

## **New Research Shows Cannabis Reduces Tumor Growth**

Medical cannabis is something of an equal-opportunity treatment. It doesn't care if it's treating a so-called "big" disease like AIDS or hepatitis-C or diabetes, or a so-called "small" disease like Dravet syndrome, a rare strain of epilepsy. It just treats the disease in front of it by relieving pain, relaxing stress, and generally bringing calm and present treatment across the board. This is one of the major reasons why marijuana has been gaining so much traction for legalization lately: its proven and almost-proven medical benefits are growing by the year. Twenty US states now have already made medical marijuana legal, and several more will be voting on that decision in the very near future.

The list of diseases medical cannabis treats is pretty long and varied. It includes HIV/AIDS, hepatitis-C, multiple-sclerosis and other movement disorders, diabetes, ALS, ADD/ADHD, fatigue, post-traumatic stress disorder, neuropathic (nerve) pain and other types of chronic pain, insomnia, anxiety, and Alzheimer's disease, among others. But perhaps the most important and impactful disease that medical marijuana has been shown to treat is the big C: cancer.

Cannabidiol (CBD), one of the main cannabinoid compounds in medical marijuana, slows the growth of cancer cells, especially in lung cancer (yes, you can smoke medical marijuana with lung cancer and get a positive effect, no matter how incongruous that may sound), and can combat the tumors caused by leukemia and breast cancer.

### **Cannabis and chemotherapy**

For starters, one of the most common treatments for cancer of almost any kind is chemotherapy. And chemotherapy is essentially controlled radiation poisoning. Its job is to destroy the cancer cells, but in doing so it can cause a lot of pain to the healthy cells around them. Medical marijuana, with its great pain relief abilities, has been a strong solution to chemo pain, as well as helping to calm patients as they go through the chemotherapy process. Cannabis indica, the "nighttime" strain of marijuana, is particularly good for this, as its specialty is calming, relaxing, and ultimately lulling its users into a gentle, pain-free sleep.

### **Cannabis and tumor size, part 1: THC**

We're actually going to look at this in reverse order, because tetrahydrocannabinol (THC) has long been seen as the cannabinoid compound that has the least medical properties. This is at least partially because THC is the heaviest and strongest psychotropic agent in the cannabis plant, and thus has been counted as a reason NOT to consider cannabis for medicinal use, and partially because CBD and other cannabinoid compounds (not coincidentally, the ones that appear in highest concentration in cannabis indica) have been studied and emphasized for their medical properties in much greater focus and deeper intensity.

But recent studies have begun to show that THC itself also has curative properties. THC as a treatment for Alzheimer's disease is a recent and significant discovery, and another study has uncovered strong possibilities that THC can reduce tumor size in cancerous patients. Most specifically, a recent study

showed that an injection of THC into mice that had been infected by human lung cancer cells reduced the size of the tumors by 50%. A new signaling platform between THC and cancer cells has been potentially identified that can reduce the size of the tumors, and the THC receptors in the human body can apparently provide positive influences on many of the body's biological systems. This presents many possibilities for THC to help form new cancer treatments.

### **Canabis and tumor size, part 2: CBD et al.**

Now we get to the compounds we're already familiar with: cannabidiol (CBD) and its type. CBD is significantly less psychoactive than THC, and as such it has been much more extensively approved and studied for its medicinal benefits. CBD has been shown to stop or slow metastasis in a number of the most aggressive cancers, including breast, brain, and prostate cancer. Along with five other cannabinoid compounds, CBD has been found to actually turn off the growth pathways in cancerous cells and tumors like a light switch. These cannabinoids sometimes kill the cancer cells outright, sometimes inhibit their growth, and most importantly seem to leave non-cancerous cells alone and potentially even protect them.

Studies on CBD have advanced somewhat further than THC studies, though both are showing great promise. It is very hopeful that strong, convenient, and readily available cannabis-based cancer treatments will be available very soon in the states where medical marijuana is legal.

### **Image:**



