# The Toxic Effects of Marijuana Use

## Edward A. Chastka, M.D.

Author's Note: The cornerstone of science is observation. The following article contains some of my observations from years of treating marijuana smokers with characteranalytic and medical organe therapy. I have also included a small sampling of the extensive body of scientific research that demonstrates the psychological, social and biological damage done by marijuana.

### Case 1: Wasted Youth

Kimberly called me because she was unhappy. Not anxious, not depressed, she just felt like her life was stuck on hold. Two years previously she graduated with honors from a prestigious university with a degree in photography. She accepted an internship with a wellknown East Coast photographer but her own photography was going nowhere. She worked 16 hours a week for minimum wage as a sales clerk in his studio but she had not taken a photograph in months. This worried me. "What do you do with your time," I asked. She said she had met a young man, a singer in a rock band. He was longhaired and handsome and she followed him in the local clubs. She said she loved him but he made it clear that he wasn't interested in commitment. The more Kimberly told me about their relationship, the more self-involved and narcissistic he seemed, treating her with neglectful contempt. They smoked a lot of pot together. Kim used marijuana occasionally at college but now she was smoking daily and sometimes multiple times a day. When I pointed out that her loss of productivity as a photographer coincided with her increased use of pot, she denied the connection. She became defensive and protested that she knew any number of people who smoked pot regularly and were successful in their careers. When I challenged her to tell me

about them she could only name one person, a professor she knew at college who smoked regularly. She paused, thinking about it, and admitted he was actually an assistant professor who had never made full professor despite his high intelligence.

Her life had become a series of dead ends: a dead-end job, a dead-end relationship and dead-end artistic ambitions. I knew it was the pot smoking that had stifled her life, but pointing this out to her had little effect. It bounced off her as if she were covered by a defensive shell. Early in therapy we developed a warm relationship. I felt interested in her life and a fatherly concern for her suffering. Now I was starting to feel frustrated. Her therapy was going nowhere, she was coming less often and there seemed no point in prolonging it. Then I had the thought, "This feels like beating a dead horse." It was a grotesque image and I was reluctant to share it with her, but I thought, "What does either of us have to lose?"

The next time she came I felt a deadness in the room as soon as we started the session. So I said, "This feels like beating a dead horse." Her outward appearance showed no response but I sensed a difference. I couldn't see it but I felt it, a subtle freezing up in her that was different from her usual deadness. I thought her feelings might be hurt so I explained, "It's the pot smoking, it makes treating you feel like beating a dead horse." Again, no overt response but something between us changed. She seemed anxious and our connection felt less comfortable. Her eyes shifted to the door like she wanted to run out of the room. Had I made her angry?

A few weeks later she made an announcement, "I broke up with my boyfriend." I was encouraged. "I have a new boyfriend," she told me. He had a steady job delivering packaged snacks to groceries and convenience stores. He drove a truck emblazoned with the advertising slogan, "Don't Go 'Round Hungry." I asked her what she liked about him. She thought about it a moment then turned to me with a look of defiance in her eyes while a slight smile played across her lips and said, "We smoke a lot of pot together." I had indeed made her angry and she was sticking it to me. The pleasure of spiting me lasted only a few weeks and then she admitted that she liked him but she wasn't

in love with him. She could see that he was going nowhere and she was bored with the life they were living. She complained, "All we do is smoke pot and watch TV." After a couple of months, she told him to move out. This was progress. In her last relationship with the rock band singer she was passive, accepting what few crumbs of affection he offered. Now, she was insisting on what was good for her.

A few weeks later she came for her next session and right away I could see something was different. Her eyes were brighter and she walked into the room with energy and determination, as if she had something important to say. "I stopped smoking pot," she told me. I was stunned by the difference I saw in her. Her skin looked fresh and she had color in her cheeks. I couldn't get over how good she looked. When I told her so, she smiled demurely.

The next time she came she announced, "I am going to business school to get an MBA." She didn't seem to need therapy much anymore, but she kept in touch with me with a phone call every few weeks. The turnaround in her life was remarkable. She studied hard, took her GMATS, did well and then completed an exhausting round of applications and interviews. One day I got a call from her and she sounded very excited. She had been accepted to business school, and not just anywhere but to Stanford, one of the best business schools in the country! After that the phone calls tapered off, and her therapy sessions ended. Her life was full and she didn't need me anymore. I was excited for her but I also felt a little sad, like a parent dropping their child off at college for the first time.

It was two years later that I heard from her again. A card arrived in the mail. It was an attractive card and clearly selected with care. Inside she had written a short note. She was living in San Francisco and was a rising executive at a major insurance company. She told me she was happy and thanked me for my help turning her life around. She was truly a dead horse that had come back to life.

