

Hormone therapy found to have significant association with heartburn, difficulty swallowing and chest pain

June 28 2023



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Whether hormone therapy (HT) can be linked to an increased risk of gastroesophageal reflux disease (GERD) has been debated for years. A new systematic review and meta-analysis attempts to resolve the controversy, suggesting that there is a significant association between

ever or current HT use and GERD. Results of the analysis are published today in the journal *Menopause*.

GERD is one of the most common conditions in gastroenterology practice. Its global prevalence has been estimated at nearly 14%. Common symptoms include heartburn, dysphagia (difficulty swallowing), and chest pain. Anatomical abnormalities, such as hiatal hernia and obesity, have been identified as risk factors. A number of medications, including antidepressants, [anti-inflammatory drugs](#), and HT have also been linked with GERD in multiple studies, although there have been conflicting results, especially with regard to HT.

Estrogen increases stomach acid production and is associated with higher levels of plasma nitric oxide, which is a key neurotransmitter for the relaxation of the lower esophageal sphincter (LES). Progesterone relaxes the esophageal muscles and the LES, allowing stomach acid to flow back into the esophagus, causing GERD symptoms. Previous research linked female sex hormones with GERD symptoms during pregnancy and with oral contraceptive use. However, the association between HT and GERD in [postmenopausal women](#) had remained unclear. A new [systematic review](#) and meta-analysis, however, provides clarity by confirming a significant association between ever or current HT use and GERD.

Researchers conducted an online search of published randomized, controlled trials and [observational studies](#) investigating the association between HT and GERD. Although a total of 84 studies were originally identified, most were eliminated because of irrelevancy or because they were duplicates or associated with conference abstracts. What remained for analysis were five full-length studies that covered more than one million participants. No participants with a prior GERD diagnosis were included.

All five studies reported a significant association between estrogen use

and GERD, as well as between GERD and HT containing a combination of estrogen plus a progestogen. Women who received combined estrogen-progestogen therapies had a lower risk of GERD symptoms compared with HT containing estrogen alone or progestogen alone.

Additional research is suggested because of the small number of included studies. Hormone therapy has proven effective in treating many menopause symptoms. GERD risk factors should be considered when evaluating women with menopause symptoms.

"Although additional research is needed, this study highlights the potential for the development of GERD symptoms with HT use. A review of risk factors for GERD and implementation of lifestyle strategies for prevention, such as smoking cessation, maintaining a healthy weight, and not lying down after a heavy meal, may be helpful to avoid GERD symptoms in menopausal women considering HT use," says Dr. Stephanie Faubion, NAMS medical director.

More information: Wafa A. Aldhaleei et al, The association between menopausal hormone therapy and gastroesophageal reflux disease: a systematic review and meta-analysis, *Menopause* (2023). [DOI: 10.1097/GME.0000000000002214](https://doi.org/10.1097/GME.0000000000002214)

Provided by The North American Menopause Society

Citation: Hormone therapy found to have significant association with heartburn, difficulty swallowing and chest pain (2023, June 28) retrieved 2 May 2024 from <https://medicalxpress.com/news/2023-06-hormone-therapy-significant-association-heartburn.html>

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