Drinking May Exacerbate Bone Loss in People With HIV

Researchers found that the more people with HIV drank, the lower a biomarker of bone formation.

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For people with HIV, among whom bone density decline is a concern even if their virus is well controlled with antiretrovirals, drinking alcohol may lower bone formation even further.

Publishing their findings in Alcoholism: Clinical and Experimental Research, researchers analyzed data from 198 participants in the Boston ARCH cohort, which includes HIV-positive people with current or past alcohol or drug use disorder.

The investigators analyzed blood samples taken from the participants, looking at biomarkers associated with bone metabolism and a biomarker that indicates recent alcohol consumption. They also relied on interviews with the participants. They controlled their data for age, sex, race, other substance use, medications, vitamin D levels and whether the participants had a fully suppressed viral load.

“We did not find an amount of alcohol consumption that appeared ‘safe’ for bone metabolism,” study lead author Theresa W. Kim, MD, an assistant professor at the School of Medicine and a faculty member of the Clinical Addiction Research Education (CARE) program at Boston Medical Center, said in a press release.

For each additional drink per day that the participants consumed, their levels of serum procollagen type 1 N-terminal propeptide (P1NP), a marker of bone formation, declined by 1.09 nanograms per milliliter on average. A healthy P1NP level is between 13.7 and 42.4 ng per ml.

Those who drank on more than 20 days per month had lower P1NP levels than those who drank on fewer than 20 days per month. Additionally, those who had high levels of the biomarker tied to recent alcohol use had lower P1NP levels.

“If I were counseling a patient who was concerned about their bone health, besides checking vitamin D and recommending exercise, I would caution them about alcohol use, given that alcohol intake is a modifiable risk factor and osteoporosis can lead to fracture and functional decline,” says Kim. “As you get older, your ability to maintain adequate bone formation declines. These

findings suggest that for people with HIV, alcohol may make this more difficult."

To read the study abstract, click here.

To read a press release about the study, click here.

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