



Policy Perspective: A Conversation with Timmen Cermak

Dr. Timmen Cermak is a psychiatrist who specializes in addiction medicine. He is the former President of the California Society of Addiction Medicine and co-author of that body's report "Youth First - Reconstructing Drug Policy, Regulating Marijuana, and Increasing Access to Treatment in California." Dr. Cermak has written many books on drug and alcohol use among youth and adults, addiction, and recovery. He is the co-chair of the Blue Ribbon Commission's Youth Education and Prevention Working Group.

What brought you to the issue of marijuana, and the work of the BRC?

I came to the issue in 1996, when the first compassionate marijuana use act in the United States was passed in California. I began encouraging the California Society of Addiction Medicine, which I belong to, to get involved and develop good public policy around marijuana use. Up to that point, we hadn't really looked at the issue. I volunteered to take on the role of unofficial expert on marijuana policy for the Association. I began following the literature on the science - domestic and international - looking especially at why marijuana has the impact on the brain that it does. I share my research with the Society, and keep them up to date on the issues and science so that we can develop meaningful public policy around marijuana use in California.

There was a huge shift in research after 1992, when it became clear that the brain has its own natural chemical system - the cannabinoid system - that is based on the same group of molecules present in marijuana. We're now looking at what the function of this system is, and in regards to marijuana, how stimulating that system affects the brain and its function. It was research into the molecules in marijuana that led to the discovery of the cannabinoid system, which is a fascinating new area of scientific research.

What is your perspective on the risks associated with marijuana use among minors? Are there problems particular to young people?

When it comes to adolescents, the data is absolutely clear that the younger they are when they first start using marijuana, the more likely they will be to develop cannabis use disorder. Dependence happens much more quickly in younger people. We also know that the cannabinoid system is hugely influential on the brain - that's why it gets us high. What we don't know right now is whether those effects are permanent.

For me, there are four key areas of concern, or risk, for adolescents who use marijuana. They're not just medical or biological, but touch on many areas of a person's life.

The first is the legal risk. Arrest and involvement with the juvenile justice system are very harmful to young people. Our current legal structure focuses entirely on punishment, instead of providing support and treatment. In my opinion, this model is not serving us well - marijuana is easily available to young people and they do use it, some of them heavily. Punishing them has not worked to reduce harm.

The second risk to young people is dependence. As I mentioned before, cannabis dependence develops more quickly in people who start using marijuana at a young age. The data shows, however, that the

majority of people who become dependent at some point in their adolescence do not develop a lifetime addiction or disease. They seem to mature out of it in the twenties or thirties.

The third risk is one of cognitive decrements. In lay terms, that means effects on short-term memory, learning and executive functions. People who use marijuana regularly (10-19 times/month) and heavily (20 or more times/month) generally show these effects. Marijuana floods the cannabinoid receptors, which is a pleasant feeling for most, but if you do this too often your brain adapts by actually decreasing its number of receptors. Fewer receptors can lead to temporary cognitive decrements, like short-term memory loss and problems with executive function that can affect risk perception. The good news is that these effects appear to reverse themselves within 5 or 6 weeks of stopping use.

To my mind, the fourth and biggest risk of adolescent marijuana use is diminished educational performance. Education is the core task of adolescence - it prepares kids for better outcomes in life, and it's very hard to recover from education deficits later in life. Heavy marijuana use in adolescence is associated with decreased school performance and academic retention. These kids are more likely to drop out of high school, and demonstrate reduced earning potential by the age of 30. This is the risk that can cause the longest lasting problem for most adolescents who use marijuana heavily.

With regard to marijuana use among adults, are there problems that are associated with more regular (or heavy) use, vs. occasional use? Does occasional use have risks of its own?

Just like with adolescents, marijuana use among adults is known to reduce the number of cannabinoid receptors in the brain. This can have some emotional effects, including reduced response to emotional stimuli. Data show that marijuana use twice a week is enough to keep the number of receptor sites slightly reduced.

