CBD vs. THC: What's the Difference?

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Chemical Structure

How CBD and THC Affect the Body

Medical Benefits

Side Effects

What's Legal?

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Cannabis is a plant that makes a
thick substance full of compounds called cannabinoids. There are more than 100 of these chemicals in cannabis. They cause drug-like reactions in your body.

CBD (cannabidiol) and THC (tetrahydrocannabinol) are the most common cannabinoids found in cannabis products.

THC and CBD are in both marijuana and hemp. Marijuana contains much more THC than hemp, while hemp has a lot of CBD.

**Chemical Structure**

CBD and THC have the same chemical formula -- 21 carbon atoms, 30 hydrogen atoms, and two oxygen atoms. The difference lies in the way the atoms are arranged. That gives CBD and THC different chemical properties, and they affect your body differently.
Both CBD and THC work with receptors that release neurotransmitters in your brain. They can affect things like pain, mood, sleep, and memory.

How CBD and THC Affect the Body

THC is the main psychoactive compound in marijuana. It's what makes people feel "high."

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Are you planning to purchase one of the following products in the next 6 months? (choose one)

- Advil
- Tylenol
- Excedrin
- Aleve
- Bayer
- Motrin

I'm not planning to purchase any of these

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We have two types of cannabinoid receptors in our bodies. THC binds with receptors -- mostly in the brain -- that control pain, mood, and other feelings. That's why THC can make you feel euphoric and give you that so-called high.

CBD doesn't cause that high. Instead, it's thought to work with other elements in the body linked to feelings of well-being.

**Medical Benefits**

People take CBD products to help with everything from *arthritis* and *Crohn's disease* to *diabetes* and *multiple sclerosis*. Some say it helps with *anxiety*, *insomnia*, and *chronic pain*. So far, there's little evidence that CBD helps with any of these.

The FDA has approved one CBD-based drug. Epidiolex is a treatment for several severe forms of rare childhood *epilepsy*.

CBD is a hot topic for researchers. The National Institutes of Health clinical trials database shows more than 160 trials involving CBD that are either active or recruiting.

As part of *medical marijuana*, THC helps ease things like:
Multiple sclerosis pain
Nerve pain
Parkinson's disease tremors
Nausea
Glaucoma

Side Effects

THC can cause:

- Problems with concentration
- Dizziness
- Vomiting
- Drowsiness
- Balance
- Memory

Side effects from CBD can include:

- Nausea
- Diarrhea
- Upset stomach
- Tiredness
- Lightheadedness
- Crankiness
- Low blood pressure
- Drowsiness

CBD can also change the way some medicines work. Talk with your doctor about it.

What's Legal?
Laws are changing all the time on cannabis. Many states allow medical marijuana, containing THC, for several uses, but it is still illegal under federal law. Some states have made recreational marijuana with THC legal for personal use. But it's also illegal under U.S. law.

As part of the Farm Bill in December 2018, Congress legalized hemp. But there are still rules about where and how you can sell products that contain CBD. You can’t sell some across state lines, for example. All CBD products are illegal if they’re sold with the promise of medical benefits.

Check your state's laws before buying products with CBD or THC.

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