

The Effects of Stimulants and Depressants on Sleep

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Sleep quality is adversely affected by the concomitant use of stimulants and depressants which is an under-appreciated health risk. Good sleep is important, in part, because it improves cognitive function, boosts mood, supports physical health, enhances performance, and regulates weight. A better understanding of the damaging effects that stimulants and depressants have on sleep cycles could improve sleep recommendations for the general public. A review of research regarding how sleep is altered by stimulant and/or depressant use is presented here. Stimulants, such as amphetamines and caffeine, promote increased dopamine and serotonin neurotransmitter activity in the central nervous system, thereby enhancing arousal and wakefulness. Depressants, such as alcohol, induce drowsiness by increasing inhibitory GABA neurotransmitter activity, ultimately leading to fragmented sleep. The generalized use of stimulants and depressants likely has measurable and long-term effects on individual wellbeing and the functioning of society, but these risks are only beginning to be characterized. Consistent disturbance of the natural sleep-wake cycle and the reduction of restorative sleep quality via the concomitant use of stimulants and depressants may result in a cascade of negative health consequences such as, chronic fatigue, decreased productivity, impairing cognitive function, and an increased risk of serious health complications. Educating the public about these risks should be prioritized.