

What risk do people who use cannabis run of developing cannabis use disorders?

A systematic review and meta-analysis

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Introduction and Aims

“One in 10 cannabis users develop dependence” is widely cited, but this is based on data collected 30 years ago.

Given the considerable changes in the cannabis landscape, an evidence synthesis to quantify the risks based on more recent data has importance in clinical practice and public health.

We aim to systematically review recent data on the risk of developing cannabis use disorder, including cannabis abuse or cannabis dependence, among people in the general population who used cannabis.

Design and Methods

PROTOCOL

- PRISMA guidelines followed
- A-prior protocol (PROSPERO:42019133166)

SEARCH STRATEGY

- PubMed, Global Burden of Disease Data Source, reference list search, authors' collection

INCLUSION CRITERIA

- Epidemiological studies with quantitative data
- General population samples – used cannabis
- Cannabis use disorder (CUD), cannabis abuse (CA), or cannabis dependence (CD) based on DSM or ICD
- Studies published from 2009, any language

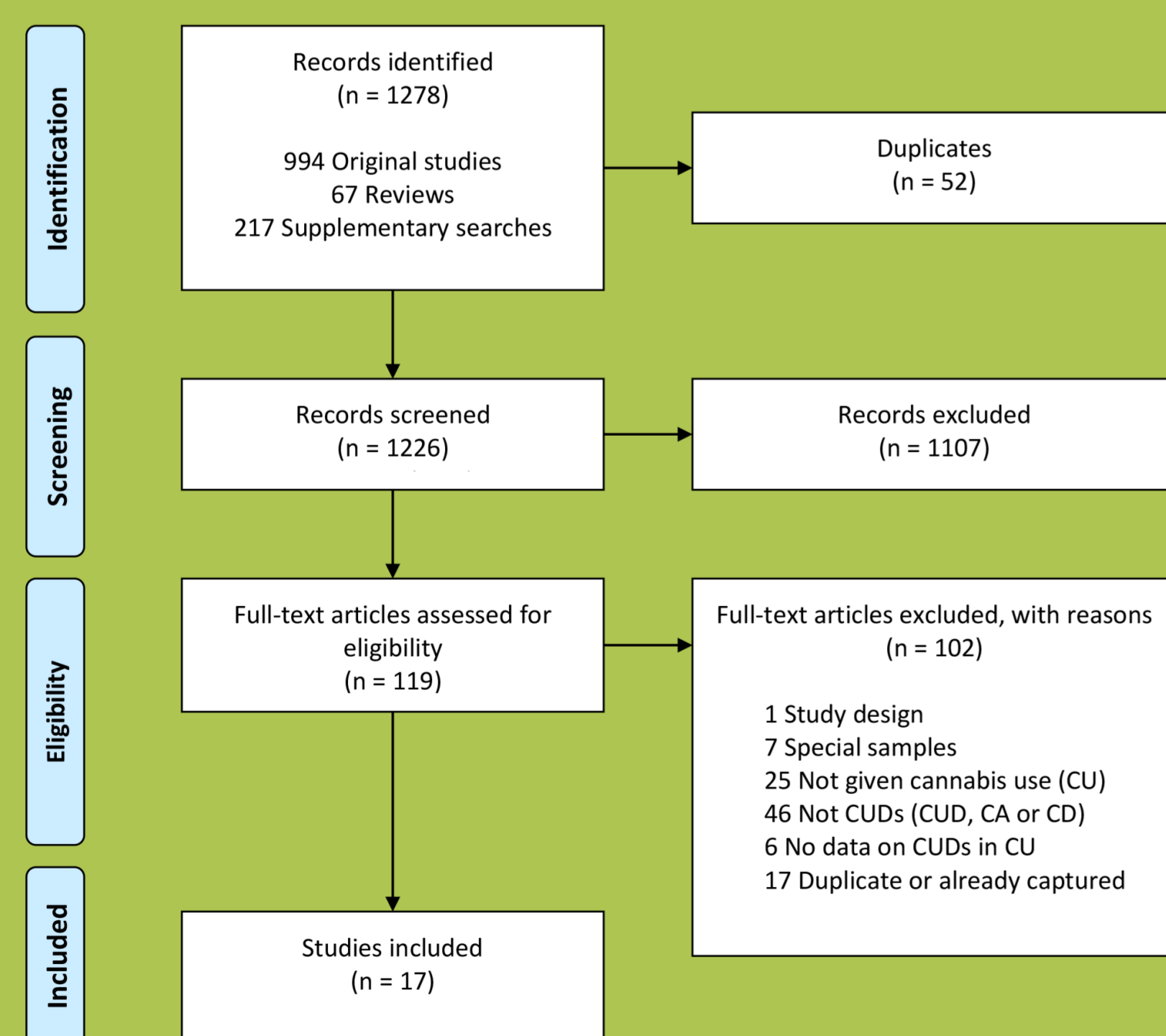


Figure 1: PRISMA flowchart of study identification

Key Findings

Among people who used cannabis, risks of CUDs were meta-analyzed (see Fig 2). All studies found were from high-income countries (United States and high-income Australasia and Europe), with about half from the United States.

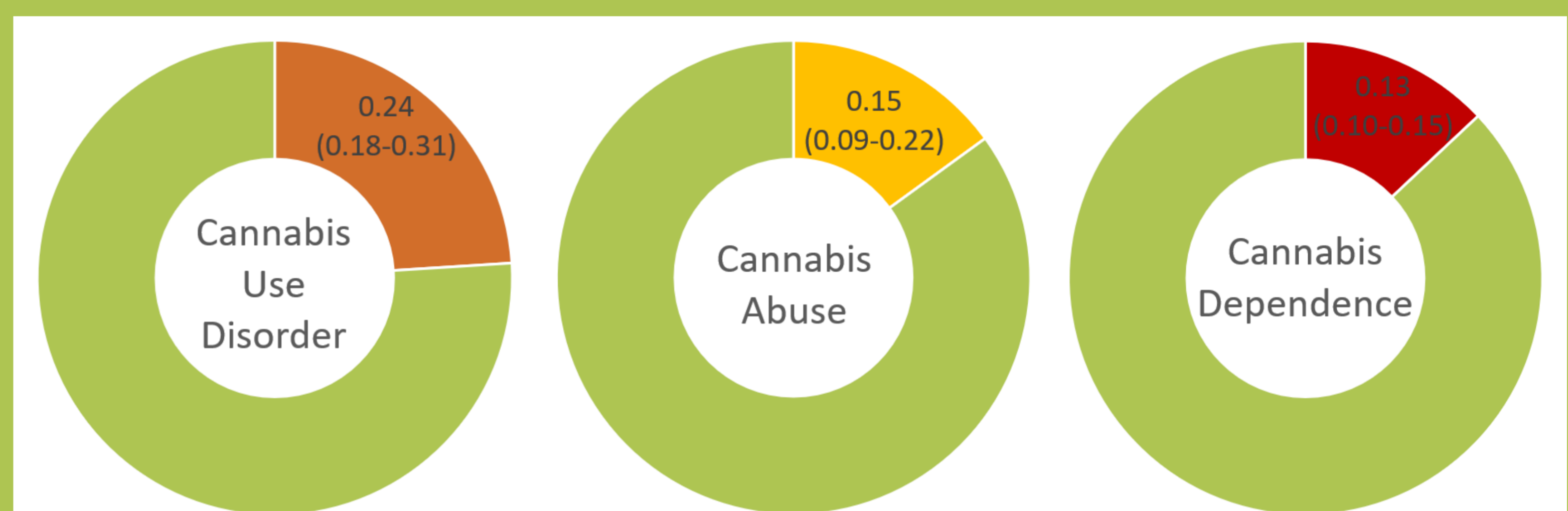


Figure 2: Pooled risks of CUDs among people who used cannabis

Of people who used cannabis regularly (weekly+), meta-analysis found 33% (22-44%) had CD.

