

RESEARCH BRIEF

November 2020 | A report for the WA State Prevention Research Subcommittee (PRSC)



Cannabis Concentration and Health Risks: Is High Potency associated with Adverse Health Effects?

The intent of this brief is to provide policy makers with a summary of the scientific evidence on topics of public health importance related to cannabis concentration.

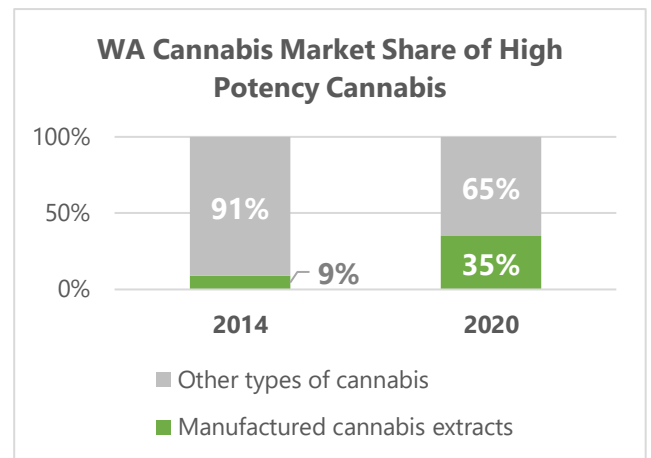
Current Context

Cannabis has been legalized for adult use in our state since 2012, and cultivation, processing, and sales are run by businesses focused on product development and marketing.

THC is the best-known psychoactive ingredient in the cannabis plant that causes people upon consumption to feel high. High potency manufactured cannabis concentrates, such as oils & butters, contain THC levels varying from 60-90%. These levels are a 6-to-9-fold increase over what was considered "high potent" cannabis back when the main method of use was smoking the cannabis plant.

These manufactured cannabis extracts now represent 35% of the Washington cannabis market, up from 9% in 2014. *But is high potency cannabis use safe?*

In an attempt to better understand the current scientific evidence of the health and behavioral risks of high potency cannabis use, a workgroup of researchers from the University of Washington and Washington State University spent six months reviewing the research on this subject.



The [resulting report](#) reveals both important public health information and important gaps in the research, both of which can help guide informed policy. These findings are related to non-medical use of cannabis only.

Report Findings

- **Young people are particularly vulnerable.** There is strong evidence of the detrimental impact of THC use during adolescence, and negative impacts may be exacerbated for those who use high potency cannabis or use more frequently.
- **The risk of developing cannabis use disorder or addiction,** particularly among adolescents, is higher with use of high potency cannabis products.

RESEARCH BRIEF

Cannabis Concentration and Health Risks: Is High Potency associated with Adverse Health Effects?

- **Younger adults, lower-income, ethnic minorities, and those reporting poor mental health** are more likely to “dab,” a method of cannabis use that provides a high dose of high potency cannabis.
- **High potency cannabis can have lifelong mental health consequences.** Daily cannabis use, especially of high potency products, increases the risk of developing a psychotic disorder (i.e., schizophrenia), and can exacerbate symptoms in those with a psychotic disorder diagnosis.
- **High potency concentrates are more likely to contain residues and contaminants** including solvent-base extraction and additives. The health effects of exposing human lungs to these contaminants are still not fully known.
- **Cannabis use during pregnancy impacts both infants and mothers.** Negative health impacts for infants include low birth weight, decreased IQ scores, and attention problems. Research is needed to assess whether higher potency cannabis use during pregnancy poses an even greater risk for infants.
- **Research supports a link between cannabis consumption and driving impairment,** but research is needed to evaluate the relationship between cannabis potency and ensuing degree of impairment.



Consensus

The greater the potency of cannabis products, the greater the likelihood of adverse health effects.

The research available to date documents that the potency of a cannabis product impacts the risk of adverse health effects, with higher amounts leading to greater risk.

This impact is particularly concerning for young users and those with pre-existing mental health conditions. These harms are likely to disproportionately impact marginalized populations (low-income, minorities).

There is an urgent need for policy considerations and deliberations to support public health and well-being.

For more information, contact:

Beatriz Carlini, PhD, bia@uw.edu

Kevin Haggerty, PhD, haggerty@uw.edu or

Michael McDonell, PhD, mmcdonell@wsu.edu

This report was created through a joint effort from the University of Washington and Washington State University, with support from the Alcohol & Drug Abuse Institute and other WA health organizations.

