

Menopause More Than Doubles Risk for Fatty Liver Disease

Postmenopausal women were more than twice as likely to have NAFLD even after adjusting for age and metabolic factors.

February 22, 2023 By [Sukanya Charuchandra](#)

Women face more than double the risk of developing [non-alcoholic fatty liver disease \(NAFLD\)](#) after menopause, according to a systematic review and meta-analysis published in the journal [Menopause](#).

“The meta-analysis reveals that menopausal status was associated with approximately 2.4 times higher odds of NAFLD,” the researchers concluded.

Arising from the accumulation of fat in the liver, NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. As a result of inflammation, NAFLD can lead to liver fibrosis, cirrhosis and even liver cancer. With no effective approved medical therapies, disease management is dependent on lifestyle changes such as weight loss and exercise.

Premenopausal women have a lower rate of NAFLD than men, the researchers noted as background. In contrast, NAFLD occurs at similar rates in postmenopausal women and men. But previous research has not clarified whether menopause itself is a definite risk factor.

Aunchalee Jaroenlapnopparat, MD, of Harvard Medical School, and colleagues conducted a systematic review and meta-analysis to assess whether a significant link between menopause and NAFLD could be established.

Using the search terms “menopause” and “NAFLD,” the researchers identified 587 relevant studies from the EMBASE, MEDLINE and Web of Science databases from inception through December 2021. For the final analysis, they included 12 eligible cross-sectional studies with data on both a premenopausal and a postmenopausal group as well as information on the participants’ NAFLD status. Together, the studies included more than 12,100 premenopausal women and more than 2,600 postmenopausal women. The studies did not report whether the women were using hormone replacement therapy.

Postmenopausal women were 2.37 times more likely than premenopausal women to develop

NAFLD, the study authors found. Even after adjusting for age and metabolic factors, such as body mass index and waist circumference, postmenopausal women still had more than twice the odds of developing NAFLD.

A lack of estrogen after menopause may be responsible for the increased risk of NAFLD, the researchers speculated. Lower estrogen levels are tied to altered fat metabolism and distribution as well as increased fat accumulation in the liver. Thus, hormonal changes associated with menopause may influence the development of NAFLD, irrespective of age and metabolic factors.

Click here to read the study abstract in [Menopause](#).

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