Bone loss during menopause transition predicted by levels of anti-mullerian hormone

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Focusing on levels of anti-mullerian hormone, which is produced by cells in the ovarian follicles and is a marker of ovarian functioning, researchers analyzed data from 474 participants in the multi-ethnic, multi-site Study of Women's Health Across the Nation. The women were between 42 and 52 years old, were pre- or early perimenopausal, had an intact uterus with one or two ovaries, and were not taking supplemental sex hormones.

Each fourfold decrease in hormone level was associated with a 0.15 percent per year faster decline in the bone density in the spine, and a 0.13 percent per year faster decline in the bone density in the top of the femur, the femoral neck. Each fourfold decrease in hormone level was associated with an 18 percent increase in the odds of faster-than-average decline in bone density in the spine and 17 percent increase in the odds of faster-than-average decline in bone density in the femoral neck.

Anti-mullerian hormone levels strongly predicted the rate of bone loss during the menopause transition. The finding might help identify which women can be expected to lose bone at a faster-than-average rate. Physicians could use this information to provide guidance on exercise, calcium and vitamin D intake, and to closely monitor women's bone density.

The findings were presented at ENDO 2016, the annual meeting of the Endocrine Society.