

Getting high & staying healthy

How to Reduce the Health Risks of Smoking Marijuana

by Mark Mathew Braunstein

Mark Mathew Braunstein is the author of the books *Radical Vegetarianism* and *Sprout Garden*, and a frequent contributor to holistic health magazines, including *Natural Health* and *Vegetarian Times*. For the past 12 years, he has served as the poster child for medicinal marijuana in the State of Connecticut, yet remains at large. As a paraplegic who walks with crutches, his marijuana use is medicinal for below the waist, and recreational above. For a free PDF of this article, contact Braunstein at [cannabis.sativa\[at\]sbcglobal.net](mailto:cannabis.sativa[at]sbcglobal.net)

Smoke and Mirrors

All drugs pose risks. Whether medicinal or recreational, whether herbal or pharmaceutical, whether legal or illicit, all drugs pose risks. Four of marijuana's risks are: First, and worst, the threat of arrest; second, greater potential for respiratory illness. Third, possible short-term memory loss, and Fourth—I can't remember the fourth.

Marijuana itself hardly compromises your physical health, and if you suffer from nausea, spasms, chronic pain, or loss of appetite, marijuana actually can be beneficial. But inhaling the smoke of incinerated marijuana can compromise your health. Marijuana is a natural drug, yet smoking it is an unnatural act.

Unnatural compared to what? Pills are unnatural drugs, and swallowing without chewing them is an unnatural act. A night view of a pharmaceutical factory with its fiery furnaces and belching smokestacks looks like a scene portrayed by Dante in his *Inferno*. And those poor folks who live downwind of the factory can attest that pharmaceutical smoke is more harmful than marijuana smoke.

Smoke in any quantity and from any source irritates the respiratory tract. Smoke is the archetypal smoking gun, minus the gun. Smoking is bad news. What's worse, it's not even news. You might willfully ignore the facts about smoking, but you'd only be fooling yourself, because no subterfuge of smoke and mirrors can fool your lungs. While eating broccoli might prevent cancer, smoking broccoli probably can cause it. Eating smoked foods definitely is linked to stomach cancer. Even incense, which fools the nose, fouls the lungs.

Coughs and Colds

Except for the cannabinoids in marijuana and the nicotine in tobacco, the two herbs are quite similar. As smoke, both contain tar and carbon monoxide. In fact, puff for puff, pot smoke contains more of both. As smoke, both can narrow your air passages and thereby reduce lung capacity. As smoke, both can cause chronic coughing and spitting up of phlegm. As smoke, both can cause cellular damage to the lungs, impairing your resistance to infections by fungi and bacteria and viruses, in turn increasing your susceptibility to bacterial pneumonia, viral colds and

flu.

Tobacco smoke is a direct cause of emphysema. But research shows that marijuana smoke does not cause emphysema. Tobacco smoke can cause both acute and chronic bronchitis. Marijuana smoke is more likely to cause acute bronchitis rather than chronic, but both usually can be remedied simply by reducing or temporarily stopping smoking, essentially quitting while you're ahead. Coughing while smoking? Then you've just smoked too much. Coughing after smoking? Then you've been smoking too often.

The most compulsive smoker's dose of pot amounts to the volume of roughly two cigarettes of tobacco a day. Most recreational smokers indulge just once or twice a week, the equivalent of barely two cigarettes a month. What a big tiff over such a little puff! And most medicinal users medicate just once or twice a day. The most indulgent cases can be tallied among glaucoma patients, some who administer the cigarette equivalent of two packs of day. For them, smoking marijuana indeed poses severe respiratory risk.

For the rest of us, however, the dan-▷

Reader advisory:

Reading about cancer could possibly cause you to worry about cancer, and worrying about cancer could possibly cause you to get cancer. So if you already are worried about cancer, please be advised to skip the next two paragraphs.

