Gary L. Wenk Ph. D.
Your Brain on Food

Marijuana For Migraines

Migraine sufferers have few options for reducing their headache pain

Migraine sufferers for relief from their headaches and medications available have unpleasant side-effects that limit their long term usefulness. About twenty years ago a new class of drugs (https://www.psychologytoday.com/basics/psychopharmacology), the triptans, was introduced as an effective and safe alternative treatment. This class of drug works effectively for most patients but must be taken at the first sign of a headache and are often associated with unwanted side-effects such as feeling hot or cold, weak, or "strange" in some way. The strange feelings are often given the term “serotonin syndrome” and also include changes in mental status. These changes in mental status can be quite significant in individuals who carry a genetic vulnerability, such as people with bipolar illness or schizophrenia (https://www.psychologytoday.com/conditions/schizophrenia). The assumption has been that these drugs work by acting upon serotonin receptors leading to a constriction of cerebral blood vessels or by some unknown mechanism(s). This assumption may be incorrect.

One potentially important “unknown mechanism” that was initially published in 1987 described how migraine headaches developed in some people shortly after they abruptly discontinued their long-term marijuana (https://www.psychologytoday.com/conditions/cannabismarijuana) use. The implication was that marijuana was preventing the onset of migraines in vulnerable individuals. In addition, marijuana has long been known to possess analgesic properties. Possibly, the marijuana was somehow masking the pain of the migraines. A recent publication from the University of California, San Francisco, in *The Journal of Neuroscience (https://www.psychologytoday.com/basics/neuroscience)*, has offered a fascinating explanation for why the use of both triptans and marijuana prevent migraine headaches.

Our brain's own endogenous marijuana-like chemicals produce analgesia by modulating the entry of pain signals into the brain at the level of our spinal cord. Future generations of pain relievers will likely be developed based upon the action of marijuana in the body. The advantage of targeting the endogenous marijuana system is that only noxious or painful signals are blocked; normal touch sensation is normal.

This recent study made two significant advances: it confirmed the role of the endogenous marijuana neurotransmitter system as a potential target for treating migraines, and their results suggest that triptans may produce their migraine relief by activating the brain's own endogenous marijuana-like chemicals. This study may lead to the development of more effective migraine prevention and treatment. The challenge will be to find a dose of marijuana that produces pain relief without disturbing normal cognitive (https://www.psychologytoday.com/basics/cognition) function.


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