## Case 2: Lost Opportunity

Lost opportunity is often a consequence of marijuana use. It is difficult to quantify but it is a frequent and well-established finding

in studies of the drug. It brings to mind an old high school friend of mine. Conway was extremely bright but a chronic underachiever. Still, he managed to graduate 10th in our class at a highly competitive high school. I lost touch with him during my college years but ran across him again a few years later through a mutual friend. Conway had become a house painter. He was good at his job and earned enough money for everything he needed. He shared an apartment with two other guys, had an old car and all the pot he cared to smoke. He smoked a little in the morning before work, a little at lunch and then a whole lot at home after work. It was several years later that we met again when I came by his apartment with a friend to pick up one of his roommates for an evening out. I found him sitting on the sofa staring into space. He was stoned and even after all of the years we had not seen each other he had little to say. We invited Conway to join us for the evening but he declined. Television provided all the entertainment that Conway required, television and marijuana. What a waste. How do you measure the loss of someone so gifted?

A study published in 2013 followed 1,200 college freshmen at the University of Maryland over a 10-year period and found that substance use, "especially marijuana use," contributed to "college students skipping more classes, spending less time studying, earning lower grades, dropping out of college, and being unemployed after college." (Arria, A. et al. 2013) How can legislatures all over the country consider legalizing recreational use of this substance, and why does the press give so little attention to the evidence that shows that marijuana stunts educational and vocational achievement?

## Case 3: Brain Damage

I first met Lonnie when he entered the inpatient drug rehabilitation center where I work. Lonnie wanted nothing more than to impress me with what a tough guy he was. He wore his baseball cap backwards with the bill pushed to one side and his shorts hanging so low I could see a good four inches of his underwear above the waist of his pants. He was a wise guy who always had a smirk on his face and never took anything seriously, particularly the idea of getting off marijuana—

the reason why his parents sent him to the inpatient drug and alcohol treatment center in the first place. Lonnie didn't think he was an addict, he just smoked pot. He was proud of the fact that what he smoked was "high quality weed," and he smoked it several times a day. In fact, Lonnie's urine THC level was 367 ng/ml three days *after* he arrived for treatment, one of the highest THC levels ever seen up to that point at the rehab center. Recently, with the increased potency of marijuana and the availability of concentrates known as "dabs," the THC levels over the past two years are increasing dramatically with several readings this year of over 750 ng/ml, the highest level that the laboratory can read.

Lonnie had been in treatment for almost a month when I met him. His THC levels were still high, and he still showed the attitude that I call "pothead thinking." Pothead thinking is a complete lack of insight into the problems caused by smoking marijuana. Despite the presence of deteriorating grades, loss of interest in sports and other activities, avoiding old friends who don't smoke weed, problems with memory and concentration, problems putting thoughts and feelings into words, poor motivation, disconnection from emotions and increased conflict with their families, those with pothead thinking insist that they haven't changed a bit. In fact, they often assert that marijuana treats all manner of physical and mental problems and they are adamant that there are studies to prove it, although they have never been able to tell me where to find these studies, at least not in legitimate medical journals.

Legitimate medical studies show profound negative changes in the brain with marijuana use. In the largest brain imaging study published to date, scientists from Amen Clinics (Costa Mesa, CA), Google, John's Hopkins University, University of California, Los Angeles and the University of California, San Francisco evaluated 62,454 brain SPECT (single photon emission computed tomography) scans of more than 30,000 people. (Amen, D. et al. 2018) SPECT scans give a visual representation of cerebral blood flow in the brain. Many illnesses, but also drug use, cause abnormalities in cerebral blood flow. This study showed significantly reduced blood flow to

the brain in marijuana users. The pattern of decreased blood flow was strikingly similar to the pattern found in schizophrenia according to the lead author, psychiatrist Daniel G. Amen, MD, founder of Amen Clinics. Dr. Amen commented, "Based on one of the largest brain imaging studies ever done, we can now track common disorders and behaviors that prematurely age the brain. Better treatment of these disorders can slow or even halt the process of brain aging. The marijuana abuse finding was especially important, as our culture is starting to see marijuana as an innocuous substance. This study should give us pause about it." (Ibid.)

Another study done in England measured the structural integrity of the corpus callosum in heavy marijuana users. The corpus callosum connects the left and right sides of the brain. It contains over 200 million nerve axons and is essential for integrating left and right brain function. This study found impaired structural integrity of the corpus callosum in marijuana users with increased severity of damage associated with increased length of use. The authors felt that these structural changes could underlie the behavioral and cognitive changes seen in marijuana users. (Rigucci, S. et al. 2016)

So what happened to my friend Lonnie? It took about three months but Lonnie turned out to be a pretty decent guy once he came out of the fog caused by his marijuana use. He stopped wearing a baseball cap to our meetings, pulled his pants up and started to be more respectful to both the staff and to his peers. His energy level and motivation increased, his memory and concentration improved and he began to regain his ability to put his thoughts and feelings into words. He also lost the pothead thinking. Now he could see the damage that marijuana did to him and to his pot-smoking friends back home and he expressed a commitment to doing whatever was necessary to maintain a drug-free lifestyle.