We also know, however, that people who use marijuana once a week or less have no elevated risk for problems. There is no data to indicate that infrequent use will lead to heavier use later on. Like most things, a safe level of usage varies among individual people.

As far as other risks with usage, marijuana is similar to most pharmacological substances that are psychoactive. For example, if a person is using drugs as a tool to quell anxiety most of the time, they will never develop the psychological tools necessary to deal effectively with their anxiety. They may not be addicted or physically harmed by the drug, but it can impede the natural process of maturation as an adult. As a psychiatrist, I like to see people make the choice to develop the means to meet their challenges with psychological tools rather than chemicals.

How does marijuana, as an intoxicant, compare with alcohol? How do the risks of addiction and other harms compare?

The risks are lower for marijuana than for alcohol. The physical effects that regular alcohol use has on the body are much more likely to be harmful than with marijuana. We know that heavy use creates a mild to moderately severe risk of developing dementia later in life.

Alcohol can also cause certain people to behave in a violent manner - much more often than marijuana does. Violent behavior among marijuana users is most often associated with its illegality, not with its physical or psychological effects. If alcohol were not already legal, it would be much harder to make the case for legalization than it would be marijuana, based just on its pharmacological effects.

I should point out, however, that there is no data to indicate that people use just one or the other of these substances.

What is the role that parents should play in reducing and preventing marijuana use among minors? I have two young children myself, and I think many parents worry about what they can do to help their children steer clear of drugs.

People - and this includes adolescents - will always take risks and experiment. We can't change that. What we can do is model safe behavior for our children and support them if they run into trouble.

Parents, especially, can have an effect on their adolescents' choices by modeling good choices of their own. Kids do what they see - if parents model responsible usage, kids are more likely to make responsible choices themselves. It's important to talk to your children openly about drug and alcohol use, but remember that kids will see other kids using these substances, and they may decide to try them.

Remember, too, that people do not parent in isolation - there is a role for the school to play. The best way schools can support parents and adolescents through drug and alcohol use is to provide a school-based Student Assistance Program that acts as a second pair of eyes on their behavior. If a counselor can spot harmful use and intervene in a supportive fashion, harm is more likely to be reduced.

The dominant form of education about marijuana and other substances has so far been aimed at abstinence. While abstinence is certainly the safest course of action, efforts at preventing heavy use are not successful if they're not paired with support and assistance programs. These programs can prevent kids from moving into a level of use that is harmful. The best way to mitigate the harms of heavy use, or prevent overuse, is to design better interventions. Ideally, counselors at the school would keep an eye on behavior, and work in concert with parents to intervene when there is a problem. There is good data to show that this method, combined with education, is better than an abstinence only/zero tolerance model.

Zero tolerance is especially ineffective because when you expel students for using drugs, you decrease supervision, when increased supervision is really what's needed to reduce harm.

What do you think is the most important issue that the public and policy makers need to think about before legalizing marijuana in California?

I think we need to focus on protecting our kids.

As it stands, the juvenile justice system in California is failing to protect our young people. As I mentioned before, the focus is entirely on punishment, not treatment and harm reduction.

We need to change the laws that regulate marijuana in California. If we craft our regulations with an eye to protecting our young people, we can reduce harm. The best way to do this is to tax and regulate marijuana sales, and to strictly regulate the advertising, marketing, placement, and promotion of marijuana related products. The policies can be similar to the way we regulate tobacco to prevent youth access and addiction: we keep cigarettes behind the counter; we limit advertising targeted at young people.

If we tax marijuana with the goal of protecting our kids, we can devote a portion of the tax revenue to funding school-based programs like the one I mentioned above. Only by committing to reforms like this can we enact sensible policies that protect our kids from the harms of heavy drug use and dependence.

California has the opportunity to set a gold standard for the rest of the country by designing a regulatory system that protects our children by prioritizing their needs.