1) Some medical reports (not studies) link heavy marijuana smoking with risk of mouth, throat, and esophagus cancers, especially for frequent users under 40 years old, an age group among whom such cancers are rare. Some studies do link marijuana smoke with lung damage. While no studies have shown yet a direct link to lung cancer, this could be because as large organs, the lungs require longer and greater exposure to smoke in order to develop sure signs of the disease. Anecdotal evidence does indicate that '60s hippies now in their sixties who do not smoke tobacco, but who still are casual smokers of marijuana, show no higher incidence of lung cancer than their peers who smoke neither.

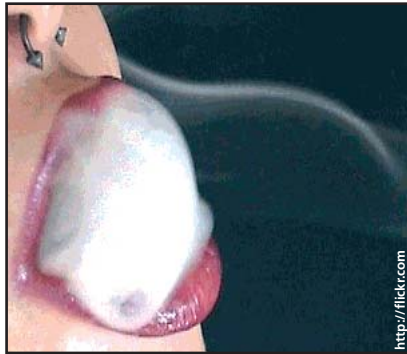
2) Meanwhile, every year 400,000 Americans and 46,000 Canadians die from lung cancers or related diseases attributed to long-term tobacco addiction. Some marijuana users do become addicted psychologically ("I can't enjoy a movie unless I'm stoned!"), but none physically ("I can't go the movies, because I'm not stoned!"). Few ever suffer from an overdose ("I can't go to the movies, because I'm stoned!"), and no one has ever died from an overdose ("I can't go to the movies, because I'm dead!"). No one. Yet every year, 50,000 Americans die from overdosing on alcohol, and 7,000 from overdoses of non-prescription analgesics. Painkillers that kill.

So if you do smoke marijuana, don't worry! Because worrying can cause you more harm than smoking. And while you're at it, relax! Make the very act of smoking ceremonial, similar to yoga and meditation, and thereby instill 15 or 20 minutes of calm into an otherwise stressful day. So among your daily average of 25,000 breaths of air, do not worry about 25 tokes of smoke.

gers of perpetually breathing city smog (cough!) every minute (asthma!) of every day (emphysema!) pose greater health risks than does smoking marijuana. Still, some safeguards can further minimize marijuana's risks.

Potency and Purity: Don't Hold Your Breath!

Trying to smoke marijuana without the actual use of marijuana may be legal and healthful, but produces predictably disappointing results. So let's first discuss the marijuana.



POTENCY

To reduce lung irritation, simply **reduce smoke inhalation**. Such a simple equation seems self-evident. So sift out low- to no-potency twigs and seeds. Brew the twigs into teas. Grow the seeds into weeds. (Do separate the THC-rich thin, green, fuzzy, outermost skin from its seed.) And remove any small stones. Numerous studies have proven that stones contain no THC, so stones do not get you stoned.

When given the choice, **choose bud over leaf**. Leaf averages only 1 to 2 per cent THC, bud averages 3 to 5 per cent. Some more potent strains of unfertilized female bud (known as sensimilla) traditionally had reached 10 to 11 per cent, but recently improved methods of hybridization have produced strains with increased scores. And driven indoors courtesy of the War on Some Drugs, home cultivators have installed intensive

lighting systems that extend "daylight" hours and lengthen growing seasons. Recent strains grown indoors are rumored to max out at 22 per cent ... and still counting!



Everyone talks about such **highly potent strains**, but same as for ghosts and gods, few of us ever see them. Many of us see a lot of leaf, so use the leaf for cooking, and save the bud for smoking. The health equation is obvious. The more potent your smoke, the less you'll toke. High power flower medicates you to the same level, or elevates you to the same peak, but with less huffing and puffing. Sensemilla makes sense to me-a, and should make sense to you-a too.

