

Following this, 2 of the 4 subjects participated in an additional experiment in which oral d-propoxyphene napsylate (300 mg q.i.d.) was completely substituted for chronic morphine. For 2 weeks subjects received a double blind injection of 15 mg morphine subcutaneously and a blank capsule (lactose). Daily observations were made which included observations for abstinence scores (daily Himmelsbach scores) as well as completion of a questionnaire¹⁰ designed to measure the chronic effects of opiates and the effects of abstinence. Capsules containing d-propoxyphene napsylate were gradually substituted for the morphine until after a period of 9 days subjects were maintained on 1200 mg/day of orally administered d-propoxyphene napsylate (Table 1). For the next 10 days this dose of d-propoxyphene napsylate was maintained as were all observations. During the transition phase, when the subjects were receiving both morphine and d-propoxyphene napsylate, there were significant Himmelsbach scores indicating mild abstinence with subjects reporting "kicking" (Table 1). However, the transition from morphine to d-propoxyphene was purposefully slow to minimize these abstinence symptoms so that subjects felt comfortable. During the period of maintenance on d-propoxyphene napsylate alone the demonstration of Himmelsbach scores suggested mild abstinence was present (Table 1). A number of symptoms were reported during this maintenance on d-propoxyphene napsylate which included feelings of persistent tiredness, weakness, lethargy; additionally there were initially, episodic feelings of elation, euphoria, palpitations and restlessness described by the subjects as effects most closely resembling those following amphetamine and cocaine. During this period of maintenance on d-propoxyphene, caloric intake was suppressed and the subjects lost body weight. The major source of points in the abstinence scores during this period of maintenance on d-propoxyphene were due to this decrease in caloric intake and continuing loss of body weight. On the 21st day of the experiment placebo capsules were substituted for the daily maintenance dose of d-propoxyphene napsylate (Table 1). Both subjects immediately perceived the substitution and reported withdrawal sickness (Table 1). During the next few days abstinence scores increased reaching a peak on the second or third days of substitution. Both subjects additionally identified this as mild abstinence and reported that the drug made them feel bad and were uncomfortable. On the eighth day a 2.5 mg dose of morphine was administered because of these feelings of uncomfortableness.