



Bruno “Bytes”

February, 2019

From Dr. Richard L. Bruno, HD, PhD
Bits and Tidbits from the Post-Polio Coffee House

On the topic of “Gut” Meds and Slow “Guts” (2/21/2019)

Dr. Bruno’s Original Post: We’ve talked about polio survivors not taking [Reglan](#) when their guts stop moving because the drug can cause Parkinson’s-like tremors. Another “no-no” is [Phenergan](#) (promethazine) a 1950s anti-vomiting drug. It can slow your gut, speed your heart rate, drop blood pressure and cause abnormal muscle movements. Check out this article: [Slow Guts and Polio Survivors](#) in the articles section of the Encyclopedia of Polio and PPS.

On the topic of Dietary Protein and Carbs (2/18/2019)

Dr. Bruno’s Original Post: There have been recent posts about dietary protein and carbs. Here is research using meal plans that are similar to The Post-Polio “Diet” that require **no** exercise, contain more protein and have fewer calories.

“...96 adults over age 65 were assigned to one of two groups: a six-month low-calorie meal plan that included more than **1 gram** of protein per kilogram of body weight (68 grams/day for a 150 pound person) plus adequate calcium and vitamin D, or a weight stability group targeting **0.8 grams** of protein per kilogram. The researchers decided not to include exercise, because many older adults are unlikely to perform the volume and intensity of exercise needed to preserve muscle and bone.

Here’s what the researchers found:

- Participants lost about 18 pounds, most of it fat (87%) and preserved muscle mass. The control group lost about half a pound.
- Even when participants lost weight they maintained bone mass. In fact trabecular bone score, (a measure of bone quality that predicts fracture risk) seemed to improve.
- Fat was lost in the stomach, hips, thighs and rear, which is important for preventing or controlling cardiometabolic diseases such as diabetes and stroke.

The researchers had the weight-loss group follow a high-protein, nutritionally complete, reduced-calorie meal plan that included the use of four meal replacements, two meals of lean protein and vegetables prepared by the participants, and one healthy snack; however any high-protein, nutritious low-calorie meal plan would likely work.”

There are three articles in the Encyclopedia of Polio and PPS about “Diet” You will find them in the [“Articles”](#) Section under that topic.

https://www.eurekalert.org/pub_releases/2019-02/wfu-nss021419.php

On the topic of a Medical History and Medications List (2/21/2019)

Dr. Bruno’s Original Post: So many of you have had recent medical problems, doctor and even ER visits. It’s vital that everyone have a MEDICAL HISTORY & MEDS LIST with:

- 1) Diagnoses (most recent first)
- 2) Past surgeries

- 3) Medications (name, dose amount and doses/day)
- 4) SENSITIVE TO ANESTHESIA and list of drug "allergies"
- 5) Recent blood work and test results (if you have had a recent exam)
- 6) Names and phone numbers of your own docs

The trouble (and maybe the life) you save will be yours.

[On the topic of nighttime “involuntary” leg movements](#) (2/23/2019)

Original Post: Regarding medications for involuntary leg movements at night, do you still recommend low dose Xanax ?

Dr. Bruno’s Response: Look at our article on Muscle Twitching at Night in polio survivors. There are 4 articles (under the topic “Sleep Issues”) in the articles section of the [Encyclopedia of Polio and PPS](#).

[On the topic of CBD \(Medical Marijuana\)](#) (2/26/2019)

Dr. Bruno’s Original Post: CBD: It can be dangerous. Does it do anything or is it just an expensive placebo?

CBD Is Everywhere, but Scientists Still Don’t Know Much About It

“It is a kind of a new snake oil in the sense that there are a lot of claims and not so much evidence.”

By Roni Caryn Rabin

New York Times Feb. 25, 2019



Cannabidiol, or CBD, a nonintoxicating component of the marijuana plant, is touted as a magic bullet that eases pain, anxiety, insomnia and depression. Salves, sprays, tinctures and oils containing CBD are marketed as aphrodisiacs that boost desire; as balms for eczema, pimples and hot flashes; and even as treatments for serious diseases like diabetes and multiple sclerosis.

