

# Tobacco and Cannabis Use

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NO CONFLICT OF INTEREST

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# Background

- Tobacco use is overrepresented in cannabis smokers, with up to 90% reporting life-time exposure
- Combined use of both substances is upwards of 60–70% in cannabis users and more than five times as likely as measured by past month use in tobacco users
- In adolescents, cannabis use is predictive of later tobacco smoking, labelled the ‘reverse gateway’
- For example, cannabis users may only be exposed to tobacco through smoking ‘joints’, leading to sustained tobacco use/dependence.
- Additionally, cigarette smoking mediates the relationship between cannabis use and cannabis dependence.

- In a longitudinal study in 14–15 year olds, cannabis use increased the likelihood of initiating nicotine use up to 8 times and developing nicotine dependence up to 3 times suggesting cannabis's role as a gateway drug
- Conversely tobacco smoking increased the risk for cannabis use and dependence up to 3 times
- Suggests a bi-directional potentiating effect and indicates that more complex factors may drive combined use

- The animal literature has characterized the neural mechanisms that may underlie these potentiating effects, it is also possible that personality factors contribute to this phenomenon – extraversion in particular
- Associations between negative emotions (depression and anxiety) that discriminate cannabis-only users from co-morbid cannabis and nicotine users

# Why mix them?

- Brain interactions, counter- actions ( sleep + awake)
- Combined use exaggerates the somatic, psychological and social consequences of each drug.
- Concurrent potentiates tobacco and cannabis dependence and blurs withdrawals (from which drug?)
- Increases the risk of relapse and reduces motivation to care.
- Leads to a reduced likelihood of therapeutic success
- Nicotine is a local cough suppressant → deeper inhalations when smoking anything!

# Medical Consequences

- cannabis joint-years was associated with worse health for 3 of 12 health outcomes, namely:
- Self-reported health and poorer lung function
- Early strokes
- Heart attacks (worse in men than women)
- Periodontal health was the only aspect of health that's showed a robust adverse association in analyses of both persistent dependence and joint-years.
- Post hoc analyses showed that cannabis users brushed and flossed less than others and were more likely to be alcohol dependent

# Medical Consequences

- Abnormalities in the brain-behavior relationships underlying memory processes with combined use of cannabis and nicotine use.
- Hippocampal volume deficits in MJ users with further abnormal brain-behavior relationships specific to combined MJ + Nic users.
- Memory functioning is more likely disrupted by chronic MJ and tobacco co-use

# What can be done?

- Prevention
- Medications (NRT, Varenicline-Champix)
- No evidence for antidepressants
- Sleep medications might help in early withdrawals
- Social / Behavioural interventions
- Relapse prevention

**DO NOT MIX THE DRUGS**

**Take the tobacco out**



# Interventions

- Data demonstrates that cannabis use was higher among participants with existing networks of substance-using peers
- Cannabis use was reduced mainly for those who nominated friends who reported low levels of substance use.
- Caution: While effect estimates from meta-analyses favours the intervention of peer-led discussions, two studies highlighted that the peer-led intervention may, in fact, enhance tobacco or alcohol use among certain higher-risk groups

# Conclusions

- Vaping cannabis (without tobacco) may be better?

## Health workers role

- More reporting of usage!
- More reporting of successful abstinence cases!
- More research into good interventions!

# Some references

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