

# Alcohol and Sleep

## I. Normal sleep architecture:

1. After a person falls asleep, they will progress through four to five sleep cycles, with each cycle lasting for an average of 90 minutes. Sleep cycles are broadly classified into two stages - rapid eye movement (REM) and non-rapid eye movement (NREM). The REM stage consolidates the day's acquired knowledge and memory, while the NREM stage consists of light sleep and deep sleep.
2. The deep sleep stage is also known as slow-wave sleep, a crucial period for the body to rest, recover, and secrete growth hormones. An adequate amount of deep sleep ensures a good sleep quality. A typical adult's deep sleep comprises 15 to 20% of their total sleep time; that of a child is higher, while that of an elderly person is lower.

## II. Effects of alcohol on sleep

1. Alcohol will only make a person feel more sluggish after sleeping. The presence of alcohol metabolites will disrupt an otherwise complete sleep architecture, with the most noticeable effects being a shorter period of deep sleep, frequently waking up from light sleep, and feeling sluggish after waking up.
2. It is highly recommended that alcohol not be used to aid sleep. During sleep, the brain will increase the amount of GABA (an inhibitory neurotransmitter) released, which reduces the activity of excitatory neurons. Alcohol metabolites also act on GABA receptors by inducing relaxation and sleepiness. If a person has experienced insomnia for quite some time, consuming alcohol would only worsen their condition because alcohol disrupts sleep quality and creates more problems that disrupt sleep. Moreover, this would increase the likelihood of developing alcohol tolerance, which leads to physical and psychological dependence and addiction.
3. Alcohol consumption aggravates snoring and sleep apnea and relaxes the soft tissues in the throat, which exacerbates sleep apnea and increases the period of light sleep as well as arousals.

### III. Alcohol consumption guidelines:

1. Based on the recommendations of the American National Institute on Alcohol Abuse and Alcoholism (NIAAA), a standard alcoholic drink contains 14 grams of alcohol, which is equivalent to:

Beer	Red wine	Whiskey
Contains 5% alcohol 1 bottle of beer	Contains 12% alcohol 1 glass of red wine	Contains 40% alcohol 1 shot of whiskey

**\*Women** should drink no more than 3 standard drinks per day and no more than 7 per week.

**\*Men** should drink no more than 4 standard drinks per day and no more than 14 per week.

2. Even though alcohol consumption can be a part of one's life, common and complex problems usually exist behind alcohol and sleep problems. In the end, the only solution is to change a person's lifestyle completely.
3. Some people drink occasionally and are better able to control their consumption; some people have to drink for work and business-related socialization and are unable to prevent themselves from doing so. For the latter, they could calculate their maximum consumption limit and convert it to how many glasses that they should drink while socializing. Tips for keeping their glasses full most of the time can also help limit their alcohol consumption and while avoiding any embarrassing social blunders.
4. A person should seek physiological and psychological assistance if they develop alcohol dependence. If a person experiences withdrawal symptoms such as abdominal discomfort, nausea, lethargy, heart palpitations, night sweats, anxiety, and shaking hands arising within hours or half a day after alcohol withdrawal, they may want to seek assistance from a psychiatrist, who could administering drugs to alleviate these symptoms.

**NTUH Center of Sleep Disorder** cares about you

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