

taneous 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 sleep stage alterations. 2) *Valium:* No significant alterations in REM sleep were noted. Stage 4 sleep was markedly decreased with administration. Following withdrawal, stage 4 sleep re-appeared 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 = 1.6; 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).