

MARIJUANA - A MIRACLE PLANT? I THINK SO.

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Hemp plants (a.k.a. cannabis, pot, weed, marijuana, Medical Marijuana = MM) have been in use for a long time. Medical and psychoactive uses have been documented for over 3,000 years. I think that all members of PCSANM are interested in cancer. Cannabis substances, called cannabinoids, can be used in cancer treatment, not to cure, but to slow growth and reduce side effects. Emerging evidence shows cannabinoids (like THC and CBD) can inhibit cancer cell lines in: breast, prostate, colorectal, lung, uterine, gastric, pancreatic tissue, as well as leukemia and various forms of lymphoma. Animal studies with THC have shown tumor shrinkage in: liver, breast, lung, glioma (brain), pituitary, testis, pancreas, and other tumors. NOTE that these are not human studies. THC and CBD are synergistic. A combination of both is better than either one alone. When combined with opioids, the opioid's dosage can be reduced, thus reducing side effects. One study showed cannabinoids equal to opioids for pain relief.

Here is what the National Cancer Institute says: Benefits for people having cancer treatment include antiemetic effects, appetite stimulation, pain relief, and improved sleep. CBD may enhance uptake of cytotoxic drugs (chemo) into malignant cells. Cannabis can inhibit angiogenesis (growth of new blood vessels) and selectively induce apoptosis (programed cell death) in cancer cells, which can slow or even stop the growth of cancer cells. It appears to do this without harming normal cells and even protect them from cell death.

Most PCSANM members are elderly (or like me, really old). We have typical aging physical problems. MM can be used not to cure, but to alleviate symptoms of: general aches and pains, arthritis, asthma (MM is a bronchodilator) autoimmune diseases, like lupus or inflammatory bowel diseases, like Crohn's colitis, high cholesterol, chronic pain, osteoporosis, (MM can enhance bone density) diabetes 1 and 2, dry skin, dystonia (muscle spasm), nocturnal leg spasms, psoriasis, eczema, glaucoma, insomnia, stress, anxiety, depression, morbid obesity, neuropathy, tinnitus, and rheumatic diseases. MM is an appetite stimulant and a cough suppressant. Hemp seed is helpful for digestive problems like constipation, is high in iron, vitamins, and essential amino acids.

Cannabinoid substances which occur naturally in all animals, are called endogenous cannabinoids, shortened, to endocannabinoids, shortened even more to eCBs. They help keep the body in balance (homeostasis). Sometimes, our body does not generate enough of these eCBs for homeostasis. Plant cannabinoids can help put our body back in balance. Amazingly, these eCBs can work forward, or backward across neural synapses. They can excite or calm. They have a smoothing, or dampening effect. Think of eCBs as "Master Regulators" of homeostasis, not only in the brain, but throughout the body. Of over sixty eCBs, the better known are: THC (delta-9 TetraHydroCannabinidiol) and CBD (CannaBiDiol). They can fill molecular receptor proteins like CB1 (identified in 1988) on neural cells. Think of this as though THC or CBD is a key and fits into a keyhole. CB 2, (identified in 1993) receptors are associated with the immune system. CBD appears to have significant analgesic and anti-inflammatory properties. In different forms, cannabis can be smoked, drunk, eaten, inhaled, sprayed, and rubbed into the skin.

The cannabis plant is a member of the Cannabaceae family which, ironically, includes the beer ingredient hops. The main cultivars are indica and sativa. It has over 400 compounds, is non-toxic (except for the root). Ingested doses from 4 to 70 mg are well tolerated. Overdose (usually by inexperienced users) results in great anxiety or sleep, not death. There are downsides to cannabis. About 9% of users become addicted (this is primarily psychological - not physical). Compare this to the addiction rates of these legal drugs: Alcohol = 17%, Opioids = 25%, Nicotine = 32%. A large study has shown there is no link between marijuana use and lung cancer.

The US federal government has severely limited the use of hemp products since 1937. Our states are way ahead of the Feds. New Mexico and 24 other states have legalized Medical Marijuana. WARNING, the definition of what is legal, or not legal, varies greatly. If you possess what is legal and travel to another state, county, or municipality, you might get a hefty fine. Worse yet, end up in the slammer.

The annual costs due to medical care and lost productivity of tobacco is estimated by the American Cancer Society to be \$289 B. Annual deaths due to: tobacco = 400,000, alcohol (direct and indirect) = 115K, legal drugs = 25K, (NSAIDS, part of legal drugs = 7,500), illegal drugs = 17K, and marijuana = ZERO. Over half of people in federal prison are there due to drug offenses, over half of these for marijuana. From 1986 to 1992 the national prison population doubled, mostly due to drug offenses. A one year stay in a federal prison costs \$45,000, more than many colleges. Federal, state, and local governments budget over \$50,000,000 (\$50 B) per year for drug control. If marijuana were legalized, government expenditures could be reduced by \$8 B. If it were taxed like other goods, it would generate \$2.4 B in revenue. If it were taxed similar to tobacco and alcohol, it would generate \$6.2 B.

If MM were legal, there could be significant reductions in: pain, suffering, drug costs, jail costs, and legal costs. Our former governor, Gary Johnson, thinks that MM should be decriminalized, and I agree. This article is my understanding of a complicated subject, any errors are mine.

Sources for this article are:

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A Cancer Support Now conference session entitled: "Uses for Medical Cannabis (or Marijuana) in Pain Management" by Rachael Speegle, RN. She is Director of Operations of The Verdes Foundation, a local cannabis dispensary.