

CANNABIS

Effects of marijuana on oral health



BACKGROUND

Cannabis (marijuana) has various components that can have psychoactive effects and possible medical uses. Among the areas where cannabis has been helpful are the relief of pain, treatment of nausea and vomiting associated with cancer chemotherapy, and treatment of anorexia-associated weight loss in AIDS patients. The legal status of marijuana and its relevance to oral health were investigated.

LEGAL STATUS

In the United States, cannabis is classified as a Schedule I substance by the Food and Drug Administration (FDA). This category is for drugs with no currently accepted medical use and a high potential for abuse. Schedule I drugs are associated with potentially severe psychological or physical dependence.

Cannabis-derived pharmaceuticals, however, fall into Schedules II or III and have proved useful for patients undergoing

cancer chemotherapy and for AIDS patients. Cannabinoids may have a role in the treatment of pain, movement, and memory, although there are also risks attending their use. Pain relief is the primary reason cannabis is prescribed to patients. Studies indicate that cannabinoids are safe and have modest effectiveness in providing relief from neuropathic pain. The specific conditions for which it has been found effective are fibromyalgia, rheumatoid arthritis, and HIV neuropathy.

Phytocannabinoid-dense botanicals (medical cannabis) have now been legalized in several states for medical uses. In addition, a number of states have passed legislation that allows the production, sale, and use of marijuana for recreational purposes. The states that have legalized cannabis for medical use are Alaska, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania,

Table 3. Summary of Oral Health References

Study	Summary
Thomson et al., 2008 ²⁴	Cannabis smoking may be a risk factor for periodontal disease independent of tobacco use.
Balayssac and Zangarelli, 2008 ²⁸	Thomson et al. study should have included other drugs such as methylenedioxymethamphetamine (MDMA, ecstasy), cocaine and alcohol.
Hujoel, 2008 ²⁹	Thomson et al. study contributed to other evidence that destructive periodontal disease occurs at a younger age than previously believed and it gives the dental professional the ability to detect possible unhealthy lifestyles.
Lopez and Baelum, 2009 ³⁰	No evidence to suggest use of cannabis is positively associated with periodontal disease in population of Chilean high school students.
Nogueira-Filho et al., 2011 ¹	Cannabis smoke may impact alveolar bone by increasing bone loss resulting from ligature-induced periodontitis.
Rawal et al., 2012 ³²	Chronic marijuana use may result in gingival enlargement similar to phenytoin-induced enlargement.
Baddour HM, 1984 ³⁴	
Layman FD, 1978 ³³	
Thomson et al., 2013 ²⁵	Periodontitis commences relatively early in adulthood and its progression accelerates with age, particularly among smokers (tobacco or cannabis).
Kayal et al., 2014 ³⁵	Illicit drug use is associated with more severe forms of periodontitis.
Zeng et al., 2014 ²⁶	The study findings confirm the importance of chronic smoking (tobacco or cannabis) as a risk factor for periodontal attachment loss.
Meier et al., 2016 ²⁷	Cannabis use for up to 20 years is associated with periodontal disease, but unrelated to health problems in early midlife. Periodontal health showed a robust adverse association in analyses of persistent dependence and joint-years.

(Courtesy of Yao SG, Fine JB: Consumption of cannabis and effects on periodontal oral health. *CDA J* 45:475-481, 2017.)

Rhode Island, Vermont, and Washington, along with the District of Columbia.

ORAL HEALTH EFFECTS

Just as smoking tobacco has been recognized as a risk factor for periodontal disease, smoking cannabis may also contribute to produce this oral disorder (Table 3). Some oral effects that have been identified with cannabis use are periodontitis at an earlier age, gingival enlargement in long-term chronic use, and bone loss. Regular exposure to cannabis smoke was found to be strongly related to the prevalence and incidence of periodontal attachment loss by age 32 years. Destructive periodontal disease has been reported at an earlier age than previously believed. Marijuana smoke inhalation increased bone loss in the furcation area in rats with induced periodontitis but had no effect in periodontally healthy rats.

Some factors that must be considered as risk factors along with marijuana use are long-term smoking behavior, low socioeconomic status, and addiction to other drugs. Illicit drug use, especially involving heroin and cocaine, has been associated with more severe forms of periodontal disease when cannabis is

also used. The data indicate that dental professionals should be aware that cannabis use can be a risk factor for periodontitis.

Clinical Significance

It's difficult to conduct randomized controlled studies of marijuana's effects because of its Schedule I classification. However, based on the changing usage patterns of this drug and shifting policies toward its acceptability, more study of its effects as a medicine is clearly needed. We need to better understand how marijuana use affects not only oral health, but the health of populations, particularly when it is combined with the use of other drugs.

Yao SG, Fine JB: Consumption of cannabis and effects on periodontal oral health. *CDA J* 45:475-481, 2017

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CONCUSSIONS

Update on concussion diagnosis and management



BACKGROUND

Concussion during sports activities affects about 1.6 to 3.8 million athletes each year, but the diagnosis and management of this entity are currently incompletely understood. Findings indicate that concussion can occur even without direct trauma to the head. Various governing bodies have issued position statements and reviews on the topic, but no standardized objective way to diagnose concussion has yet been found. Management remains a fluid process, and the ultimate relationship to chronic traumatic encephalopathy (CTE) is just being uncovered. The signs and symptoms of concussion, its diagnosis and management, and additional considerations related to its occurrence were discussed.

SIGNS AND SYMPTOMS

Concussion is a mild traumatic brain injury and produces a number of symptoms. The manifestation of these symptoms varies widely, with some athletes exhibiting changes immediately and others developing them gradually over a period of 24 to 48 hours post-impact.

Immediately after the injury, athletes may experience headache, head pressure, confusion, foggy, difficulty concentrating, memory problems, a vacant stare, and repetitive questioning.

Their vision may be blurred or double, and they may be sensitive to light and exhibit difficulty with balance and coordination. Some athletes report nausea, vomiting, and somnolence minutes to hours after injury. In the hours to days after injury, it's common to experience irritability, difficulty sleeping, loss of appetite, fatigue, mood lability, and anxiety.

About 10% of athletes lose consciousness. This was traditionally seen as an indicator of concussion severity, but more recent evidence supports it as indicative of the region of the brain that received the trauma.

DIAGNOSIS AND MANAGEMENT

Diagnosis

After the trauma, the athlete should be assessed for medical emergencies, with advanced cardiac life support and advanced trauma life support algorithms observed. If an intracranial hemorrhage or cervical spine injury is possible, the athlete should be immobilized and transported immediately to an emergency department for complete evaluation.

A field assessment is commonly done using concussion symptoms assessment tools. These include the Maddocks questions, the