

# HOW CBD IS ABSORBED

When CBD is absorbed, we are referring to its transfer from site of administration to the bloodstream, where it can then be transported throughout the body to interact with or influence cannabinoid receptors CB1 and CB2, and non-cannabinoid receptors like serotonin receptors 5-HT1A and vanilloid receptor TRPV-1.

How CBD is absorbed depends on the route of administration, or how it's consumed. Whether CBD oil is ingested, situated under the tongue, inhaled or applied topically plays an important role in the uptake, distribution, and elimination of the compound. It can therefore influence how effective cannabinoid treatments will be eliciting their natural balancing effect.

## Absorption After Ingestion and Sublingual Methods

The most common route of CBD oil administration is orally, or through the mouth. When CBD is ingested, it is absorbed by the digestive system. From the stomach, the compounds enter the hepatic portal system, where they are carried through the portal vein into the liver. The liver then metabolizes the CBD molecules, in what's referred to as the "first pass effect." CYP450 mixed function oxidases enzymes in the liver act upon CBD, reducing the concentration of the compounds before passing on what remains to the bloodstream.

Ingestion, while considered by most to be the easiest administration method, isn't the most efficient for absorbing high levels of CBD. Studies have found, however, that consuming CBD oil with fatty acids can help bypass first pass metabolism and increase how much CBD is absorbed through ingestion.

- If CBD oil is held under the tongue for 60 to 90 seconds before being swallowed, the mucus membranes in the mouth can absorb the compounds. This sublingual method allows CBD to completely bypass the digestive system and liver metabolism, so the compounds can avoid being broken down by enzymes and reach the bloodstream more quickly.

## Absorption After Inhalation

When CBD oil is inhaled, such as through vaporization, the compounds are absorbed through the alveoli in the lungs, which offer a large absorptive surface area. Once through the alveoli, the CBD molecules are immediately transferred into the bloodstream. Compared to ingestion, the inhalation method allows more CBD to be absorbed and offers faster absorption.

## Absorption After Topical Application

When CBD oil is applied topically, or directly to the skin, it never reaches the bloodstream but can be absorbed through the skin's surface to interact with nearby cannabinoid receptors.

Human skin in general has low permeability, which means it blocks most substances from entering. The skin has a particularly low absorption rate for cannabinoids, so application of CBD balms, salves and lotions need to be heavy enough to overcome this barrier. However, when applied liberally CBD is permeable to the skin through its pores.

Now that you know the way CBD is absorbed varies depends on the administration method. You may decide that one method is more ideal than another depending on your needs. However, selection the method with which you feel most comfortable is important as you'll more likely be able to be consistent with your servings.