Unlike THC, or tetrahydrocannabinol, the “psychoactive” component of the cannabis plant, CBD won’t get you “high.” But scientists know little about what it can do: Most of the information about CBD’s effects in humans is anecdotal or extrapolated from animal studies, and few rigorous trials have been conducted.

“It is a kind of a new snake oil in the sense that there are a lot of claims and not so much evidence,” said Dustin Lee, an assistant professor in psychiatry and behavioral sciences at Johns Hopkins University who is planning a human trial of CBD for use in quitting smoking.

The Food and Drug Administration has approved some drugs made from synthetic substances similar to THC to treat poor appetite and nausea in people with A.I.D.S. or cancer. But so far, the [F.D.A. has approved only one drug containing CBD, Epidiolex](#), after clinical trials found it reduced seizures in children with two rare, severe forms of epilepsy.

“There’s a lot of hype about everything about CBD,” said Dr. Orrin Devinsky, the director of the NYU Langone Comprehensive Epilepsy Center, who led the Epidiolex studies and went out of his way to say the drug’s effect was

“not miraculous.” “There is certainly data that it has a variety of anti-inflammatory effects, but whether that translates into improving human health is unknown. Does it help people with eczema, rheumatoid arthritis or ulcerative colitis? We don’t know. There is a good theoretical basis, but the studies have not been done.”

The F.D.A. still considers CBD a drug, so it cannot be sold in foods or drinks or as a dietary supplement, and [several states and cities](#) — including New York City, California, Maine and Ohio — have ordered restaurants to remove CBD from lattes, smoothies, muffins and other foods. The F.D.A. has issued several warnings to companies that make unproven claims that their CBD products will treat or prevent disease.

“This deceptive marketing of unproven treatments raises significant public health concerns, as it may keep some patients from accessing appropriate, recognized therapies to treat serious and even fatal diseases,” an F.D.A. spokesman said.

Dr. Yasmin Hurd, director of the Addiction Institute at Mount Sinai in New York City and a professor at the Icahn School of Medicine who has done extensive research on CBD, says the compound holds particular potential for the opioid crisis because it appears to reduce heroin cravings in recovering addicts. But, she said, “let’s do the research. It’s crazy that this substance is being consumed by everybody, yet we still don’t know the mechanism of action.”

CBD has a relatively good safety profile and is “hands-down safer generally than THC,” the intoxicating component of cannabis, Dr. Hurd said. But it can cause adverse side effects, including sleepiness and diarrhea. Patients in the Epidiolex trials also had more infections and rashes, as well as depressed appetite, sleep problems and elevated liver enzymes.

First isolated in 1940, CBD is one of more than 100 biologically active components called cannabinoids that are in the cannabis plant, and it is the second most abundant cannabinoid after THC. Scientists have long known CBD has anticonvulsant and anti-inflammatory effects, but it was not until recent years that CBD got more serious attention from researchers, who initially were more interested in studying cannabis’s psychogenic components, like THC.

“You don’t get a high from CBD no matter how much you take,” said Sumner Burstein, a professor emeritus of biochemistry and molecular pharmacology at the University of Massachusetts Medical School. It is also not addictive, but there is a possibility CBD will interact poorly or interfere with other medications, he said.

Studies are now getting underway to evaluate whether CBD can alleviate anxiety or post-traumatic stress disorder, or help with substance abuse and tobacco cessation. Leaf Vertical, a biopharmaceutical research company, will explore whether it can enhance cancer therapies. Animal studies suggest its anti-inflammatory effects may have benefits for helping to manage chronic pain or treat arthritis or inflammatory bowel diseases like Crohn’s disease. It is also being looked at for the treatment of autism.

GW Pharmaceuticals, which makes Epidiolex, has a multiple sclerosis drug approved in the United Kingdom that combines CBD and THC, and the company is exploring the combination for other therapeutic applications. It is also studying other uses for CBD alone, including for Rett syndrome, a rare genetic disorder that has devastating neurologic consequences in young children.

