

Marijuana and Its Growing Effect on Outdoor Activities

As more and more states pass some form of legalized marijuana for either recreational or medical use, there is a growing risk to everyone participating in outdoor activities. There is an increasing number of injuries, often times severe, resulting from people engaging in outdoor activities while under the influence of marijuana. Engaging in outdoor activity while under the influence not only increases the risk of injury to the user, but also to those around them. The use of marijuana can cause not only the initial injuries, but can adversely impact medical care and treatment received for those injuries, and can detrimentally impact a person's recovery from those injuries.

Recently in a lawsuit filed in Colorado federal court an out of state teenager who had used marijuana since sixth grade came to Colorado over his spring break to ski and to 'participate' in Colorado's newly legalized marijuana industry. After taking a consumable marijuana product on the slopes, the teenager went off a ski jump, landed on his hip and fractured his femur. He was taken to a local hospital where the femur was repaired and he was discharged a few days later with supplemental oxygen by nasal cannula which is common for patients being discharged from mountain community hospitals. Immediately after discharge as the teenager and his family drove down to Denver from the mountains, the teenager again consumed an edible marijuana product. That night it was suspected that the teenager consumed additional marijuana and perhaps other illicit drugs and/or alcohol. The following morning the teenager was found without his nasal cannula in place and with a respiration rate of 6, profoundly below the regular rate. Paramedics took the teenager to the hospital where he was found to have a traumatic anoxic brain injury resulting from lack of oxygen. He spent the next 3 months in a rehabilitation hospital recovering from his injuries.

In the following lawsuit much of the pretrial discovery involved the teenager's use of marijuana in causing the initial femur fracture and issues of comparative negligence. Issues also involved whether the teenager's long-term use of marijuana impacted the medical care received for those injuries. Long-term users of marijuana, often the patient demographic in ski towns, can require heavier doses of anesthetic agents during surgery and require higher doses of pain medications to control pain after surgery, both of which increase risks of medical care. The teenager's long-term use of marijuana since his developing adolescent years was also central in determining to what extent, if any, the teenager's ultimate cognitive condition following rehabilitation was the result of the lack of oxygen, as the teenager claimed, or represented a return to a low preinjury baseline, the result of long-term marijuana use inhibiting adolescent brain development. Both sides employed experts in pulmonology, neurology, neuropsychology, traumatic brain injury rehabilitation to examine these issues. Ultimately, the case was dismissed by the plaintiff for unrelated reasons.

As reported by the National Institute of Health in June, 2014, scientists from the National Institute on Drug Abuse (NIDA), the federal agency that brings the power of science to bear on drug abuse and addiction, and part of the National Institutes of Health, issued an article published in the New England Journal of Medicine, reporting that marijuana impairs critical thinking and memory functions during use and that these deficits persist for days after using. In addition, a long-term study showed that regular marijuana use in

the early teen years lowers IQ into adulthood, even if users stopped smoking marijuana as adults. NIDA also reports that marijuana can cause problems with memory loss, distorted perception, trouble with thinking and problem solving, concentration, and anxiety. A NIDA funded study at McLean Hospital in Belmont, Massachusetts found that college students who used marijuana regularly had impaired skills related to attention, memory, and learning 24 hours after they last used the drug. Other impairments observed in frequent marijuana users involve sensory and time perception and coordinated movement, suggesting use of the drug can adversely affect driving and sports performance. (Herkenham, M et al. Cannabinoid receptor localization in the brain. *Proceedings of the National Academy of Sciences of the United States of America*. 87: 19321936, 1990; Mathew, RJ; Wilson, WH; Turkington, TG; and Coleman, RE. Cerebellar activity and disturbed time sense after THC. *Brain Research*. 797(2): 183189, 1998.)

Cannabinoid receptors are affected by THC, the active ingredient in marijuana, and many of these sites are found in the parts of the brain that influence pleasure, memory, thought, concentration, sensory and time perception, and coordinated movement. (Herkenham, M et al. Cannabinoid receptor localization in the brain. *Proceedings of the National Academy of Sciences of the United States of America*. 87:19321936, 1990.) In a study reported by the National Highway Traffic Safety Administration, even a moderate dose of marijuana was shown to impair driving performance. The study measured reaction time and how often drivers checked the rearview mirror, side streets, and the relative speed of other vehicles. (National Highway Traffic Safety Administration (NHTSA) Notes. Marijuana and alcohol combined severely impede driving performance. *Annals of Emergency Medicine*. 35:398400, 2000.)

In states like Colorado where outdoor activities are part of the lifestyle, there is tremendous responsibility that participants recognize not only to themselves, but also to those around them. Outdoor activities often times involve inherent risks simply given the nature of the activity itself, which is what makes engaging in them so exciting, rewarding, and memorable to begin with. However, in Colorado, and in other states facing an exponential rise in marijuana use among their populations, we face more and more potential situations where marijuana use results in injuries to both those using marijuana and to those with whom those users come in contact. To the marijuana user, know that engaging in outdoor activities while under the influence of marijuana not only increases the risk of injuring those around you, but also increases the risk of personal injury and can increase the risk of medical care necessary to treat those injuries and adversely impact a healthy recovery from those injuries. To the non-marijuana user, know that there is a potential increase in the already inherent risks of any outdoor activity because those around us may be under the influence of marijuana and may not be adhering to customary and necessary safety rules. To everyone, outdoor activities represent and promote a healthy lifestyle. Respect yourself and look out for those around you so that we all can continue to enjoy those outdoor activities that add so much to our lives.

- Craig A. Sargent Hall & Evans, LLC