The change that I saw in Lonnie is typical of the changes I see in young people who have been heavy marijuana smokers. If they stop using it long enough for their brains to heal, I almost always see a substantial improvement in cognitive and emotional functioning over a period of about three months. The predictability of this improvement

leads me to conclude that it is the result of an improvement in the biological functioning of the brain.

### Case 4: No Safe Dose

James was a 35-year-old executive in an insurance firm when he first came to my office complaining of anxiety and insomnia. His anxiety had become so intense that he couldn't eat. He would wake up early in the morning with a feeling of dread and a knot in the pit of his stomach. He was losing weight and having trouble concentrating at work. James was proud of the fact that he could drink his friends under the table at social gatherings but these occasions were rare and he never used drugs other than alcohol. I gave James some medicine to help him to sleep and to suppress his anxiety enough to return to work. We also started a course of medical orgone therapy to help resolve the issues causing the anxiety.

At times James felt that he wanted to cry but didn't know why and he suppressed these feelings. Anxiety is often associated with emotion that has been suppressed, so with James, once he recognized that he suppressed his feelings, I focused on discovering how he suppressed them. Early in therapy I noted that he had an unconscious habit of sticking his neck out in a way that reminded me of a turtle. Watching this trait over time I realized that, when anxious, he would duck his head like a turtle pulling its head back into its shell. When I asked him if he was aware of this habit he remembered that his nickname in college had been "Turtle Man." This posture was associated with a great deal of tension in his face, jaw and neck. When I watched him breathe while lying on the therapy couch, I saw that his chest was rigid and held high and sometimes he would clench his fists at his sides while breathing.

James' father had been a brutal authoritarian and throughout his childhood his parents had frequent and violent arguments. As a child, James watched while his father verbally, and sometimes physically, abused his mother. James was close to his mother, even felt responsible for her but as a boy there was nothing he could do to protect her. Sometimes his father would turn his anger against James and he was often critical. He recalled that his father frequently criticized his childish play saying, "Son, that doesn't put money in the till."

James' father died at an early age of a heart attack. James' mother lived alone and was beginning to show signs of dementia. James never married, but he was the rock of the family providing care for his mother and sometimes helping out his younger sister who struggled with alcohol and drug problems. He rarely showed his feelings. The tension in his face, jaw and neck made sure of that. Because talking about his feelings was difficult for James, initially I encouraged him to just breathe and make sounds. Gradually, he relaxed and began to talk about his misery, the relationship with his mother that he was losing and the relationship with his father that he never had. Gentle physical work on the tension in his jaw and neck helped the tears come to the surface, first in his eyes, then in his face and finally in deep sobbing from his chest. As the feeling came out, James' sleep improved, he began to experience relief from his anxiety and he began to use less medication. He became less reserved with me and our relationship deepened as relationships do between a patient and therapist when deeply held feelings are expressed in therapy.

About two years into his treatment, when we knew each other quite well, James came to an appointment seeming vague and disconnected. I tried to reestablish our usual connection but it just wasn't working. Finally I gave up and simply pointed out his lack of emotional response. He felt it too, but he couldn't explain it. I asked what he'd been doing recently and he told me he had attended a reunion with his college buddies. There had been a lot of drinking but that was typical when he got together with his old friends. The difference was that this time they had smoked marijuana once or twice as well. James told me he had not smoked marijuana since he left college. That had to be it. There was no other explanation for his emotional disconnection. The effect wore off after a few weeks but the impression it made on me remains. All of that disconnection came from one weekend of marijuana use.

Marijuana suppresses emotional connection with oneself and with other people. It damages memory and concentration, decreases motivation and achievement in life, restricts blood flow to important parts of the brain, damages the fiber tracts that help the brain integrate and increases the risk of anxiety, depression and psychosis. People often ask me if it isn't OK to just smoke a little on the weekends. I say, "Sure, you can smoke a little if you only want to do a little damage to your brain, have a little decrease in your emotions, your memory, concentration, motivation and have just a small increase in risk for serious psychiatric disorders." While the amount of damage marijuana does is related to the amount a person smokes, severe anxiety, depression or psychosis can strike the first time pot is smoked. This does not happen to everyone who smokes marijuana but it does happen to some and as yet we have no sure way of predicting who is at risk for such outcomes or what amount can bring them about. Accordingly, there is no safe dose of marijuana.

### References

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