

## Episode 044: Marijuana and Mental Health

David Puder, M.D., Victoria Agee



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**PSYCHIATRY &  
PSYCHOTHERAPY**

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There are no conflicts of interest for this episode.

*On today’s episode of the podcast, I will discuss marijuana use and how it affects mental health with Daniel Binus, the chief psychiatrist at Beautiful Minds, near Sacramento, California. Also joining us is a third-year medical student, Victoria Agee.*

### **Why are we even talking about marijuana?**

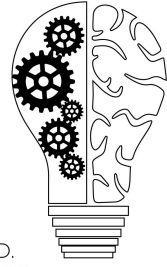
There are a few reasons we believe this is important to talk about. First, as medical professionals, we often see patients who want help with their anxiety, depression, ADD and suicidality. They say they use cannabis, and that they need cannabis, to help calm those symptoms. When we explain the research to them, it still takes them awhile to let go of their habits and embrace other forms of therapy and medication that is a better long-term option.

Also, we head into a time when marijuana is being legalized, there are tons of THC companies that will benefit from suppressing this information and even suppress these studies we will reference here. Hiding this information could be detrimental to society’s mental health. While there are some potential benefits to one component of marijuana (CBD), something I will review in the future (evidence is fairly young in that field), the THC component can be highly damaging to mental health.

Whether or not people are willing to admit it, cannabis is actually highly addictive. One of the symptoms of addiction is intellectualizing reasons for use. Not only does it change the way the brain functions, it changes the way we see and perceive the world. It also changes our visual and spatial abilities. If you’re an architect or use math in your job, it deeply affects those abilities as well. THC stays in your brain a long time—it can be weeks (or even a month) before people get the full function of their brain back and the fog has cleared.

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### **What is the research on cannabis?**

Ganja is from the cut tops of leaves (5-8% THC content) and hashish is from the resin and is therefore more potent (10-20% THC content) Delta-9-tetrahydrocannabinol (THC) is the most commonly used substance worldwide.

### **It causes long-term changes in the brain**

Recent research shows that consistent cannabis use will change the way your DNA is expressed in the brain. It will upregulate and downregulate proteins in the brain, and can change the morphology of the way it works. Marijuana, in fact, leads to changes in our genes over time, called epigenetic changes ([Szutorisz, 2018](#)). So the initial effect may be pleasure or fun, but long term, it can create changes that take months to develop in a way that people don't understand why they are having new issues that pop up. Basically, it's not changing your gene structure, but it is changing the expression of those genes. Anytime you make positive food choices or develop a consistent exercise routine or make physical changes, epigenetic changes occur that are healthy for long term change (see my episode on [diet](#) and [exercise](#))

It's not surprising that marijuana also causes similar changes in the brain, but not in a healthy way.

When people use cannabis heavily, it causes our endogenous cannabinoids that naturally occur within the body to shift, which can create a disruption in our natural release of cannabinoids. This actually creates a direct correlation between heavy cannabis use and lower IQs ([He, 2019](#)).

### **It lowers intelligence**

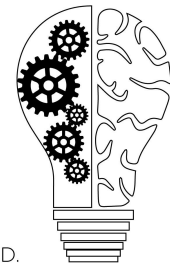
Studies show that over 20 year cannabis use, people lose an average of 6-8 IQ points. That means you could go from intelligent to average, or even average to below average.

### **It affects men's sexual health**

In a survey of 8,650 people, women had no association with any of the sexual problems from marijuana use. Men, however, had significant associations between daily cannabis

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use and reporting an inability to reach orgasm (OR 3.94), reaching orgasm too quickly (OR 2.68), and reaching orgasm too slowly (OR. 2.05).

Among the 424 men who reported reaching orgasm too quickly, there was an association between frequency of cannabis use and the extent to which reaching orgasm too quickly was experienced as problematic (F- 2.85, P <0.01) ([Smith, 2010](#))

Routine usage of cannabis (more than once per week) was also associated with a nearly 30% reduction in median sperm concentration and total sperm count after adjustment ([Gunderson, 2015](#)).

### **It increases risk for psychotic disorders**

Multiple studies have shown a link between marijuana use and psychotic effects that demonstrate that it is definitely causal in contributing to psychotic disorders.

A meta-analysis of 66,000 individuals showed that heavy cannabis and average cannabis users were 4x and 2x, respectively, as likely to develop schizophrenia or other psychosis-related symptoms compared to nonusers ([Marconi, 2016](#)).

In a study that came out this year (2019), young adults who used cannabis were about 1.5x more likely to develop depression and suicidal ideation and 3.5x more likely to attempt suicide ([Gobbi, 2019](#)).

### **It has negative effects at any age**

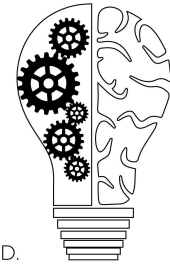
Cannabis exposure during gestational development has a direct correlation to drug-seeking behavior later in life. Early life cannabis exposure (adolescents) upregulates expression of *Penk* mRNA, an opioid neuropeptide in mesocorticolimbic system, which has direct causal link to enhanced behavioral susceptibility to heroin use as an adult([Szutorisz, 2018](#)).

Studies also show that in teens, even a few uses of marijuana makes them predisposed to depression, psychotic disorders and suicidal ideation.

### **It causes impaired social functioning**

## Episode 044: Marijuana and Mental Health

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It increases the amount of impulsivity and hostility in daily life. It increased hostile behaviors and also paranoia of others being hostile. It also deadens the ability to detect microexpressions and create social connection so that it may remove appear to improve social anxiety. However, it's not an actual solution, because it prevents someone from presenting their real self.

### **How to help a patient who uses cannabis**

Cannabis can potentially help the symptoms of anxiety, ADD, depression, and a whole host of mental health issues initially. The problem is that cannabis fundamentally changes the brain in a way that causes long-term damage. Not only that, but if people are using cannabis as a coping mechanism for their mental health issues instead of therapy, they will not deal with the underlying issues, only medicate the symptoms.

When a new patient comes in and reports regular marijuana use, I highly recommend for them to get off of it, for at least the course of therapy. However, it also is important to mention that the first stance to take with every patient is empathy. I tell them there is no shame in their marijuana use. I liken it to them using a log when they're in an ocean—it helped them keep their head above water because it floated. But when a rescue boat comes along, if they try to heft the log into the boat, it won't work. With proper therapy, with the boat, they won't need the log for survival any longer.

I even tell them they can get back on it after the therapy if it hasn't helped them. When they are off of marijuana, they have the ability to be present and really process what they will need to process in therapy in order to get over anxiety and depression.

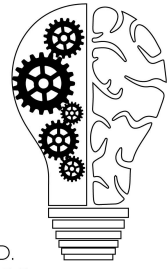
When they do take the symptom suppressor of marijuana away, often they will experience a flood of emotions and memories. Maybe cannabis was the best thing our patients could find in the moment, but there are obviously better ways of helping them deal with their pain.

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### **In conclusion**

I have a very extensive worksheet of all of the research about cannabis in my Free Resources Page. It's important to understand the depth of the ways THC can affect our patients lives and mental health.



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