



Gerd W. Clabaugh, MPA
Director

Kim Reynolds
Governor

Adam Gregg
Lt. Governor

Information about the Therapeutic Use of Medical Cannabidiol

What Patients are Eligible to Receive a Medical Cannabidiol Registration Card?

A list of debilitating medical conditions for which patients are eligible to receive a medical cannabidiol registration card can be found here: <https://idph.iowa.gov/cbd/For-Patients-and-Caregivers>

What is a Cannabinoid?

A *cannabinoid* is a class of chemical compounds that occurs naturally in some plants and animals. There are more than 60 naturally occurring cannabinoids. Cannabinoids have been found to be useful for compassionate-use treatment of some debilitating medical conditions.

What is CBD?

Cannabidiol (CBD) is the name of one type of cannabinoid found in the *Cannabis* plant family that has potential therapeutic uses. CBD is not psychoactive. It does not alter the state of mind of a person who uses it.

What is THC?

Tetrahydrocannabinol (THC) is another type of cannabinoid found in the *Cannabis* plant family that also has potential therapeutic uses. THC is the cannabinoid with psychoactive effects and is known for the mind-altering “high” it can produce.

How do CBD, THC and other Cannabinoids Work?

CBD, THC and other cannabinoids attach themselves to certain receptors in the body. The human body produces certain cannabinoids on its own, and has two receptors, called CB1 and CB2 receptors.

- CB1 receptors are found throughout the body, but many of them are in the brain. In general, the CB1 receptors in the brain deal with coordination and movement, pain, emotions and mood, thinking, appetite, and memories.
- CB2 receptors are more common in the immune system. CB2 receptors have an effect on inflammation and pain.

It appears that most cannabinoids do not act on either receptor directly. Instead, CBD and THC seem to influence the body to use more of its own cannabinoids. Products that contain both CBD and THC have the ability to stimulate and reverse both CB receptors. In some disease conditions this allows beneficial therapeutic effects while minimizing some of the less desirable psychoactive effects sometimes experienced from the use of THC.

Potential Health Benefits

Due to the way CBD, THC, and other cannabinoids act in the body, they may have some potential health uses. Certain research (including cell culture, animal models, and clinical studies in patients) has shown cannabinoids to have a range of effects that may be therapeutically useful, including anti-seizure, antioxidant, neuroprotective, anti-inflammatory, analgesic, and anti-anxiety properties.

How are CBD, THC and other Cannabinoids Used?

CBD, THC and other cannabinoids are taken in a variety of ways. They may be ingested orally, rubbed on the skin as a cream or an oil, inhaled in a nebulizable form, or used as a suppository.

Potential Side Effects of Cannabinoids

Small-scale studies that have looked into the safety of the use of CBD by adults and have found that CBD use is generally well tolerated across a wide range of doses. There have been no known findings of significant central nervous system side effects (effects on vital signs or mood) among people who use CBD sparingly or more heavily.

The most common side effects of CBD include:

- Fatigue/tiredness.
- Diarrhea.
- Changes in appetite or weight.
- Dry mouth.
- Low blood pressure.
- Special Considerations for use of CBD:
 - Parkinson's disease - Some early research suggests that taking high doses of CBD can make muscle movement and tremors worse in people with Parkinson's disease.
 - Pregnancy and breast-feeding - There is not enough reliable information about the safety of taking CBD while pregnant or breastfeeding. CBD is not recommended for use by pregnant or breastfeeding women.

THC has been studied in detail and those effects are summarized here.

The most common side effects of THC include:

- Unusual changes in mood or behavior, feeling depressed.
- High or low blood pressure.
- Seizures.
- Drowsiness, dizziness, lightheadedness, or a false sense of well-being (euphoria). Patients using THC should not drive or do anything that could be dangerous until they know how THC affects them. Standing up slowly from a sitting or lying position can lessen the chance of getting dizzy.
- THC can be habit-forming (in 1 out of every 10 people).
- There have been reports of altered brain development in young patients, thought impairment, short-term memory impacts, and chronic psychosis disorders.
- Rarely, allergic reactions, such as itching or hives, swelling in the face or hands, or chest tightness.
- Special Considerations for the use of THC:
 - Pregnancy and breast-feeding - There is not enough reliable information about the safety of taking THC while pregnant or breastfeeding. THC is not recommended for use by pregnant or breastfeeding women.
 - THC can cause drowsiness and impaired cognition - *If a patient has ingested or taken medical cannabidiol products containing THC, they should refrain from operating heavy machinery or a motor vehicle.*

Contraindications and Drug-Interactions When Using Cannabinoids

- **Drug Interactions**
 - Interaction with clobazam (specifically the active metabolite, desmethylclobazam, to increase concentrations and side effects)
 - Interaction with several other antiepileptic drugs that can result in increased side effects, such as drowsiness, fatigue, and lack of concentration.
 - Interaction with valproate to increase the risk of liver toxicity
 - Liver toxicity that can result in increased in liver enzymes and possible serious liver damage.
- **Contraindications**
 - Disulfiram or metronidazole use within the past 14 days.
 - Use of disulfiram or metronidazole within 7 days of using THC.

- Use of the following drugs:
 - Amiodarone, amitriptyline, amoxapine, amphetamine, amphotericin B, atropine, buspirone, clarithromycin, cyclosporine, desipramine, erythromycin, fluconazole, itraconazole, ketoconazole, lithium, phenobarbital, ritonavir, scopolamine, warfarin.
- Use of alcohol.
- Sleep aids.
- Allergy medications.
- Narcotics.
- Grapefruit or grapefruit juice.

As with any new or alternative treatment option, a patient should discuss the potential health benefits, side effects, and risks of using CBD, THC, and other cannabinoids with a qualified healthcare practitioner before using them. The dose and form will vary with the condition being treated.