NAFLD Is Linked to Higher Risk of Obstructive Sleep Apnea

Individuals with both fatty liver diseae and obesity had the greatest risk of sleep apnea.

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Non-alcoholic fatty liver disease (NAFLD) is linked to a higher risk of obstructive sleep apnea, according to a large study that used Korean population data, published in Scientific Reports.

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. With no effective approved medical therapies, disease management is dependent on lifestyle changes such as weight loss and exercise.

Besides NAFLD, obesity is also connected with sleep apnea. The condition occurs when muscles that support the tongue and soft tissues in the throat relax and block the airway, temporarily cutting off breathing. Some signs of sleep apnea include snoring, intermittent hypoxia (reduced oxygen level) and interrupted sleep.

Su Jong Yu, MD, PhD, of Seoul National University in Korea, and colleagues set out to study the link between NAFLD and sleep apnea. The team accessed data from the Korean National Health Insurance System, the national insurance used by some 97% of the Korean population, between January 2009 and December 2009. The database included information on sociodemographic factors, diagnosis and treatment specifics as well as data from annual or biennial medical examinations. The researchers tracked participants from their inclusion in the study until a diagnosis of sleep apnea or December 31, 2015, whichever came first.

NAFLD status was assigned to individuals with an fatty liver index (FLI) of at least 60 in the absence of high alcohol intake. Of the 8,116,524 participants, 12% had an FLI of at least 60 and 23% had an FLI of between 30 and 60. Individuals with a higher FLI were more likely to be male, current smokers and alcohol drinkers, and they had a higher income.

Over the course of 6.3 years, the team identified 45,143 cases of sleep apnea, with higher incidence seen in those with an FLI of at least 60 compared to those with an FLI below 30.

When analyzing multiple variables at once, the researchers found that individuals with a higher FLI had a higher risk of sleep apnea, irrespective of body mass index and the presence of abdominal

fat. Those with the most elevated FLI and obesity had the highest risk.

“In this nationwide population-based study involving most Korean adults, we found that NAFLD (defined by FLI) was significantly associated with increased risk of obstructive sleep apnea, even after adjusting for multiple metabolic variables,” wrote researchers. “Moreover, the risk of obstructive sleep apnea was higher in NAFLD patients who were younger, male or obese than in those who were older, female or non-obese.”

Click here to read the study in Scientific Reports.

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