Poor Sleep Quality Linked to Fatty Liver Disease

Associations with sleep efficiency and daytime dysfunction varied based on sex.

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Usage of sleep medication and daytime dysfunction due to sleepiness are associated with non-alcoholic fatty liver disease (NAFLD), according to results from a self-reported questionnaire published in BMJ Open.

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 the buildup of scar tissue (fibrosis), cirrhosis (advanced scarring) and even liver cancer. NAFLD/NASH is increasingly recognized as a manifestation of metabolic syndrome, characterized by abdominal obesity, high blood pressure, elevated blood sugar and abnormal cholesterol or triglyceride levels. With no effective approved medical therapies, disease management is dependent on lifestyle changes, such as weight loss and exercise.

While obstructive sleep apnea and short sleep duration are considered risk factors for NAFLD, whether sleep quality has any impact on the risk of developing NAFLD is unclear. So Atsushi Takahashi, MD, of Fukushima Medical University in Japan, and colleagues set out to shed light on any associations between sleep quality and NAFLD.

Between May 2013 and March 2014, a total of 6,138 Japanese men and women who received checkups were included in the study. Excluding people who did not meet the criteria, 4,828 people completed the Pittsburgh Sleep Quality Index (PSQI) questionnaire. The sleep questionnaire took into account seven parameters scored from zero to three: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, sleep medication use and daytime dysfunction. The team compared the overall PSQI score (a lower score indicates better sleep quality) for men and women with and without NAFLD.

The researchers found that the mean PSQI score for sleep medication use was higher among men and women without NAFLD than among those with NAFLD. After adjusting for body mass index (BMI), however, sleep medication use was not linked with NAFLD in either group.

Daytime dysfunction was linked with NAFLD in both women and men, but after adjusting for BMI,

the association was significant only for women. On the other hand, sleep latency and habitual sleep efficiency were linked with NAFLD in men but not women. The researchers found no links between NAFLD and the global PSQI score, subjective sleep quality, sleep duration or sleep disturbance.

“This study demonstrated that sleep medication use and daytime dysfunction were associated with NAFLD,” wrote the researchers. “These findings suggest that additional studies are needed to assess the importance, if any, of sleeping pills for the treatment of NAFLD.”

Click here to read the study in BMJ Open.

Click here to learn more about NAFLD.
