TERPENES

What are terpenes?

Terpenes are naturally occurring chemical compounds found in plants and some animals. They're responsible for the aromas, flavors, and even colors associated with various types of vegetation. In terms of cannabis, terpenes are what make certain strains smell or taste different from others. Many cannabis terpenes even have therapeutic properties.

While nearly all plants contain terpenes, some of the more common sources people encounter them include:

- aromatic herbs (sage, thyme, tarragon, etc.)
- citrus fruits (lemons, oranges, mandarin, etc.)
- cannabis

When terpenes work together with cannabinoids, in a process known as the "entourage effect", the therapeutic potentials increase dramatically. Terpenes can also modify how much of each cannabinoid is absorbed. This means the presence of certain terpenes can increase or decrease the amount of the psychoactive cannabinoid THC is absorbed, effectively controlling the potency. Consequently, a strain of medical cannabis with the perfect mix of terpenes and cannabinoids could be designed to treat a particular disease or condition.

What do they do?

As for what terpenes do in humans, that's still a bit of a mystery. But cannabis researchers and consumers alike are increasingly looking at terpenes as a way to classify cannabis products and predict their effects.

The main hypothesis is that the terpene profile — the dominant terpenes — work in tandem with the cannabinoid content — the amount of tetrahydrocannabinol (THC), cannabidiol (CBD), and other cannabinoids — to produce the effects people associate with different strains.

Formed from the same resinous trichomes as cannabinoids, cannabis terpenes also bind to the same endocannabinoid receptors located throughout the brain and body. For example, depending upon which receptors they react with, different terpenes may help to induce sleep and relax muscles while others reduce stress and elevate mood, or reduce inflammation and increase energy.

Do they get you high?

Terpenes won't make you feel high in the traditional sense. Still, some are considered to be psychoactive, because they affect the brain. While terpenes aren't intoxicating on their own, they impact the effects of THC, the cannabinoid responsible for the high feeling from cannabis.

Many cannabis connoisseurs and budtenders say that consumers place far too much emphasis on THC content when choosing a strain. Instead, they recommend focusing more on certain terpene profiles to get their desired effects.

How do they compare to THC and CBD?

THC and CBD are just two of over 100 cannabinoids found in cannabis, however they are the two most abundant cannabinoids and the most well studied. Both cannabinoids and terpenes can give you some clues about what to expect from a cannabis product, but they're two different compounds.

That said, they all appear to interact with each other in what experts call the "entourage effect". This is the hypothesis that the "full spectrum" of cannabis, including all the cannabinoids, terpenes, and other compounds found in cannabis, work synergistically to produce the sensations and effects of cannabis. In other words, it's a hypothesis that a little bit of everything might have more benefit than a lot of one thing.

A 2010 study, for example, showed that a combination of CBD and THC was more effective for pain management than THC alone. This is important to consider if you're using CBD for therapeutic purposes. If you use a CBD isolate (a product that contains only CBD) and find it doesn't have your desired effect, it might be worth trying a full-spectrum CBD product, which will also contain terpenes and other cannabinoids, including small amounts of THC.

Common terpenes and their effects

There are about 400 known terpenes in cannabis, but experts have only linked a handful of them to specific effects.

Here are some common terpenes and their potential effects:

- *Beta-caryophyllene*. A major ingredient in cloves, rosemary, and hops, beta-caryophyllene could be beneficial for managing symptoms of anxiety and depression.
- *Beta-pinene*. If you've strolled through a coniferous forest, you know the smell of beta-pinene, which could also have potentially both anti-depressant and anti-cancer properties.
- *Humulene*. This terpene is found in ginseng, which has long been used in folk medicine for energizing effects.

- *Limonene*. One of the most commonly found terpenes, limonene has distinct citrus notes and may potentially have anti-cancer properties. In mice, it's been shown to have anti-anxiety properties.
- *Linalool*. Lovers of lavender as aromatherapy may want to seek out cannabis with linalool, which may help alleviate stress.
- *Myrcene*. Found in mangoes, myrcene has antifungal and antibacterial properties and could also have sedating effects.

Keep in mind that much of the research around terpenes is still in early stages. More high-quality studies in humans are needed to fully understand the health impacts of different terpene profiles.