MedicalXpress

New model may pinpoint timing of final menstrual period

March 26 2013

For women enduring hot flashes and other symptoms of menopause, a new model could better estimate the timing of the final menstrual period, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (*JCEM*).

Researchers at the University of California, Los Angeles (UCLA) developed a formula using the levels of two hormones to estimate when the final menstrual period would occur. The calculation relies on changing levels of estradiol, a hormone present in the ovary, and follicle stimulating hormone, a hormone in the brain that gives instructions to the ovary. As women go through menopause, follicle stimulating hormone levels rise and estradiol levels dip.

Currently, physicians monitor bleeding patterns to determine the menopause transition stage. However, the menopause transition stage is a very imprecise predictor of when the final menstrual period will take place. More than 60 percent of women who are classified as early perimenopausal – meaning that their periods are less predictable but they have no big gaps in cycles – become postmenopausal without any additional clinical bleeding signal.

"We need a better way to answer women's questions about when to expect the final menstrual period." said lead author Gail Greendale, M.D., of UCLA's David Geffen School of Medicine. "If further research bears out our approach, it could be the first step to developing web-

based calculators and other tools women can use to estimate where they are in the menopause transition and how far away their final period is."

The researchers analyzed longitudinal data from 554 women taking part in the National Institutes of Health's Study of Women's Health Across the Nation to develop the model.

Being able to predict the final menstrual period could have broader implications for women's health, Greendale said. In the year leading up to the final menstrual period, women face accelerated bone loss and increased cardiovascular risk.

"For example, some researchers have proposed that an intervention begun one or two years before the final menstrual period would greatly decrease future fracture risk by preventing the very rapid bone loss that occurs in the few years before and few years after the final menses," Greendale said. "But before ideas such as this can be tested, we need to accurately predict where a woman is in her timeline to menopause."

More information: The article, "Predicting the Timeline to the Final Menstrual Period: the Study of Women's Health Across the Nation," appears in the April 2013 issue of *JCEM*.

Provided by The Endocrine Society