

Avoid cannabis during adolescence, pregnancy and while driving, say experts

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Experts recommend avoiding cannabis during adolescence and early adulthood, in people prone to or with mental health disorders, in pregnancy, and before and while driving, based on an in-depth evidence review published by *The BMJ* today.



However, they say cannabidiol (one active compound in <u>cannabis</u>) is effective in people with epilepsy, and cannabis based medicines can help people with multiple sclerosis, <u>chronic pain</u>, inflammatory bowel disease, and in palliative care.

Their recommendations are based on an "umbrella review" of 101 meta-analyses on cannabis and health. Umbrella reviews synthesize previous meta-analyses and provide a high-level summary of evidence on a particular topic.

According to the Global Burden of Disease 2019 study, around 24 million people worldwide have <u>cannabis use disorder</u> (being unable to quit cannabis despite it causing health and social problems). It's more common among men and in high income countries.

An increasing number of studies have examined the effects of cannabinoids on health and other outcomes, but most findings are observational and prone to bias, making it difficult to draw firm conclusions.

To address this, an international team of researchers set out to assess the credibility and certainty of over 500 associations reported between cannabis and health in 50 meta-analyses of observational studies and 51 meta-analyses of randomized controlled trials, pooling data from hundreds of individual studies.

The studies were published from 2002 to 2022 and looked at the effects of different combinations of cannabis, cannabinoids, and cannabis based medicines on health.

The researchers graded the evidence as high, moderate, low, or critically low certainty in randomized trials—and as convincing, highly suggestive, suggestive, weak, or not significant in observational studies, based on



quantitative criteria.

Based on at least suggestive level evidence in <u>observational studies</u> and moderate certainty evidence in trials, the researchers found an increased risk of psychosis associated with cannabinoids in the <u>general population</u>.

Specifically, <u>cannabis use</u> was associated with psychosis in adolescents (when <u>brain development</u> is still taking place), and with psychosis relapse in people with a psychotic disorder. In other words, use of cannabis when no psychotic disorder has occurred increases the risk of its onset, and using cannabis after its onset, worsens clinical outcomes.

Based on weak to suggestive observational evidence and high to moderate certainty trial evidence, the researchers also found an association between cannabis and general psychiatric symptoms, including depression and mania, as well as detrimental effects on memory, verbal and visual recall.

They note that these associations are of particular concern given that the age pattern of cannabis use disorders coincides with the peak age at onset of mental health disorders, from around mid-teens to early 20s, and at that age adolescents and young adults are still in education.

Across different populations, weak to convincing level observational evidence suggested a link between cannabis use and motor vehicle accidents. And in <u>pregnant women</u>, there was also convincing observational level evidence for a link between cannabis use and risk of having a small, low birth weight baby.

Cannabidiol was, however, beneficial in reducing seizures in certain types of epilepsy, while cannabis-based medicines were beneficial for pain and muscle stiffness (spasticity) in multiple sclerosis, as well as for chronic pain in various conditions, and in palliative care, yet not without



adverse events.

This umbrella review is the first to pool observational and interventional studies on the effects of cannabinoids on humans, but the researchers note that most outcomes associated with cannabinoid use are supported by weak evidence, have low to very low certainty, or are not significant.

They also point to other limitations, such as differences in the cannabis content of products, the fact that not all individuals will experience the same effects of cannabis on their mental health and cognition, and that randomized trials might not be representative of the real-world population.

Nevertheless, they say law and public health policy makers and researchers "should consider this evidence synthesis when making <u>policy decisions</u> on cannabinoids use regulation, and when planning a future epidemiological or experimental research agenda."

Future guidelines are needed to translate current findings into clinical practice, while involving stakeholders, they add.

More information: Balancing risks and benefits of cannabis use: umbrella review of meta-analyses of randomised controlled trials and observational studies, *The BMJ* (2023). DOI: 10.1136/bmj-2022-072348

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