Hashish does usually fulfill the goal of a more potent puff, but comes with several caveats that effectively eliminate it from consideration as a more healthful drug. As a concentration of the resin, hashish lacks the other constituents found in the fibrous portions of the bud that contribute to the total marijuana experience. Thus both its medicinal and its recreational effects are quite different from marijuana when consumed whole. It too easily allows an overly eager consumer to pass beyond the stage of feeling pleasurable high and instead to descend into the stage of feeling uncomfortably drugged. The resin rarely is unadulterated, but is pressed together with binders that possibly contain contaminants. You never really know what you're getting, and when you finally put that in your pipe and smoke it, higher and harsher temperatures are required for combustion of hashish

than for marijuana when smoked whole.

So back to good ol' marijuana. Store your prized herbal medication in such a way as to assure it retains its potency. If purchased, the herb probably came packaged in a plastic zipper-type food storage bag. That is only a first line of defense. Such bags are waterproof, but not airtight, else its sweet aroma would not penetrate beyond the bag. Place that bag inside another, this second one an "oven bag," marketed for roasting dead meat inside an oven. Such bags indeed are airtight.



<http://isyourworldflat.blogspot.com>

Bags hardly protect the delicate herb from being crushed, however, so place the double-bag inside a rigid and airtight container such as glass or Tupperware-type plastic. Keep the bud whole to keep it fresh and thereby retain its potency. Next, store the rigid container in a cool, dark place. Refrigerators are fine, and freezers are better. Kept frozen, herbs lose little potency. But be advised that fridges and freezers often are the first and second places where cops and thieves search to confiscate or steal your stash. So here you should be both imaginative and inventive, and with one extra precaution.

Do not store your stash in an area of your home, for instance an unfinished attic or cellar, that in the coldest winter months is exposed to night and day temperature fluctuations sufficient to freeze and thaw, and refreeze and re-thaw. Such extreme fluctuations cause herbs to crumble, with a similar consequent

loss of potency as from being crushed. Just look at the effect of seesaw freeze and thaw on asphalt roads when water and ice are added to the mix. In this context, pot holes are quite the opposite of whole pot.



<http://lexoticanimallover.com>

PURITY

If given the choice, **go organic**. Compared to a melon or a mango fertilized with chemicals, sprayed with pesticides, and preserved with fungicides, an organically-grown fruit should taste better, and usually does. Ditto for organically-grown marijuana. Chemical fertilizers such as ammonium nitrate, the active ingredient of the Oklahoma City bomb, can truly blow your mind.

Be especially vigilant for pesticides. Marijuana is a costly crop to risk loss to insects, so some gardeners insure against losses with heavy doses of insecticides. Is your marijuana on drugs? Until you can send a sample of your stash to a test lab, conduct some crude drug testing at home. Crush a raw bud between your fingers. Its aroma should conjure images of the verdant rainforests of Hawaii or British Columbia, not the petrochemical refineries of New Jersey or Montreal East. Its aroma should almost "taste" good. Still, the proof is in the puffing.

The varying aromas of the smoke from different strains is subtle, and smoke from any source tends to numb nasal passages. So don't expect to smell it while you're smoking. Instead, trust your throat and your head. If just a little puff causes you to cough, or if a little too much gives you a headache, don't blame

the herb, blame the chemicals. And here should be emphasized health safeguards regarding the actual act of inhaling smoke. Breathe deeply if you want, but do not hold that breath. Once the delicate membranes of the cilia of your lungs are coated by the air and smoke, no amount of holding your breath will provide any greater effect. Instead, it only further irritates your lungs. Cannabinoids are fat-soluble and so are quickly absorbed through the lungs. Tars, however, are not fat-soluble, and are absorbed more slowly. So take it easy, and breathe easily. Don't hold your breath!

Scientific studies have proven that holding your breath is a waste of time and a useless gesture.