But the combination of CBD and THC may be more effective for some conditions than CBD alone, experts caution. While cannabis has shown promise for treating pain syndromes, for example, it is not clear that CBD alone will be an effective pain reliever.

Several researchers said their interest in CBD was piqued by patient inquiries. So many people asked Dr. Michael Van Ameringen, director of an anxiety research center in Hamilton, Ontario, about CBD’s therapeutic potential for anxiety that he decided to review the medical literature, and concluded that “there actually really is very, very little scientific evidence to support its use as a treatment for anxiety at this point.”

Some research has reported promising results in other psychiatric applications. Last year, for example, [European scientists reported that patients with schizophrenia](#) who were given 1,000 milligrams of CBD in addition to their regular antipsychotic medications experienced fewer hallucinations and racing thoughts compared with those on a placebo. But [other studies of schizophrenia](#) have not found the same benefits.

One Israeli trial found that people with Crohn's disease improved when they used cannabis, but a [randomized controlled trial of CBD alone found no benefit](#) for patients with treatment-resistant Crohn's, though investigators said the dose used may have been too low to be effective.

Indeed, CBD research is at such an early stage that just figuring out the correct therapeutic dose to test is a challenge, scientists say. Scientists are anticipating easier access to the drug for research since a bill signed late last year removed hemp-derived products like CBD from the list of Schedule 1 controlled substances, and allowed for the cultivation of hemp, which is defined as having less than 0.3 percent THC content. Before passage of that bill, CBD was considered part of the marijuana plant, and researchers in the U.S. were required to have a license in order to possess it, and had to obtain the product from a government-approved source and keep it under lock and key.

Still, procuring high quality, uncontaminated CBD for research remains a daunting task, said Dr Lee of Johns Hopkins. "It might be available at the local 7-11 in Pennsylvania," said Dr. Lee "but any product you get on the market is not federally regulated by the F.D.A, so the purity and safety and quality are questionable."

Indeed, a [recent study that evaluated dozens of CBD products ordered online](#) found that nearly 70 percent were not labeled accurately and had either higher or lower concentrations of the ingredient than indicated on the label. Some also contained THC.

Dr. Hurd, who has been studying CBD for nearly 10 years, warns that the expectations around the substance are unrealistic. "People are making it out to be a nirvana kind of drug, and that's a problem," she said. "One compound cannot cure everything."

https://www.nytimes.com/2019/02/25/well/live/cbd-cannabidiol-marijuana-medical-treatment-therapy.html?fbclid=IwARoSgV-cAZKmPnajXXydoLG7jQEh07Lz_mIWSHneJTh2_sHZTdsGL46LliA

[On the topic of THC and CBD \(Medical Marijuana\)](#) (2/28/2019)

Dr. Bruno's Original Post: After 20,000 doses, "results suggest that THC may be more important than CBD in generating therapeutic benefits. In our study, CBD appears to have little effect at all, while THC generates measurable improvements in symptom relief."

This is another article that brings to our attention - there is still a LOT of confusing information about this.

THC Found More Important for Therapeutic Effects in Cannabis than Originally Thought

Article ID: 708796

Released: 27-Feb-2019 11:05 AM EST

Source Newsroom: [University of New Mexico](#)

Newswise — Researchers at the University of New Mexico (UNM) recently solved a major gap in scientific literature by using mobile software technology to measure the real-time effects of actual cannabis-based products used by millions of people every day.



Contrary to popular media-reports and scientific dogma, the psychoactive chemical, tetrahydrocannabinol or "THC," showed the strongest correlation with therapeutic relief and far less evidence for the benefits of relying on the more socially acceptable chemical, cannabidiol or "CBD."

In a new study titled, "The Association between Cannabis Product Characteristics and Symptom Relief," published in the journal *Scientific Reports*, UNM researchers Sarah See Stith, assistant professor in the Department of Economics, and Jacob Miguel Vigil, associate professor in the Department of Psychology, found that THC and CBD contents were the most important factor for optimizing symptom relief for a wide variety of health conditions.