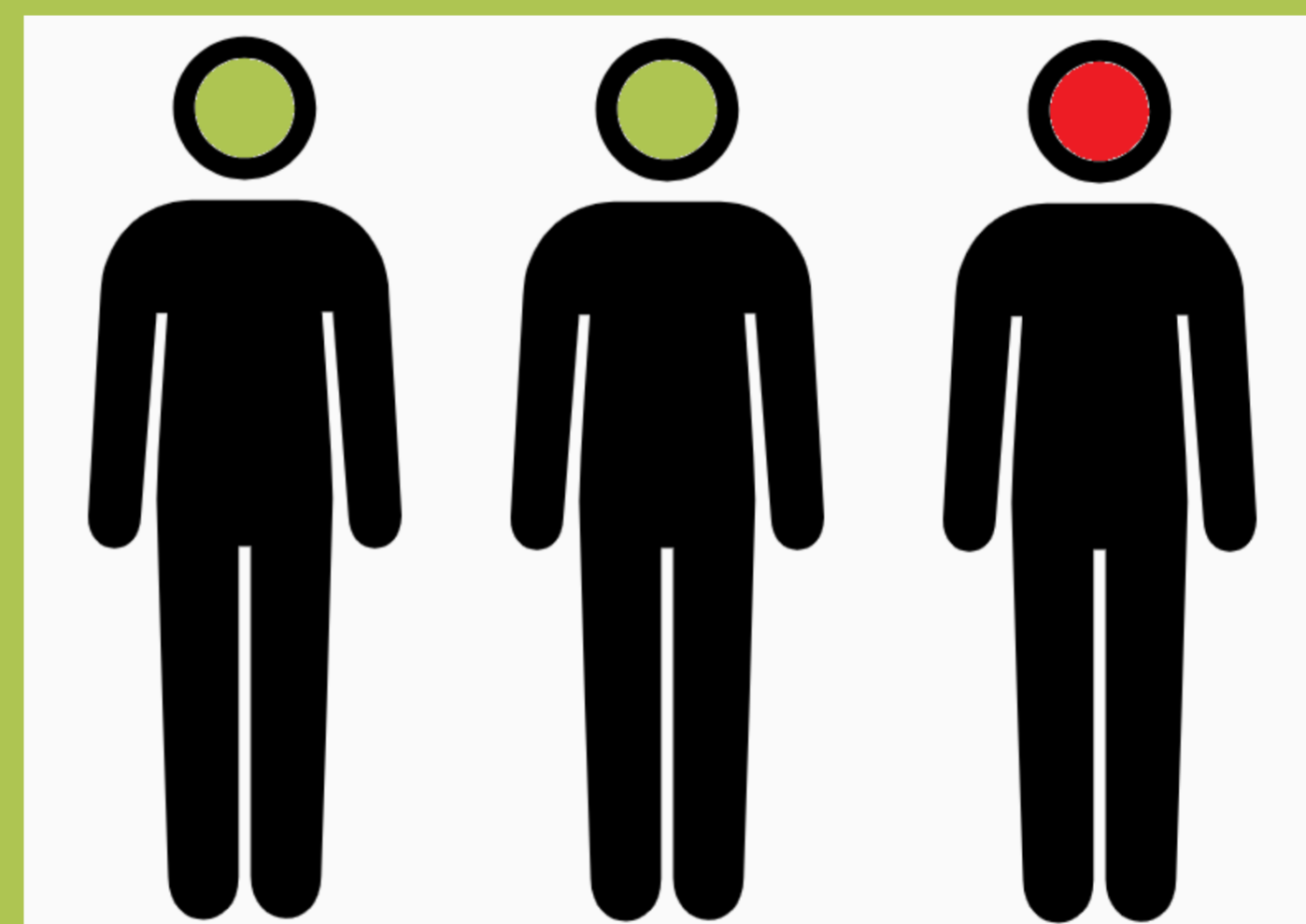


Figure 3: 1 in 3 risk of cannabis dependence with regular cannabis use

Meta-analyses of CUD and CA given regular cannabis use were not conducted due to lack of data.

There were mixed findings, but more evidence leaned towards higher risk in young males.

Subgroup analysis by recall period revealed somewhat consistent estimates given lifetime or recent cannabis use, the confidence intervals overlapped, though heterogeneity was large.

Meta-regression were conducted to examine if the overall results were moderated by study and sample characteristics. Higher risks were found from Australian studies, which used the Composite International Diagnostic Interview (CIDI) to measure CUDs.



Conclusions and Implications

- This timely research provides data to inform knowledge of CUDs in developed countries, and calls for evidence outside of high-income countries.

Given cannabis use, we have:
1 in 4 risk of developing CUD
1 in 7-8 risk of developing CA or CD

May increase in the future

- Future studies that examines how changes in cannabis policies can impact cannabis use (e.g. method of use, product types, and potency of cannabis) are needed to inform strategies to minimise cannabis-related harms in the population.