

As the opioid epidemic continues to affect the country, patients are looking for alternatives to prescription painkillers (i.e. opioids). The following guide provides insight so physicians can better advise their patients on cannabis use for the management, reduction and prevention of opioid addiction.

### **Cannabis reduces opioid overdose.**

- In states with medicinal cannabis laws, fatal opioid overdoses drop by an average of 25%. This positive effect grows the longer the law has been in place. For instance, there is a 33% drop in mortality in California, where compassionate use has been in place since 1996 (1).
- This finding was replicated by Columbia's school of public health, using a completely different analysis strategy (2).
- When a state legalizes cannabis, prescription opioid hospitalizations decrease by 23% (3).

### **Cannabis reduces opioid consumption.**

- Cannabis is opioid-sparing in chronic pain patients. When patients are given access to cannabis, they drop their opioid use by roughly **50%**. This finding has been replicated several times from Ann Arbor to Jerusalem (4, 5).
- This opioid sparing effect is accompanied by an *enhancement* of cognitive function once patients begin cannabis therapy: this effect is most likely due to the fact that patients reduce their opioid use (6).
- Cannabis use is associated with a reduction in not only opioid consumption, but also many other drugs including benzodiazepines, which also have a high incidence of fatal overdose. In states with medicinal cannabis laws, the number of prescriptions for analgesic and anxiolytic drugs (among others) are substantially reduced (7). Medicare and Medicaid prescription costs are substantially lower in states with cannabis laws (8).

### **Cannabis can prevent dose escalation and the development of opioid tolerance.**

- Cannabinoids and opioids have acute analgesic synergy. When opioids and cannabinoids are co-administered, they produce greater than additive analgesia (9). This suggests that analgesic dose of opioids is substantially lower for patients using cannabis therapy.
- In chronic pain patients on opioid therapy, cannabis does not affect pharmacokinetics of opioids, yet it still enhances analgesia. This finding further supports a synergistic mechanism of action (10).
- Pre-clinical models indicate that cannabinoids attenuate the development of opioid tolerance (11, 12).

### **Cannabis, alone or in combination with opioids, could be a viable first-line analgesic.**

- The CDC has updated its recommendations in the spring of 2016, stating that most cases of chronic pain should be treated with non-opioids (13).
- The National Academies of Science and Medicine recently conducted an exhaustive review of 10,000+ human studies published since 1999, definitively concluding that cannabis itself (not a specific cannabinoid or cannabis-derived molecule) is safe and effective for the treatment of chronic pain (14).
- When 3,000 chronic pain patients were surveyed, they overwhelmingly preferred cannabis as an opioid alternative (15).
  - 97% "strongly agreed/agreed" that they could decrease their opioid use when using cannabis
  - 92% "strongly agreed/agreed" that they prefer cannabis to treat their medical condition
  - 81% "strongly agreed/ agreed that cannabis by itself was more effective than taking opioids

### **Cannabis may be a viable tool in medication-assisted relapse prevention**



## Physician guide to cannabis-assisted opioid reduction

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- CBD is non-intoxicating, and is the 2<sup>nd</sup> most abundant cannabinoid found in cannabis. CBD alleviates the anxiety that leads to drug craving. In human pilot studies, CBD administration is sufficient to prevent heroin cravings for at least 7 days (16).
- Cannabis users are more likely to adhere to naltrexone maintenance for opioid dependence (17).

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