

## **The long-term relationship between cannabis and heroin use: An 18-20-year follow-up of the Australian Treatment Outcome Study**

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**Introduction / Issues:** Cannabis use is common among those with opioid use disorders (OUD), but it remains unclear whether cannabis use is associated with an increase or reduction in illicit opioid use. To extend upon previous longitudinal studies with limited follow-ups, the current study examined a within-person reciprocal relationship between cannabis and heroin use at several follow-ups over 18-20-years.

**Method / Approach:** The Australian Treatment Outcome Study (ATOS) recruited 615 people with heroin dependence in 2001-2002 and reinterviewed at 3-, 12-, 24-, 36-months, 11 and 18-20-years post-baseline. Heroin and cannabis use were assessed at each time point using the Opiate Treatment Index (OTI). A random intercept cross-lagged panel model (RI-CLPM) was conducted to identify within-person relationships between cannabis use and heroin use at subsequent follow-ups.

**Key Findings:** After accounting for a range of demographic, other substance use, mental and physical health measures, an increase in cannabis use at 24-months was associated with an increase in heroin use at 36-months (Estimate = 0.21, SE = 0.10,  $p = 0.03$ ). Additionally, an increase in heroin use at 3-months and 24-months post-baseline was associated with a decrease in cannabis use at 12-months (Estimate = -0.27, SE = 0.09,  $p < 0.01$ ) and 36-months post-baseline (Estimate = -0.22, SE = 0.08,  $p < 0.01$ ). All other cross-lagged associations were not significant.

**Discussions and Conclusions:** Although there was some evidence of a significant relationship between cannabis and heroin use at earlier follow-ups, this was sparse, and inconsistent across time-points. Overall, there was insufficient evidence to suggest a unidirectional or bidirectional relationship between the use of these substances.

**Implications for Practice or Policy:** Caution should be taken given the emergence of cannabis-based interventions for those using opioids.

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