

# Cannabis in painful HIV-associated sensory neuropathy

## A randomized placebo-controlled trial

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**Objective:** To determine the effect of smoked cannabis on the neuropathic pain of HIV-associated sensory neuropathy and an experimental pain model.

**Methods:** Prospective randomized placebo-controlled trial conducted in the inpatient General Clinical Research Center between May 2003 and May 2005 involving adults with painful HIV-associated sensory neuropathy. Patients were randomly assigned to smoke either cannabis (3.56% tetrahydrocannabinol) or identical placebo cigarettes with the cannabinoids extracted three times daily for 5 days. Primary outcome measures included ratings of chronic pain and the percentage achieving >30% reduction in pain intensity. Acute analgesic and anti-hyperalgesic effects of smoked cannabis were assessed using a cutaneous heat stimulation procedure and the heat/capsaicin sensitization model.

**Results:** Fifty patients completed the entire trial. Smoked cannabis reduced daily pain by 34% (median reduction; IQR = -71, -16) vs 17% (IQR = -29, 8) with placebo ( $p = 0.03$ ). Greater than 30% reduction in pain was reported by 52% in the cannabis group and by 24% in the placebo group ( $p = 0.04$ ). The first cannabis cigarette reduced chronic pain by a median of 72% vs 15% with placebo ( $p < 0.001$ ). Cannabis reduced experimentally induced hyperalgesia to both brush and von Frey hair stimuli ( $p \leq 0.05$ ) but appeared to have little effect on the painfulness of noxious heat stimulation. No serious adverse events were reported.

**Conclusion:** Smoked cannabis was well tolerated and effectively relieved chronic neuropathic pain from HIV-associated sensory neuropathy. The findings are comparable to oral drugs used for chronic neuropathic pain.