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The Science Behind... Medical Marijuana

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In Missouri, the November 6th midterm ballot will contain three provisions related to medical marijuana. In order to help you better understand the science behind medical marijuana, we've summarized some of the most common findings by scientists related to this topic. While this list is not comprehensive, we hope this informs your voting options on November 6th. For a full list of ballot provisions, visit the Missouri Secretary of State's website.

Medical marijuana laws (MML) have been enacted in 31 states, where doctors are now able to recommend the use of medical cannabis (marijuana) products to their patients in the form of oil, pill, or inhaled marijuana. It should be noted that other cannabis products may be distributed in this form, although they may not be legal for doctor recommendation in Missouri. The active ingredient in these products are chemical extractions from the cannabis plant, and not the plant itself. Chemical extractions such as Tetrahydrocannabinol (THC) and Cannabidiol (CBD) function differently than marijuana. Missouri law currently allows for neurologists to recommend CBD to seizure patients.

Medical marijuana has been shown to be an effective treatment for severe to chronic pain and spasticity (Hill, 2015; Baron, et al, 2018; Powell, et al., 2018). Medical marijuana has also been recommended to reduce the symptoms of several psychiatric disorders (Bhorik, et al., 2018; Han, et al., 2018) and epilepsy; however, scientists are still working to understand exactly why marijuana has these effects (Maa and Figi, 2015).

With the empirically observed benefits of medical marijuana, there are also potential adverse effects of the product. In a study done in a clinical setting, researchers found that some adverse effects were associated over time with recreational marijuana use, but there were no significant adverse effects with medical marijuana use (Bhorik, et al., 2018). Frequent recreational marijuana use may be associated with bronchitis, increased rates of respiratory tract infections, short term memory impairment, and reduced motor coordination (Han, et al., 2018).

MMLs have, in some cases, allowed for access to medical marijuana dispensaries (Maa and Figi, 2015; Powell, et al., 2018). In 2010, seventeen states with MMLs were analyzed, and the prescription of opioid pain medication had fallen as a result of the MML, cutting Medicare Part D spending by \$104.5 million (Bradford and Bradford, 2016). MMLs have been shown to reduce the prescription of opioid pain medication, and the overall risk of opioid societal harm; however, the overall pharmaceutical supply of opioids has remained constant (Powell, et al., 2018).

Scientists have also thoroughly examined the impact of MMLs on teen marijuana use (Anderson, et al., 2015). A wide concern, and common hypothesis, was that the legalization of medical marijuana would increase the incidence of teen marijuana use. However, research findings largely reject this hypothesis, and finds that teen marijuana use remains constant before and after state MMLs are passed (Anderson, et al., 2015). If you have more questions about the science behind medical marijuana, read more by the [Missouri State Medical Association](#) or [Centers for Disease Control and Prevention](#). Don't forget to vote on November 6th!