

Human Circadian Rhythm: Sleep-Wake Cycle

Melatonin is the hormone of deep rejuvenating sleep. It is synthesized in the morning in the brain on exposure to sunlight or bright morning light. Melatonin gets stored in the Pineal gland of the brain. It gets released when the darkness of the night sets in. Inadequate exposure to bright morning light reduces the synthesis of melatonin.

Additionally, the release of melatonin at night gets inhibited on exposure to blue light from digital devices such as television, computer, and cell phones. Lack of deep rejuvenating sleep from melatonin imbalance increases stress hormone cortisol levels. High cortisol levels lead to obesity and diabetes. Several scientific studies have shown that lack of sleep even by 1-2 hours/ day, can cause a weight gain of as much as 10-15 Kg within few months.