



TREE OF LIFE  
BOTANICALS

## CBD and Bioavailability

In order for phytocannabinoids to be used effectively, they must have high *bioavailability*, which means the percentage of a substance that is absorbed into the bloodstream. Due to its nature as a fat-soluble compound, CBD is not readily absorbed by the body and needs to be broken down into smaller molecules. All of Tree of Life's products are top in class in bioavailability through the process of *nanoemulsion*, in which the oil is placed in an ultrasonic liquid processor. By converting electrical energy into mechanical energy, the processor creates a stable emulsion which contains very small, nano-sized droplets of oil, capable of entering cell walls and releasing their therapeutic properties into the blood.

In addition to the nanoemulsion process, terpenes are included in full-spectrum CBD products. Terpenes contain molecules which also assist in absorption. Additionally, the accompanying ingredients in Tree of Life's products help play a role in absorption rates. Once in the bloodstream, the phytocannabinoids can begin acting on endocannabinoid receptors.



Bioavailability is also affected by the method of CBD ingestion. Oral administration of CBD, such as gummies and gel caps must pass through the digestive tract and liver. This type of delivery has the lowest bioavailability. Oil droppers, which are taken sublingually, are a preferred method for many users and have the highest level of absorption. Tree of Life products are 4-5 times more potent due to Nano-emulsification which is a huge advantage in the marketplace since most products don't apply any measures to enhance bioavailability.