

# Bilateral oophorectomy associated with higher prevalence of low bone mineral density and arthritis in younger women

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Women who underwent surgery to remove their ovaries before the age of 45 years were more likely to have arthritis and low bone mineral density compared with women with intact ovaries, researchers found.

Anne Marie McCarthy, Sc.M., a doctoral candidate in epidemiology at Johns Hopkins Bloomberg School of Public Health, presented the results at the 2011 CTRC-AACR San Antonio [Breast Cancer](#) Symposium, held Dec. 6-10, 2011.

"Our study suggests that some women with oophorectomy, particularly at a young age, can experience clinically relevant decreases in bone mineral density (BMD). Clinicians need to be aware of this so they can intervene early if required," McCarthy said.

She and senior investigator Kala Visvanathan, M.D., MHS, associate professor at Johns Hopkins Sidney Kimmel Cancer Center and Bloomberg School of Public Health, examined associations of oophorectomy with [arthritis](#) and BMD in the Third National Health and [Nutrition Examination Survey](#) (NHANES III), a nationally representative survey conducted from 1988 to 1994.

The BMD analysis included 3,660 women, and the arthritis analysis included 4,039 women. Women aged 40 years and older who had no cancer history and reported a [bilateral oophorectomy](#) or intact ovaries

were included for analysis.

Researchers used dual-energy X-ray to measure BMD in the femoral neck.

Women who had both ovaries removed before 45 years of age and who never used HRT had a lower BMD on average than women with intact ovaries (0.691 g/cm<sup>2</sup> vs. 0.729 g/cm<sup>2</sup>, respectively). They were also twice as likely to have very low [bone mineral density](#) compared to women with intact ovaries.

Participants were also asked if they had been diagnosed with arthritis. Researchers found that 45.4 percent of women who had oophorectomy reported arthritis compared with 32.1 percent of women with intact ovaries. They found a higher prevalence of arthritis — 47.7 percent — among women who had undergone oophorectomy before 45 years of age.

"[The study] highlights the need for more research in this area to identify those women at risk and to determine appropriate screening and preventive strategies for these young [women](#)," McCarthy said.

She added that NHANES III is a cross-sectional study, so "therefore, we cannot make statements on whether oophorectomy actually causes osteoporosis or arthritis at this time."

Provided by American Association for Cancer Research

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