health and healthcare experiences. To learn more, visit menopause.org.