ROLLING PAPERS

Taking an Active Roll

Commissioned by the high commander in America's losing War on some Drugs, the Institute of Medicine's (IOM) 1999 report on medicinal marijuana surprised proponents of the herbal remedy by its accuracy and advocacy. The IOM study, however, cautions on page 126 that, "**As a cannabinoid drug delivery system, marijuana cigarettes are not ideal.**"

Rolling papers both hold the marijuana (as does a car's fuel tank) and hold back its combustion (as does a car's carburetor). **The thinner the joint (the cigarette), the more room to breathe.** But two thin joints compared to one thick require two sheets of rolling paper rather than one ▶

sheet. With practice, one sheet can get you rolling. Papers, however, offer no psychoactive nor medicinal effect. Even a single sheet needlessly adds to the toxic load, especially of tar. So trim the two corners facing you where you start rolling, and in two ways, you will be cutting corners.

In a study funded jointly by the Multidisciplinary Association for Psychedelic Studies (MAPS) and the California chapter of the National Organization for the Reform of Marijuana Laws (NORML) and reported in 1996 by Dale Gieringer, Ph.D., preliminary research showed that the marijuana in the roach end (the butt) filters out tars streaming from the marijuana in the ember end, and does so more effectively than does a water pipe. So far so good. But the study failed to take into account that such good news turns bad when eventually you smoke the roach down for all that it's worth.

The joint study also noted the benefits of a joint in its being air-cooled on all sides, as rolling paper serves to aerate the smoke before it reaches your mouth. Although rolling paper made from hemp was not yet available in the mid-1990s and so not tested, this explains today why hemp is a troublesome rolling paper. Compared to traditional fibers for rolling papers, hemp is much thicker and less porous. Joints made with hemp rolling paper snuff out easily, thus requiring multiple ignitions. So save hemp for writing paper for your letters to legislators in advocacy of the re-legalization of marijuana, and **resort to the more traditional fibers for rolling papers.** Cotton and rice, and tree-pulp are nice.

Just as most joints start out smaller than tobacco cigarettes, most roaches end up shorter than cigarette butts. Thus the burning ember of marijuana dangles perilously close to your fingertips and to your lips. Burns are not conducive to good health. Filter tips can safeguard

against such a health hazard, as well as filter out much tar and most ash. Unfortunately, they also filter out some cannabinoids. You end up smoking more, thereby canceling out the benefit of the filter tip.



Filter tips minus the filters are called **smoking tips** and do serve to prevent burns. Smoking tips are quite popular in Europe. While smoking tips are commercially available, smokers generally roll their own from strips of thin non-corrugated cardboard, such as found in the outer packaging for near-at-hand rolling papers and matchbooks, or from heavy stock paper such as for file cards. Trim a piece to the width of a cigarette filter and to a length maybe three times its width. Next, roll it into a coil, as for sushi. Apply pressure with your fingertips to retain the smoking tip's coil shape. Moistening it with the tip of your tongue can help to keep it coiled. Then place it into the rolling paper, before rolling, at one end which will be the mouthpiece. This traps a bit of tar and ash, and becomes the leftover roach that you trash when done, sparing you the expense of discarding marijuana.

A sort of exterior smoking tip that you do not discard with each joint is the long, slender cigarette holder, similar to pipe stems. But inserting your joint into a holder is like holding up your pants with both suspenders and a belt. You might as well omit the paper and use only a pipe.



PIPE
More than Pipe Dreams

Smoke, by character, is hot and dry.

Smoke dries out your mouth and throat, making you more susceptible to colds and flu. Desiccated air from indoor heating, which dries out your nasal passage, mouth and throat, contributes to the higher incidence of such diseases in winter. **A pipe, especially its stem, cools down the smoke** before it reaches your mouth. The longer, the cooler. The bowl and the stem trap tar, which condensates along their walls. Especially when you keep the mouthpiece elevated above the level of the bowl, the sticky tar in turn traps some ash. Scrape off this tar regularly, not just when your pipe becomes clogged. An additional benefit of a long stem is less smoke in your eyes or embers on your lap.

