MARIJUANA INTOXICATION: REPORTED EFFECTS ON SLEEP AND DREAMS
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150 experienced marijuana users returned an anonymous questionnaire on how frequently they had experienced 206 possible effects of marijuana intoxication (being "stoned") in their last 6 months of use (categories: Never, Rarely, Sometimes, Very Often, Usually) (abbreviated below as N, R, S, V0, & U), and also rated the minimal degree of intoxication ("stonedness") needed to experience them (categories: Just, Fairly, Strongly, Very Strongly, Maximum). These latter ratings are given scale values of 0-4 and means are presented for brevity herein. General results may be found elsewhere (Tart, Nature, in press). 7 effects on sleep and dreams are presented here, as well as significant differences when respondents were divided by Age, Sex, Educational Level (< 4 years college vs. graduate work), Frequency of Marijuana Use in last 6 months, Total Marijuana Use (frequency by total time used), and Usage of Other Psychedelic Drugs (primarily LSD).

Drowsiness well before bedtime is common (45%, 25%, & 12% for S, V0, U), with a mean intoxication level of 2.0: heavy users (last 6 mos.) have to be more intoxicated to experience this (P < .01), as do those classified as heavy users in Total Use (P < .01).

Finding it easier to go to sleep at bedtime when stoned is common (7%, 19%, 57% in S, V0, U), at a mean intoxication level of 1.6, with the more educated needing to be more intoxicated (P < .05). Finding it very difficult to go to sleep at bedtime when stoned is not common (45%, 23% in N, R), and occurs at a higher mean level of intoxication (2.5) (difference in distribution of levels sig., P < .001). Those who have used LSD at some time report a higher level of intoxication for difficulty in getting to sleep while stoned (P < .01).

Sleep is commonly reported as being particularly refreshing after going to bed stoned (35%, 20%, 26% in S, V0, U), with a low mean intoxication level (1.4) reported for this. Light marijuana use in the last 6 mos. is associated with a lower intoxication level for this (P < .05). It is unusual for sleep to be poor or restless in this condition (49% & 28% in N & R), and when this occurs the level of intoxication (2.3) is higher (P < .001). Users of LSD must be more intoxicated for sleep to be poor after going to bed stoned (P < .01).

It is fairly common for dreams to be more vivid when the user goes to bed stoned (23%, 16%, 12% is S, V0, U), at a mean intoxication level of 1.7, but it is almost as common for dreams to be less vivid or forgotten (21%, 7%, 13% in S, V0, U) at approximately the same level of intoxication (1.6). Respondents reporting heavy Total Use reported a somewhat higher level of intoxication necessary for dreams to be less vivid (P < .05).

Bearing in mind the need for confirmatory laboratory studies, the data suggests that: (1) moderate levels of marijuana intoxication have a sedative effect (drowsiness and refreshing sleep), but high levels may stimulate the users sufficiently to ward off drowsiness and make sleep poor; (2) more experience in altered states of consciousness (greater marijuana use and/or use of other psychedelics) reduces disturbances of sleep.

Supported by USPHS grant MH16810.
Simultaneous reports of increased dreaming as well as a marked increase in the intensity of the dream content. Several Ss reported unpleasant dreams; however, one S reported increased dreaming but described his dreams as "more peaceful and calm" during withdrawal.

Sleep Laboratory and Clinical Studies of the Effects of Tofranil, Valium, and Placebo on Sleep Stages and Enuresis

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Four enuretic children with a history of bedwetting 4 or more nights per week were studied to determine the effects of Tofranil, Valium, and placebo on enuretic frequency and sleep stages. The study consisted of three separate investigations. In each study, after 4 placebo baseline nights, administration of either Tofranil, placebo, or Valium was started and continued for one month. Initial drug doses in the laboratory were Tofranil 50 mg and Valium 10 mg. The dose was increased each week if the children did not show a 50% reduction in enuresis for that week. Results: 1) Tofranil: A moderate reduction in REM sleep was noted throughout the one month administration period. Following drug withdrawal, there was an abrupt and marked REM rebound while stage 4 sleep slightly decreased. Tofranil was effective in treatment of enuresis when the dose was adjusted. This effect is apparently independent of stage sleep alterations. 2) Valium: No significant alterations in REM sleep were noted. Stage 4 sleep was markedly decreased with administration. Following withdrawal, stage 4 sleep reappeared but not completely to baseline levels. Only one child had a reduction in enuretic frequency. 3) Placebo: No significant alterations in sleep stages or enuretic frequency.

Marijuana Intoxication: Reported Effects on Sleep

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One hundred fifty experienced marijuana users indicated by questionnaire how frequently various effects of being stoned were experienced (Never, Rarely, Sometimes, Very Often, Usually) (N, R, S, VO, U), and also the minimal degree of intoxication (MDI) needed for each effect (0-4 scale). Drowsiness before bedtime is common: (VO = 25%, U = 12%), MDI = 2.0. Finding it easier to go to sleep at bedtime when stoned is common (VO = 19%, U = 57%), MDI = 1.2, with difficulty in going to sleep uncommon (N = 45%, R = 23%) and occurring at a higher MDI of 2.5 (p < .001). The night's sleep being particularly refreshing is common (VO = 20%, U = 26%), MDI = 1.4, with poor or restless sleep uncommon (N = 49%, R = 28%) and at a higher MDI of 2.3 (p < .001). Effect on recalled dream vividness is variable: for more vivid, VO = 16%, U = 12%, MDI = 1.7; for less vivid or forgotten, VO = 7%, U = 13%, MDI = 1.9; no significant differences. The data suggest that: 1) moderate levels of marijuana intoxication have a sedative effect but high levels may overstimulate, ward off drowsiness, and make sleep poor; and 2) more experience with altered states of consciousness (greater marijuana use and/or experience with other drugs) results in higher MDIs for negative effects (pre-bedtime drowsiness, difficulty getting to sleep, restless sleep).