

Cannabis sativa / *Cannabis indica*

There's a fair amount of confusion surrounding the botany of Cannabis even among botanists. Until the 1960s, botanists considered that there was only one species of Cannabis *C. sativa*, but by 1963 an additional species *C. ruderalis* was considered to have enough distinct characteristics to single it out as a distinct phenotype. Shortly thereafter, *Cannabis sativa* var. *spontanea* (large fruited sativas versus fiber sativas) was added as well as *C. indica* shortly thereafter. In the last decade most botanists would add the recently defined *C. afghani*. Today most scientists believe that the species is *Cannabis*, part of the family *Cannabaceae*, found in the genus *Humulus* along with the hops plant. Because of cannabis's thorough domestication and long association with humans spanning nearly seven thousand years, the notion that there are individual *Cannabis* species is not completely agreed upon. Today's popular mixed strains are hybrids and cross-hybrids to further add to the confusion.

These different species, subspecies or phenotypes have also been positively identified on the basis of the psychoactive resin's chemical composition. *Indicas* can have higher levels of cannabidiol (CBD) and lower levels of tetrahydrocannabinol (THC) than *sativas*. *Sativas* have lower levels of CBD and higher levels of THC than *indicas*. But once again adding to the confusion most modern hybrids have been exclusively bred for THC production are nearly devoid in CBD. We will come back to these differences in chemical composition later.

How does a botanist identify these different species or phenotypes? If the plant is tall (6-18 feet), with long thin leaves and sparsely branched with long internodes it is *C. sativa*. *Sativas* are thought to have originated in a large geographical area running from Central Asia through Central Europe at approximately the 45-50th parallel. If the plant is short (1-2 feet), sparsely branched and auto flowers it is *C. ruderalis*. Unlike the other Cannabis species *C. ruderalis* will flower independent of the amount of light provided. *C. ruderalis* originates in Siberian but can now be found on all the world's continents, including the Antarctica. If the plant is short – four feet or less and has short internodes, dense branching with dark green short broad leaves – and its flowering is determined by hours of daylight it is *C. indica*. *Indicas* originate from the 30th parallel across the greater Himalayas (Afghanistan, Pakistan, India and Nepal). *C. afghani* is similar to *C. indica* but found at 3000ft in altitude in the mountainous regions of Afghanistan. *C. afghani* is popularly known as kush.

Domesticated types, mixed strains and hybrids are subject to the selective pressures of human cultivation and have expanded the possible range of phenotype definition. Today there are some hybrid *indicas* that can feel like *sativas* and hybrid *sativas* that have *indica* characteristics. So what is the medicinal effect of *indicas* generally? *Indicas* are superb as muscle relaxants and provide the best full on analgesic effect, sometimes because of higher levels of CBD. *C. indicas* are excellent for pain management as it provides the whole body buzz. *Indicas* are bronchodilating (they open the airways) and lower one's blood pressure. *Indicas* are euphoric in nature and can also lower depression. *Indicas* can increase appetite, but also put one to sleep before they can do anything about it. *Indicas* make an obviously night time choice for medicating as they are excellent at enhancing sleep.

In conclusion, *indicas* are sedatives/relaxants and are most effective for treating anxiety, chronic pain, neurogenic pain, insomnia, muscle spasms and tremors.

What typifies the *sativa* high? The *sativa* medicinal high is uplifting, stimulating and energetic. No couch lock here. *Sativa* is cerebral in nature... the mind trips the light fandango and there's a feeling of optimism. They can be great for depression also as long as they don't raise anxiety. Due to *sativas'* energetic mode they can induce a wee bit of anxiety in some folks. We often use the caffeine analogy for those without *sativa* experience. Some *sativas* that are extremely high in THC can also be spacey or psychedelic in nature. *Sativas* can also be surprisingly decent for pain, excellent for migraines, but they operate differently than *indicas* which gel the body. When using a *sativa* it is not that you don't still have your pain, it is that your mind is delightfully otherwise occupied. *Sativas* encourage greater movement than *indicas* and are thus particularly good for muscular-skeleton issues. *Sativas* are a good choice for daytime medicinal use. If there is a downside to some *sativas* it is they can be a little edgy like too much caffeine in one's system. As well those with anxiety disorders will want to explore them slowly. In summation, *Cannabis sativa's* high tends to stimulate hunger and be more comedic, energetic and creative.

The active chemicals responsible for the medicinal effects of cannabis are collectively called cannabinoids. This group includes THC, CBD, and CBN. *Sativa's* cannabinoid profile tends to be dominated by higher THC levels and no CBD levels. *Indica's* chemical profile can show a more CBD with more moderate THC levels. This being said most modern cannabis hybrid strains are being engineered solely for THC production. As the medical benefits of CBD become more understood we would expect future strains to have more CBD. More data is needed to determine a complete understanding of the *indica/sativa* effect.

Interestingly, most folks in the Pacific Northwest have not explored the medicinal nature of *sativas* as well as they have explored *indicas*. In the Pacific Northwest most medicinal and street marijuana is cultivated indoors. Growers, particularly non-patient growers, tend to want to maximize their yields and tend to focus on *indicas* which have shorter growing seasons, are easier to grow and are usually more profitable. *Sativas* have longer growing seasons and are harder to grow, but in the long run *sativas* may be more medicinally useful for patients. Have you had your *sativa* today?

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