



# Understanding Medical Cannabis

**Patient Education Handout: This handout is for informational purposes only and does not advocate for or against cannabis use.**

## What Is Medical Cannabis?

Medical cannabis comes from the *Cannabis sativa* L. plant. It contains natural compounds called cannabinoids, such as tetrahydrocannabinol (THC) and cannabidiol (CBD), that create psychoactive and non-psychoactive effects that may provide relief for symptoms commonly reported by patients, including pain, nausea, and muscle tightness, and other condition-related effects.

Hemp and marijuana both come from the same species of plant: *Cannabis sativa*. The key difference between the two lies in their THC content, which is the psychoactive compound responsible for the “high” associated with cannabis.

- The Agriculture Improvement Act of 2018 (2018 Farm Bill) removed hemp, as defined therein, from the federal Controlled Substances Act, allowing for its legal production as an agricultural commodity under a consistent regulatory framework. "Hemp" is defined as the plant *Cannabis sativa* L. containing a delta-9 (THC) concentration of not more than 0.3% on a dry weight basis. Any cannabis exceeding this limit is considered marijuana and remains a Schedule I controlled substance at the federal level.
- Marijuana contains more than 0.3% THC and is grown for medicinal or recreational use due to its psychoactive effects. It is regulated differently depending on state and federal laws.

## Key Cannabinoids

### THC (Tetrahydrocannabinol)

- Causes the “high” some people feel.
- May affect pain, appetite, and nausea.
- Different forms of THC exist, most commonly delta-8, delta-9, and delta-10 THC.
  - Delta-8 THC: A form of THC that occurs naturally in very small amounts. Delta-8 generally has milder psychoactive effects than delta-9 but can vary among individuals. Most delta-8 products on the market are made through chemical conversion of CBD from hemp.
  - Delta-9 THC: The primary form of THC found naturally in the cannabis plant. It is the most potent of the three and is responsible for most of the psychoactive (“high”) effects associated with cannabis.
  - Delta-10 THC: Another minor form of THC found in very small amounts in the plant and is also commonly made through chemical conversion of CBD from hemp.
- Potency, effects, and safety can vary across these forms, especially because delta-8 and delta-10 products are often manufactured rather than naturally occurring. These products can be purchased outside of the medical market and are not regulated by the South Dakota Medical Cannabis Program.



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### Other Cannabinoids

- CBD, cannabitol (CBN), cannabigerol (CBG), and others are also found in the plant
- Do not cause a “high”.
- Cannabis and cannabinoids like CBD are being studied by national research institutions, including the National Institutes of Health (NIH), universities, and clinical research centers, to better understand their potential effects on conditions such as anxiety, seizures, and chronic pain. These studies are ongoing and aim to inform future medical guidance and public health policy.

### Terpenes & Flavonoids

- These aromatic compounds are found in the cannabis plants and are responsible for giving cannabis its distinct smell and flavors.

## How Cannabis Works in the Body

Cannabinoids interact with the **endocannabinoid system (ECS)**—a system in the body that helps regulate:

- Pain
- Mood
- Sleep
- Appetite
- Immune responses

The ECS includes:

- **Cannabinoid 1 (CB1) receptors**
  - Location: Primarily found in the brain and central nervous system
  - Function: Help regulate mood, memory, appetite, pain perception, and coordination
  - Cannabis interaction: These receptors are activated by compounds like THC, which can lead to psychoactive effects (e.g., feeling “high”)
- **Cannabinoid 2 (CB2) receptors**
  - Location: Primarily found in the immune system and peripheral tissues
  - Function: Play a key role in modulating inflammation, immune response, and tissue repair
  - Cannabis interaction: Activation of CB2 receptors does not produce psychoactive effects, making them a focus of research for non-intoxicating therapies
- **Natural “endocannabinoids” made by the body**

Cannabis-based cannabinoids can influence these same receptors.

## Medical Cannabis

- Legal in South Dakota
- Used for managing specific health conditions outlined in South Dakota Codified Law (SDCL) 34-20G-1 (8).
- The South Dakota Medical Cannabis Program operates under SDCL 34-20G and Administrative Rules of South Dakota (ARSD) 44:90, which establish strict requirements for product testing,



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## Medical Cannabis

secure storage, seed-to-sale tracking, and licensed healthcare provider certification. These safeguards help ensure that patients have access to medical cannabis in a controlled, compliant, and responsible manner.

## Legal Types of Medical Cannabis Products

Individual results may vary. Product options may be tailored for symptom management.

### Inhalable (Breathed in)

- Examples: Flower, vape pens, pre-rolls
- Onset: Minutes (fast acting)
- May not last as long; smoking carries respiratory risks

### Ingestible (Swallowed)

- Examples: Edibles, capsules, oils
- Onset: 30–120 minutes (slow acting)
- Effects may last longer; dosing can be less predictable

### Topical (Applied to the skin)

- Examples: Creams, balms, patches
- Onset: 10-60 minutes
- Used on the skin for local relief
- Usually non-intoxicating

### Mucosal (Under Tongue or Cheek)

- Examples: Tinctures, sprays, dissolving strips
- Onset: 15–45 minutes
- Allows more controlled dosing

## Important Notes

- Effects vary widely between individuals.
- Start-low-and-go-slow is a common dosing approach.
- Discuss cannabis use with a healthcare provider, especially if you take other medications or have health conditions.

**This handout provides general information only and is not medical advice. For personalized guidance, speak with your healthcare provider.**