



The Joys of a Little Bit

A little bit. It's a simple way to emphasize a controlled and measured dosage approach to using cannabis as a medicine. Because cannabis has low toxicity, it can be difficult for patients to gauge when they are overmedicating, until they develop tolerance to the plant's medicinal effects and find themselves using much more cannabis to achieve the same level of effects.

A good strategy for using medical cannabis is to nibble on oral cannabis product throughout the day, taking very small doses to maintain a consistent effect. Many patients find this convenient, because it reduces the intense onset of smoking medical cannabis, instead providing a gentle and predictable outcome.

Oral cannabis products have considerable advantages over smoking cannabis. No odor, no paraphernalia, no coughing, and no secondhand smoke. No lingering aroma on clothes, either.

Edibles are also much more portable and discreet than smoking when away from home. Smoking cannabis is difficult to do in public, while a small caramel or cookie is innocuous. And once a dosage baseline is established with a consistent edible product, it is easy to predict and maintain the medicinal cannabis effect whenever and wherever it is needed.

Because it takes an hour or two for effective levels of THC to be reached with swallowed edibles, the dose can be timed in advance of when it will be needed. For chemotherapy, it is often recommended to take the cannabis dose three hours before the chemotherapy session.

If the medicinal effects of oral cannabis are needed more quickly, the oral cannabis product can be dissolved beneath the tongue, where its active ingredients can be directly absorbed into the bloodstream. Because the THC is not metabolized, the effect of this sublingual administration more closely resembles the effects of smoked cannabis.

The effects of edibles last twice as long as smoked cannabis: three hours vs. ninety minutes is typical.

What's a dose?

It is recommended that one start with a very small dose. Oncologists use BSA or "body surface area" for determining dose, often represented by the formula mg/m^2 . There are several calculators online that will take a person's height, weight, sex and age and determine a dose based on the BSA formula. The missing piece for cannabis is the milligram starting point for THC. This ranges from $2.5\text{mg}/\text{m}^2$ to $15\text{mg}/\text{m}^2$. The results of the calculation for a 65" tall, 125 lb. 35-year-old woman at the $10\text{mg}/\text{m}^2$ increment would range from 5 milligrams for a sub-psychoactive dose to 25 milligrams for a full dose for pain or chemo-induced nausea. As always, ask your doctor for their dosage tips.

The latest science and medical tidbits about oral delivery

The same dosage edible given to twenty random patients will be absorbed differently by each one. The range of absorption, as represented by blood plasma levels of THC, ranges from 20% to 55%. This specific variation is caused by stomach acidity and contents, how well the THC is emulsified within the edible, and liver metabolism. This variation is solely due to digestion, not cannabis tolerance.

Cannabis tolerance can drastically reduce the effectiveness and perceived potency of edibles. Tolerance is the body's endocannabinoid system reacting to overdoses of plant cannabinoids by down-regulating CB1 receptors and reducing the density of the receptors throughout the body, especially within the brain. In other words, tolerance is simply the body providing fewer places for cannabinoids to work, requiring higher doses to achieve the same level of effect. The good news is that brain scanning has shown that the cannabinoid receptor density returns within a month, when patients abstain or significantly reduce dosage.

The reason that oral cannabis feels different than smoked or vaped cannabis is because, when swallowed the body metabolizes delta-9-THC into delta-11hydroxy-THC, which is more psychoactive than THC.

Raw, fresh cannabis contains almost all of its THC in the form of an acid (THCA). THCA is not psychoactive. THCA is converted to THC by heat, a process called decarboxylation. Decarboxylation is achieved by low heat over a long period of time (curing achieves partial decarboxylation) or high heat for a brief period of time (smoking or vaping). Cooking cannabis heats it to decarboxylation temperatures, but usually only achieves partial decarboxylation, since baking times are short. Our oral cannabis products are completely decarboxylated before cooking.

Different medical conditions appear to benefit from different levels of dosage of oral cannabis products. Conditions such as migraine may benefit from very small doses of cannabis taken like a vitamin. There is a hypothesis that some people with migraine have a deficiency of the body's own endocannabinoids and supplementation fixes that deficiency. Appetite stimulation also requires lower dosage, than would be required for treating pain. Pain has a sweet spot of dosage. Studies have proven if that sweet spot for cannabis pain dosage is exceeded, the patient will actually feel more pain. Nausea, especially from chemotherapy, seems to require the highest dose of cannabinoids among the common medical conditions. MS patients often require high doses as their disease progresses, but this has not been proven and may be due to cannabis tolerance.

One interesting method for calculating cannabis dosage by BSA or Body Surface Area, often represented as mg/m². Patients should ask their doctor to recommend dosage of oral cannabis using this formula, when the edible.

