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## New Meta-Analysis Shows That Hormone Therapy Can Significantly Reduce Insulin Resistance

## After years of mixed results, a review of 17 randomized, controlled trials demonstrates benefit of estrogen alone and estrogen plus progestogen in reducing risk of prediabetes

CLEVELAND, Ohio (Sept 10, 2024) –Menopausal women are at greater risk of insulin resistance as a result of declining estrogen levels. Previous studies evaluating the potential benefits of hormone therapy on insulin resistance have produced mixed results. However, a new meta-analysis of 17 different randomized, controlled trials suggests hormone therapy can be beneficial. Results of the meta-analysis will be presented at the 2024 Annual Meeting of The Menopause Society in Chicago September 10-14.

Insulin resistance can occur in men or women, but menopausal women are at greater risk because, as estrogen levels fall during the menopause transition, the body can become less responsive to insulin. A diagnosis of insulin resistance is considered serious because it can be a precursor of prediabetes, type 2 diabetes, and metabolic disorders.

A number of studies have previously attempted to determine the potential positive effect of hormone therapy on insulin resistance. However, those studies produced inconsistent results. But in this new metaanalysis of 17 unique randomized, controlled trials that covered more than 29,000 participants between 1998 and 2024, it was found that hormone therapy significantly reduced insulin resistance in healthy postmenopausal women without metabolic diseases including diabetes, hypertension, and cardiovascular diseases.

Cumulative totals of the 17 different trials included 15,350 participants who were randomized to hormone therapy including estrogen alone or estrogen plus progestogen and 13,937 who were randomized to placebo. The mean age of the study population ranged from 47 to 75 years, and treatment duration ranged from eight weeks to two years.

"Our analysis showed that both types of hormone therapy, including oral and transdermal routes, significantly reduced insulin resistance in healthy postmenopausal women, although estrogen alone was associated with a more prominent reduction when compared to a combination hormone therapy," says Dr. Xuezhi (Daniel) Jiang, lead researcher from Reading Hospital Tower Health and Drexel University College of Medicine in Pennsylvania.

More detailed results will be discussed at the 2024 Annual Meeting of The Menopause Society as part of the oral abstract presentation titled "Effect of hormone therapy on insulin resistance in healthy postmenopausal women: A systematic review and meta-analysis of randomized placebo-controlled trials."

"Hormone therapy is an effective treatment for many bothersome menopause symptoms, including hot flashes," says Dr. Stephanie Faubion, medical director for The Menopause Society. "This new metaanalysis is important as declining estrogen levels in menopausal women put them at greater risk for insulin resistance and hormone therapy could be beneficial in reducing insulin resistance in these women."

Drs. Jiang and Faubion are available for interviews in advance of the Annual Meeting.

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

The Menopause Society (formerly The North American 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.