

Physicians' Perspective
Medical Cannabis Update: Smokeless Marijuana
By Dr. Rick Bayer

Oregonians passed the Oregon Medical Marijuana Act (OMMA) in 1998 and will vote this fall to upgrade the OMMA. [Vote Yes on Measure 33, discussed elsewhere this issue.]

Most Americans support medical cannabis (marijuana) and agree patients should not be arrested for using marijuana under medical supervision. Nevertheless, the most criticized aspect of medical marijuana is the smoke. The question is, can patients benefit from cannabis without inhaling smoke and the cancer-causing agents (carcinogens) created when plants combust?

There are no studies showing cannabis smoking causes cancer or emphysema, but cannabis smoke contains measurable carcinogens. We know smoking marijuana can cause irritated airways (bronchitis) with cough and chest pain. The prestigious Institute of Medicine issued a report in 1999 agreeing cannabis is medicine but expressing concern about smoke. The highest risks for long-term cannabis smoking are seen in regular users, including patients.

In the past, if one needed immediate benefit from cannabis to control vomiting, one had to smoke it. Eating cannabis or swallowing FDA-approved Marinol (synthetic THC) requires an hour to work. Smoking works almost immediately and so is attractive to those seeking immediate relief from pain, spasm, nausea, etc.

Fortunately, there is an alternative to smoking cannabis called vaporizing that avoids nearly all carcinogens but offers the rapid relief previously found only by smoking. Cannabis releases medicinal vapors above 140° C (284° F) but doesn't release benzene and other carcinogens until it reaches 200° C (392° F) and will not combust (release smoke) until it reaches 230° C (446° F).

This means if a device gently cooks cannabis at 140° to 190° C (284° to 374° F), one can inhale the herbal medicine in the smokeless vapor without inhaling the carcinogens found in smoke.

Fortunately, smokeless cannabis inhalers are available now. If you know patients who smoke cannabis, make sure they know about vaporizers. At my website www.omma1998.org, link to the medical cannabis bibliography and look under scientific articles online for a detailed discussion of vaporization and vaporizers.

Why don't all patients use them? The primary obstacle is cost, with the best vaporizer being over \$500. Hopefully, as medical cannabis becomes more accepted, relaxation of paraphernalia laws will combine with product demand

to make vaporizers affordable.

Another obstacle is some persons do not tolerate inhaling any medicine. Even asthma inhalers irritate our airways, taste bad, and take practice to use correctly. The vapors from standard medical cannabis are almost entirely botanical/natural THC, which does not cause cancer or emphysema but can irritate airways.

One way to minimize risk of irritation to airways is to ingest cannabis by mouth to control predictable symptoms and inhale vaporized cannabis to control unpredictable symptoms. This would include “breakthrough pain” or pain that occurs in spite of the regular dosing of oral pain medicine. This type of protocol would be consistent with modern pain treatment standards.

Like other dried powdered herbal medicines, one can easily make capsules from cannabis after heating 10 or more minutes at about 100° C or 212° F. The mild heating activates raw cannabis by removing a carbon dioxide molecule. But if one uses too much heat, the medicinal components vaporize. Heat activation occurs during the process of vaporizing, smoking, or cooking cannabis, but for capsules, it’s useful to activate the cannabis before ingestion to make it more potent and digestible.

Even on an empty stomach, oral cannabis takes an hour to work but lasts 4 to 6 hours. The cost of cannabis capsules for most OMMMA patients is pennies compared to synthetic pharmaceutical THC (Marinol) that can cost more than \$20/pill and is without biologically active compounds naturally found in botanical cannabis. One can only hope the ability to grow one’s own medicine will increase access to medicine for Oregonians as the Oregon Health Plan shrinks and drug costs continue to skyrocket.

Treatment of pain or other symptoms in any patient routinely requires adjustments or titration of dose. Cannabis offers an advantage because no lethal overdose exists, which makes it safer than standard pain treatment medicine offered by the pharmaceutical industry. Cannabis represents a legitimate alternative in many treatment situations. If risks of smoking are removed, the risk of cannabis is the same as THC described at www.marinol.com

With harm reduction technology like vaporization, economy of growing one’s own medicine, and no lethal overdose from cannabis; patients and doctors have another tool to ease human suffering.

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