

# *Medical Marijuana for People with Severe Epilepsy*

## Background

It has been known for years that marijuana is effective in alleviating the symptoms associated with multiple sclerosis, HIV/AIDS, chemotherapy-induced nausea, and intractable pain. Research dating back to the 1980's found that medical cannabis could help relieve seizures in people with epilepsy.

More recently, the use of medical cannabis in children with severe forms of epilepsy has received a great deal of attention. The American public became aware of this application for cannabis when Dr. Sanjay Gupta's documentary, "Weed," was broadcast on CNN in August of 2013. The documentary featured the case of Charlotte Figi of Colorado, a five-year-old suffering from Dravet's Syndrome, a treatment-resistant genetic disorder characterized by nearly constant seizures. Before beginning treatment with medical marijuana, Charlotte was having 300 grand mal seizures a week, and some were so violent that her parents did not believe she would survive. After a short time on medical marijuana, Charlotte's seizures were reduced to two or three per month, and she was able to overcome the many developmental delays caused by her epilepsy. After the airing of "Weed," parents of children with epilepsy throughout the U.S. began to press for access to medical marijuana. In the face of resistance from their elected representatives to pass medical marijuana laws, hundreds of desperate families have moved to Colorado and other states, where medical marijuana is available. These "medical marijuana refugees" and other families with epileptic children have joined with thousands of patients suffering from other serious, debilitating illnesses in demanding that this medicine be made legal and accessible to all who need it.

## Epilepsy can be life-threatening

There are several known syndromes of epilepsy that affect children as young as infancy. They include Dravet syndrome, Doose syndrome, Lennox Gastaut syndrome, and idiopathic early onset epilepsy. All are characterized by frequent convulsions, which cause serious cognitive, behavioral, and motor delays. Some children have hundreds of seizures each day, some lasting as long as thirty minutes, making it impossible for them to function. The mortality rate is high -- 15-20% by the age of twenty - with most deaths occurring during sleep due to Sudden Unexplained Death in Epilepsy (SUDEP). Unfortunately, one young child in New Jersey recently died while waiting for her application for medical marijuana, which is legal in that state, to be approved.

## Some forms of pediatric epilepsy are treatment-resistant

In a fair number of cases, the anti-epileptic drugs (AEDs) prescribed for these children are ineffective, and in some cases these drugs even make the seizures worse. In addition, many have the AEDs have side effects, ranging from mild to life-threatening. Some of the milder side effects are hyperactivity, trouble sleeping, eye problems, weight gain, slowed thinking, fainting and heart rhythm changes. The life-threatening side effects include blistering and peeling of large areas of the skin (which can require hospitalization in a burn unit). Parents of these children typically try many different medications but see little improvement, and many say that the side effects can be as devastating as the seizures. Parents in states where medical marijuana is legal were surveyed and it was reported that, on average, these children had tried 12 different medications before starting on medical cannabis.

## Medical cannabis has anticonvulsant properties

The marijuana plant contains about eighty-five different chemical compounds called "cannabinoids." The most familiar one is Tetrahydrocannabinol (THC), which can cause the "high" associated with recreational marijuana use. But most of the anticonvulsant properties come from a different chemical in the plant called Cannabidiol (CBD), which is not psychoactive. While more research is needed, there is some scientific evidence suggesting that cannabis and/or extracted CBD can reduce seizures with few side effects: [http://www.cannabis-med.org/studies/ww\\_en\\_db\\_study\\_search.php](http://www.cannabis-med.org/studies/ww_en_db_study_search.php).

### Medical cannabis can be administered safely to children

Charlotte Figi and other children with seizure disorders in Colorado take medical marijuana in the form of an olive oil solution containing a high CBD cannabis extract that is given in food or under the tongue or in a feeding tube. This particular CBD-enriched strain, called “Charlotte’s Web,” contains very low levels of THC, and parents report that their children do not experience any psychoactive effects. They also report no negative side effects and that there are several beneficial effects aside from reducing the frequency of seizures. For example, parents report that their children experience better sleep, increased alertness, and better mood.

### A number of doctors who treat those with severe epilepsy support treatment with CBD

Three neurologists at the University of Utah’s Division of Pediatric Neurology, including the division chief Dr. Francis Filloux, who specializes in Dravet syndrome, recently wrote to the Utah Controlled Substances Advisory Committee: *“I would like to express my strong belief that [cannabidiol]-based oils (referred to here in Utah as Alepsia) should be available as soon as possible to Utah children with severe epilepsy. The substance is not psychoactive or hallucinogenic, it contains less THC than do other materials that can be legally purchased in Utah, and it has absolutely no abuse potential.”* They join a growing roster of medical practitioners who are urging legal access, including the Epilepsy Foundation and experts on their Board, like Dr. Orrin Devinsky, who recently wrote: *“And as a doctor, I would gladly prescribe marijuana products for many of my patients who failed existing therapies if it were legal in my state.”*

### Sources

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