The findings were based on the largest database of real-time measurements of the effects of cannabis in the United States, collected with the ReleafApp, developed by co-authors Franco Brockelman, Keenan Keeling and Branden Hall.

Since its release in 2016, the commercially developed ReleafApp has been the only publicly available, incentive-free app for educating patients on how their type of product (e.g., flower or concentrate), combustion method, cannabis subspecies (indica, sativa, and hybrid), and major cannabinoid contents (THC and CBD) affect their symptom severity levels, essentially providing invaluable user feedback on their health status, medication choices, and the clinical outcomes of those choices as measured by symptom relief and side effects.

The study aimed to address the practical questions of knowing how fundamental characteristics of currently available and frequently used cannabis products, characteristics that often influence consumer choices, affect health symptom intensity levels. The average patient, across the roughly 20,000 measured user sessions and 27 measured symptom categories ranging from depression to seizure activity, showed an immediate symptom improvement of 3.5 points on a 0-10 scale. Dried flower was the most commonly used product and generally associated with greater symptom improvement than other types of products.

Cannabis is rapidly gaining popularity as a mid-level analgesic and promising substitute for prescription opioids and other classes of medications, which often carry undesirable side effects, dangerous drug interactions and risk of death. Presently, federal barriers restrict researchers from conducting cannabis administration studies in the U.S.

"We were able to fill the most significant absence in the previous medical literature, understanding the 'efficacy, dose, routes of administration, or side effects of commonly used and commercially available cannabis products in the United States,'" said Vigil, quoting from the recently released report from the National Academies of Sciences, Engineering, and Medicine, Committee on the Health Effects of Marijuana.

By studying products containing both THC and CBD, the authors were able to analyze the relative importance of these cannabinoids for symptom relief and side effect prevalence, advancing previous research examining either chemical in the absence of the other. One of the most striking patterns in the current results was that THC was generally associated with a more intense user experience, as measured by symptom relief and the prevalence of both positive and negative side effects.

"Despite the conventional wisdom, both in the popular press and much of the scientific community that only CBD has medical benefits while THC merely makes one high, our results suggest that THC may be more important than CBD in generating therapeutic benefits. In our study, CBD appears to have little effect at all, while THC generates measurable improvements in symptom relief. These findings justify the immediate de-scheduling of all types of cannabis, in addition to hemp, so that cannabis with THC can be more widely accessible for pharmaceutical use by the general public," said Vigil.

"More broadly understanding the relationship between product characteristics and patient outcomes is particularly important given the lack of medical guidance received by medical cannabis patients," said Stith. "Most receive only a referral for cannabis treatment from their healthcare provider with all other treatment advice coming from prior recreational experience, the internet, social interactions, and/or often minimally trained personnel working in dispensaries.

"This is very different from how patients receive treatment using conventional pharmaceuticals that come with clear dosing instructions and a standardized, uniform product," she added.

The authors caution that cannabis use does carry the risks of addiction and short-term impairments in cognitive and behavioral functioning, and may not be effective for everyone.

"However, I have seen many people use it as a primary medication for a full spectrum of health conditions as part of their broader desire to gain more control over their healthcare treatment," says Vigil, a perspective that seems to gaining momentum as cannabis appears to be re-emerging as one of the most widely used medications in the U.S.

<https://www.newswise.com/articles/view/708796/?sc=mwhn&fbclid=IwAR2jMHNMHNDvaN8ZTukvg4NHTfDbwkgVCinbBbIssUbuX7a8sUr993B35H8>

[On the topic of AFM](#) (2/26/2019)

Dr. Bruno's Original Post: AFM: NO SMOKING GUN.

This is an excellent article on acute flaccid myelitis, or AFM. **Note:** AFM "starts as a respiratory infection," while polio does not, and investigators don't yet know what causes the illness.

