Journal of Sleep Disorders & Therapy

OPEN ACCESS Freely available online

Commentary

Inflammatory Pathways Linking Sleep Disorders and Depressive Symptoms

Ebony Jens*

Department of Cognitive and Behavioral Therapy, King Saud University, Riyadh, Saudi Arabia

DESCRIPTION

The connection between sleep disorders and psychiatric conditions is one of the most fascinating and troubling areas in modern medicine. When people think about sleep, they often see it as a passive activity, a simple act of resting the body after a long day. Yet science has shown that sleep is not passive at all; it is an active and highly regulated process, essential to the stability of the brain and the balance of the mind. In recent decades, evidence has mounted that disturbances in sleep are not merely symptoms of psychiatric conditions, but can also play an influential role in their development, severity, and persistence.

The most obvious relationship is seen in depression. Insomnia is one of the hallmark complaints of patients with depressive disorders, whether it appears as difficulty falling asleep, staying asleep, or waking too early. Yet it is increasingly clear that insomnia is not only a symptom of depression but also a risk factor. Large scale population studies have shown that people with chronic insomnia are more likely to develop major depressive episodes later in life. Evidence suggests the latter may be true in many cases. Sleep disruption alters the regulation of neurotransmitters such as serotonin and dopamine, which are central to mood regulation. It also increases inflammation, impairs emotional regulation, and affects the brain's capacity to process positive experiences.

A similar story unfolds with anxiety disorders. Anyone who has lain awake at night worrying about tomorrow's tasks or rehearsing conversations in their head knows how closely anxiety and sleeplessness are linked. Yet for patients with generalized anxiety, panic disorder, or post-traumatic stress disorder, this link becomes pathological. These patients often report hyperarousal, a state in which their nervous system is in overdrive, preventing the body from settling into the restful rhythms needed for sleep. Research using brain imaging has shown that sleep deprivation heightens activity in the amygdala, the brain's emotional alarm center, while reducing regulation from the prefrontal cortex. This imbalance creates a state of emotional volatility, amplifying the very feelings of anxiety and dread that caused the initial insomnia. In this way, sleep disturbance and anxiety fuel each other, leading to chronic distress that is resistant to treatment if sleep is not addressed.

Bipolar disorder illustrates perhaps the most dramatic interplay between sleep and psychiatric conditions. Changes in sleep are one of the most reliable markers of mood episodes. During manic phases, patients often sleep very little, sometimes going days with only a few hours of rest, yet they feel energized. In depressive phases, hypersomnia or severe insomnia are common. What is particularly revealing is that disruptions in sleep can sometimes precipitate manic or depressive episodes, suggesting that sleep is not merely a passive reflection of the underlying mood state but an active driver of instability. This raises important clinical questions about whether stabilizing sleep patterns could serve as a frontline strategy in preventing mood swings. In fact, some therapies for bipolar disorder already focus on social rhythm stabilization, encouraging consistent sleep and wake times as a way to anchor mood regulation. This practical approach underscores just how central sleep is to the psychiatric landscape.

Correspondence to: Ebony Jens, Department of Cognitive and Behavioral Therapy, King Saud University, Riyadh, Saudi Arabia, E-mail: jense@gmail.com

Received: 02-Jun-2025, Manuscript No. JSDT-25-38604; **Editor assigned:** 04-Jun-2025, PreQC No. JSDT-25- 38604 (PQ); **Reviewed**: 17-Jun-2025, QC No. JSDT-25-38604; **Revised:** 24-Jun-2025, Manuscript No. JSDT-25-38604 (R); **Published**: 01-Jul-2025, DOI: 10.35248/2167-0277.25.14.651.

Citation: Jens E (2025). Inflammatory Pathways Linking Sleep Disorders and Depressive Symptoms. J Sleep Disord Ther. 14:651.