Arm's length is long enough a stem for anyone to handle. The long stem should be segmented for efficient cleaning and convenient storage. You can piece together long stems from several metal segments available piecemeal from most smoke shops. But metal imparts an unpleasing metallic taste to the smoke and is heavy to lug. Wood, a natural fiber, imparts an agreeable aroma, and is lightweight. Despite a diversity of pipes sold in smoke shops or from the pages of this magazine, segmented long-stemmed wood pipes are rare finds. Asian Indian import stores often stock them. Or try some musical improvisations. Try taping closed the finger holes and inserting a bowl at the end of an inexpensive wooden flute. Or perhaps try drilling and carving one yourself. Two drumsticks, hollowed out and joined together, will attune you to a different drummer.

Here it should be noted that when you engage in the unhygienic act of sharing a joint, pipe or vaporizer with friends, you also share some fresh saliva if someone is sloppy about it. Saliva can harbor bacteria and viruses that transmit a host of contagious diseases, plus is just gross. In this situation, the notion of sharing should be discredited. In other words, don't pass that joint!

Instead, pass around a segmented pipe, having distributed the segments to your circle of friends. Everyone shares the same bowl, but participants smoke from their individual segments applied to the communal bowl when it comes their way. Think hookahs with one single bowl but several tubular stems.

Pipes on the commercial market are made of glass, wood, corn cob, metal, stone, and ceramic. Fragile glass can break and shatter, and cuts are not conducive to good health—and people who live in glass houses should never get stoned. Wood, especially hardwood, is ideal for stems, but not for bowls, at least initially, because wood burns. Wood thus requires an initiation ceremony in which an empty bowl is puffed upon but not inhaled. Where there's fire, there's smoke.

Corn cob burns way too easily. Sometimes its outer shell, coated with varnish, is flammable and can ignite along the rim of the bowl. Corn cob's low cost lends itself to throwaway one-time use when you travel, but its first use can be its worst.

Metal bowls are non-flammable. Smoke shops sell them piecemeal the same as metal stems. Take care because metal conducts heat, which can burn your fingers, and burns are not conducive to good health. The safest bowls are inert ceramic or stone-dead stone. Smoke shops stock soapstone and sandstone pipes, but with short stems. So construct a hybrid of your own of long segmented wood stem, and stone or ceramic small bowl. The traditional Moroccan sebsi with its long wooden single segment stem and small clay bowl

exemplifies this. Heads up, head shops! Are you listening?



WATERPIPES The Big Bong Theory

As a teenager, you very likely started smoking marijuana when still living at home with your parents. Even if your parents were tolerant enough about teenage drug use to not chastise you for your many youthful indiscretions, prudence dictated that you hide your stash anyway. Part of your hidden treasure probably included a pack or two of rolling papers and maybe, just maybe, a pocket pipe made of soapstone or metal or wood.

Upon leaving home for your first full-time job or for your freshman year in college, part of your rite of passage probably included the acquisition of your first bong for your new pad or your new dorm room. Of course, the smoke shop from which you purchased it could probably not call it a bong, but simply a waterpipe, as the proprietor could not condone its use for anything but tobacco. Wink, wink.

Your new waterpipe, in addition to the bragging rights it bestowed upon you, enabled you to indulge in some serious smoking, because now you were being kind to your lungs, oh joy. The water cooled and moistened the otherwise hot and dry smoke. And the water even purified the smoke, trapping much of the ash, some of the tar, and other untold contaminants. Just hearing the bubbling effect was reassuring to your ears. And just smelling that malodorous water was reassuring to

your ego when you were done and dumped it down the drain and rinsed out your waterpipe. Gosh, that stink in the sink was bad enough to make you want to never smoke again, or anyway never smoke with anything but your trusty waterpipe. With its use, you were doing your lungs a big favor. Or so you assumed.

Turns out your assumptions were only partly correct.

