

# Keeping Up with KEEPS

*The Kronos Early Estrogen Prevention Study*

**The Kronos Early Estrogen Prevention Study (KEEPS) found hormone therapy has no effect on memory and thinking skills. The KEEPS Continuation study will examine the risks and benefits of hormone therapy in preventing Alzheimer's disease in women.**

## Alzheimer's Disease Facts



Researchers are looking for a **CURE.** The KEEPS continuation study is looking for ways to prevent the disease.

6<sup>th</sup> leading cause of death in U.S.

In her 60s, a woman's estimated lifetime risk for developing Alzheimer's disease is **1 in 6.** For breast cancer it is **1 in 11.**



Almost **2/3<sup>rds</sup>** of people with Alzheimer's disease are women.

**60%** of Alzheimer's disease caregivers are women.

### Why is an estrogen study now looking at Alzheimer's disease?

- Women are at increased risk for Alzheimer's disease.
- Scientists have long suspected a role of estrogen in maintaining brain health.
- Midlife is key to understanding risk for Alzheimer's disease.
- Menopause is a key midlife event for women, and scientists want to know, among other things, how menopausal hormone therapies affect brain health.

*Thank you for your contributions to science. Your involvement with KEEPS and the KEEPS Continuation study will help us answer questions about the intersection of menopause, aging, brain health, and Alzheimer's disease.*

# What Your Participation in KEEPS Helped Us Learn

*The following is a list of selected publications using data from KEEPS. Your participation has made a difference!*

## **“Arterial Imaging Outcomes and Cardiovascular Risk Factors in Recently Menopausal Women: A Randomized Trial”**

*Annals of Internal Medicine, 19 August 2014*

Study determined 4 years of menopausal hormone therapy did not affect the progression of atherosclerosis (hardening of the arteries). Some blood markers of risk for cardiovascular disease did improve with hormone therapy.

## **“Effects of Hormone Therapy on Cognition and Mood in Recently Postmenopausal Women: Findings from the Randomized, Controlled KEEPS–Cognitive and Affective Study”**

*PLOS | Medicine, 2 June 2015*

Study determined in recently postmenopausal women with low heart disease risk, 4 years of certain menopausal hormone therapy offered positive mood effects but did not affect thinking or memory skills.

## **“Pharmacogenomics of Estrogens on Changes in Carotid Artery Intima-medial Thickness and Coronary Arterial Calcification: Kronos Early Estrogen Prevention Study”**

*Physiological Genomics, January 2016*

Study determined genetic factors might influence how menopausal hormone therapy effects a woman’s cardiovascular, or heart, health.

## **“Early Postmenopausal Transdermal 17β-Estradiol Therapy and Amyloid-β Deposition”**

*Journal of Alzheimer’s Disease, 7 May 2016*

In this small sub-sample of KEEPS women, researchers saw a reduction in brain changes associated with Alzheimer’s disease risk with certain menopausal hormone therapy, especially in women genetically predisposed for the disease. These findings need to be confirmed in the KEEPS Continuation study.

## **“Longitudinal Changes in Menopausal Symptoms Comparing Women Randomized to Low-dose Oral Conjugated Estrogens or Transdermal Estradiol Plus Micronized Progesterone Versus Placebo: The Kronos Early Estrogen Prevention Study”**

*Menopause, March 2017*

Study found recently postmenopausal women had substantial reductions in hot

flashes and night sweats with lower-than-conventional doses of estrogen, as well as a mild reduction in sleep disturbances.

## **“Effects of Oral vs Transdermal Estrogen Therapy on Sexual Function in Early Postmenopause: Ancillary Study of the Kronos Early Estrogen Prevention Study (KEEPS)”**

*JAMA | Internal Medicine, 1 October 2017*

Study found recently postmenopausal women treated with certain menopausal hormone treatments experienced modest improvements in sexual function, including desire, arousal, lubrication, orgasm, and satisfaction.

## **“Effects of Oral Versus Transdermal Menopausal Hormone Treatments on Self-reported Sleep Domains and Their Association with Vasomotor Symptoms in Recently Menopausal Women Enrolled in the Kronos Early Estrogen Prevention Study (KEEPS)”**

*Menopause, February 2018*

Study found recently menopausal women who took hormone therapy experienced fewer incidents of hot flashes and night sweats, and in turn, slept better.