

# Sleep Problems Are Common Among People With HIV

Poor sleep quality, sleep apnea and daytime sleepiness were linked to mood disorders and cardiovascular risk, but not to specific antiretrovirals.

April 19, 2023 By [Liz Highleyman](#)

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People living with HIV are more likely to experience sleep disorders compared with their HIV-negative peers, according to study results [published in the journal AIDS](#). Sleep problems were associated with anxiety and [depression](#), [cardiovascular risk factors](#) and the use of various medications that can affect sleep, but not with specific antiretroviral drugs.

“In our cohort of people with HIV on stable antiretroviral therapy, despite the alarmingly higher prevalence, sleep disorders were associated with the same determinants (cardiovascular risk factors and mood disorders) observed in the general population,” Maria Mazzitelli, MD, PhD, of Padua University Hospital in Italy, and colleagues concluded.

Sleep disturbances—such as insomnia, waking during the night, sleep apnea and daytime sleepiness—can affect daily functioning, attention, performance and overall quality of life, as well as long-term health, especially metabolic and cardiovascular health, the study authors noted as background. Some 10% to 30% of the general population are thought to experience sleep disorders, although many people are not properly diagnosed.

Prior research has shown that sleep disorders are more common among people living with HIV. Certain antiretroviral drugs—in particular efavirenz (Sustiva, also in the Atripla and Symfi combination pills)—are known to cause sleep problems, including insomnia and unusual dreams. Other factors, such as alcohol or non-prescription drug use and anxiety or depression also play a role. The link between sleep problems, cardiovascular risk and mood disorders has been studied in the general population, but far less so in people with HIV.

Mazzitelli’s team performed a study of sleep problems among 721 HIV-positive people receiving care at Padua University Hospital. A majority (72%) were men, the median age was 53 years, and they had been living with HIV for a media of 15 years. All were on stable combination antiretroviral treatment, and most had an undetectable viral load; the median CD4 count was above 600. Two thirds had comorbidities (most commonly high blood pressure, obesity and elevated blood lipids), and 20% were taking multiple medications (known as polypharmacy).

About half of the participants were taking antiretrovirals that could potentially affect sleep, mainly integrase inhibitors; less than 1% were on efavirenz. In addition, 20% were using various hypnotic, sedative or other sleep-affecting drugs, including benzodiazepines, corticosteroids, opioids for pain relief and antidepressants that can affect sleep-wake cycles. All told, 61% were using medications that could impair sleep.

The researchers assessed sleep quality using a variety of measures (Pittsburgh Sleep Quality Index, Berlin Questionnaire for sleep apnea, Insomnia Severity Index, Epworth Sleepiness Scale and Fatigue Severity Scale). Anxiety and depression were evaluated using two measures (Generalized Anxiety Disorder-7 and Patient Health Questionnaire-9). [Framingham risk scores](#) and measures designed specifically for people with HIV (D:A:D 10R and 10F) were used to assess cardiovascular risk.

Overall, 77% of participants were found to have sleep disorders. A majority (60%) had scores indicating poor sleep quality, followed by sleep apnea (31%), insomnia (31%) and high daytime sleepiness (8%). A small number had other sleep problems, including somnambulism (sleepwalking) and restless leg syndrome. What's more, 28% had anxiety and 16% had depression.

After controlling for other factors, Berlin Questionnaire sleep apnea scores were independently associated with high body mass index, a Framingham cardiovascular risk above 10% and D:A:D risk scores above 10%. Pittsburgh Sleep Quality Index and Insomnia Severity Index scores were independently linked to anxiety and depression. However, no associations were observed between sleep disorders and specific antiretroviral regimens or antiretroviral drug classes.

Despite having an excellent virological and immunological profile and antiretroviral tolerance, the study population "still maintain[s] a very high prevalence of sleep disturbances, greater than the general population...with a potential significant effect on quality of life," the study authors concluded.

"The main drivers of the problem remain mood disorders, and the iatrogenic effects of drugs other than antiretroviral ones," they continued. "Possible underlying mechanisms such as inflammation/chronic immune activation and microbial translocation could play a role," although this study was not designed to look at these factors. Microbial translocation refers to leakage of bacteria from the gut, which can trigger ongoing immune activation.

In order not to underestimate sleep disorders, psychiatric disorders and other related issues, the researchers suggest that people with HIV should be assessed for both sleep and mood disorders once a year. Moreover, sleep health and sleep disorder assessment should be included when evaluating cardiovascular and metabolic health.

Overall, the factors associated with sleep disorders in people with HIV on contemporary antiretroviral therapy with optimal viral control and immune recovery resemble those observed in the general population, Kelesidis, Theodoros, MD, of the David Geffen School of Medicine at UCLA, noted in an [accompanying editorial comment](#). But much remains to be learned.

“Emerging evidence has suggested that abnormal immunological function may contribute to poor quality of sleep,” he wrote. “Thus, an unmet need in the field is the evaluation of the microbiome and biomarkers of bacterial translocation and immune dysfunction in people with HIV in association with independent sleep disorders scales and cardiovascular risk factors. Assessment of both sleep and mood disorders in people with HIV may improve the overall assessment of these patients in the clinic but is often neglected in clinical practice.”

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