"Acute flaccid myelitis, or AFM, has been compared to polio - a description that strikes fear in the hearts of parents. What starts as a respiratory infection can develop into muscle weakness and paralysis, primarily in children. Sometimes the paralysis is permanent, sometimes not. But investigators don't yet know why, or even what causes the illness.

The first large outbreak of the illness occurred in 2014, during cold and flu season, and during an outbreak of a respiratory virus. Logically, investigators assumed AFM was associated with the same virus. But only about half of patients show evidence of a virus in their respiratory systems. And when researchers look at spinal fluid - where finding a virus would be a smoking gun for the muscle weakness and paralysis - there's even less to go on.

"We've only found four patients that had evidence of virus, and we found three different viruses," said Tom Clark, an epidemiologist with the Centers for Disease Control and Prevention. "There's nothing definitive yet to pin AFM on a specific viral cause."

What's even stranger is the pattern of AFM's rise over the past five years. There were 120 cases in 2014, 149 in 2016. And that number [jumped to 215 confirmed cases](#) in forty states last year. But there were only two or three dozen cases in the intervening years, 2015 and 2017. "That's new, that's unusual," said Clark. "This every other year pattern, it is a clue. It just doesn't point to anything obvious." (This pattern is neither new nor unusual, since the polioviruses and other 100-plus members of the enterovirus family typically have an every-other-year pattern of spikes in cases. Of course, the polio spikes in the 1940s were in the tens of thousands of cases, not in the tens of cases.)

"Clark says CDC and academic researchers are continuing to run tests and search for an explanation for AFM. In the meantime, they are trying to improve treatments and get the word out to doctors and parents - so they can be informed, but not afraid. ("Click" on this article link (below) to hear an interesting interview about AFM with Tom Clark, infectious disease investigator with the CDC:

<https://www.capeandislands.org/post/no-smoking-gun-cases-polio-illness?fbclid=IwAR039WbEuLoCf-TLO2QwsBeeKtNfv6TBVZAf5fsbhktjGnXaV0GvPwgEq#stream/0>

On the topic of Adamantane (an anti-viral drug) and PPS (2/28/2019)

Dr. Bruno's Original Post: BEWARE: A Viral Cause and A Treatment for PPS? A Completely Inaccurate Marketing Pitch for Amantadine.

This poorly written article from Fashion News Magazine (yes, "Fashion News") suggests potential consumers of the 50 year-old generic drug amantadine. It states, "Adamantane (a.k.a. amantadine) antiviral drugs act on influenza A virus. Medical conditions treated through amantadine antiviral drugs include sexual dysfunction, selective serotonin reuptake inhibitor induced [sic], post-polio syndrome (an infectious viral disease wherein a person's nervous system is affected), Parkinson's disease, influenza prophylaxis, influenza A, influenza, head injury, fatigue, extrapyramidal reaction, chronic fatigue syndrome, and attention deficit hyperactivity disorder."

The Post-Polio Institute has collected limited clinical evidence that amantadine may reduce neck muscle spasm pain. But "Post-polio syndrome" is **NOT** an infectious viral disease and amantadine is **NOT** a treatment for PPS.

Note: This article is a most clear example of how we must ALL be very careful about determining where we get our information. Typically, we would put the entire article into this monthly publication, but in this case, because of so much inaccurate information, we have chosen to publish only a "link".

https://fashionjournal24.com/adamantane-antiviral-drugs-market-competitive-strategies-regional-analysis-forecast-2020/?fbclid=IwAR2MEct5IB4_7Ft9EoLYf1BZxZN-kYDXdQ1qoV9SrlofdymQwXNtNCXzJ2U

Additional Bruno "Bytes" are available for you to share in the Encyclopedia of Polio and Post-Polio Sequelae.

Go to: <http://www.papolionetwork.org/bruno-bytes.html>

Scroll down the page (through the Current Month posts).

Previous months are located there, in easily printable PDF format and are available by "clicking" on them,

Would you like to see Dr. Bruno in "action"? Check out the [Video Library](#).

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