Yes, waterpipes are cool. Waterpipes do cool the smoke, but do not moisten it. Long-stemmed pipes also cool it, and also do not moisten it. But you never expected your long-stemmed pipe to moisten the smoke because after all it has no water. The power of suggestion is strong, especially to impressionable young minds. The water in the bong tends to make people believe that the smoke bubbles gathered some moisture along its route from the small bowl to the big mouth. However, chemical analysis of the smoke exiting the waterpipe proves otherwise. The mere presence of water does not necessarily impart any steam.

Although smoke bubbles gain no moisture from the water, the water does trap from the smoke bubbles a goodly amount of bad substances, namely most particulate matter (ash), some water-soluble toxins such as hydrogen, cyanide and hydrocarbons, and some tar. Usually you filled your waterpipe with cold water, right? Cold water cools the smoke, this is true. But according to Lester Grinspoon, MD, PhD, professor emeritus of Harvard University Medical School and author of the two seminal books *Marijuana Reconsidered* and *Marijuana: The Forbidden Medicine*, hot water better traps the tar. A dual-chambered water pipe would be ideal, with the first chamber filled with hot water, and the second chamber with cold. Of course, most waterpipes provide only one chamber, so here's a hot tip! Fill your single-chamber waterpipe with hot water, not cold.




Until the MAPS/NORML study cited earlier, almost all research upon waterpipes was conducted with tobacco, not with marijuana. The MAPS/NORML study was conducted with marijuana and found that waterpipes filter out proportionately more psychoactive THC than tar, which is more THC than anyone had previously suspected. As a result, waterpipe users end up smoking more, and therefore more tars—not fewer—to reach the desired effect. Any potential benefit of using a waterpipe is thereby cancelled out.

The study results surely are disappointing to waterpipe smokers who prefer the milder smoke and who had assumed it also was more healthful. But wait! All is not lost. To replace your waterpipes, you can resort to the latest generation of vaporizers.



VAPORIZERS Don't Go Up in Smoke

So-called vaporizers do not create true vapor, but instead produce smolder. The words smolder and smolderizer do lack marketing appeal, so manufacturers adapted the word vaporizer, previously associated solely with a device that emits steam vapor into the room of a convalescent ailing from a respiratory illness. The smoldering type of vaporizer is surrounded by much hype, smoke and mirrors, though maybe without the smoke.

Paper  from tree pulp burns at temperatures 451°F and above, hence the title of Ray Bradbury's Fahrenheit 451, a novel about firemen who burned books. Cannabis

burns at temperatures above 460°F (238°C). But cannabis volatilizes at temperatures between 266°F and 446°F (130°C and 230°C). Vaporizers volatilize the herb, rather than burn it, so such devices very well could have been called volatilizers, and to Webster's satisfaction. But the misnomer vaporizer is here to stay.

The first generation of marijuana vaporizers marketed during the early 1990s were primitive and ineffective. In other words, they sucked. And in order to keep them lit, you sucked too. Some were short stubs of soldering irons stuck with toxic glues to ceramic bases, or seemed simply to be inverted car cigarette lighters. To the irritation of impatient patients, the herb took many lengthy minutes to begin to volatilize. Vaporizer? More like, evaporator.

Once the herb finally began to volatilize, it promptly snuffed out unless you kept at it, nearly hyperventilating, making inhalation a real workout. Some models emitted foul odors, and the medicinal and psychoactive effects proved elusive and disappointing. Their promise for lowered health risk was realized only because you abandoned them in frustration. No use, no risk.

Most of us who tried those early models became unreceptive to any future advancements. Yet advanced they have. Now in the new millennium, second generation late model vaporizers offer features such as adjustable temperature control, automatic shutoff when temperature exceeds a predetermined limit and battery-powered operation. Other models come with strings attached, the power cords. And all these models come with hefty price tags attached.

Manufacturers claim, and user testimonies for specific models seem to confirm, that smolder delivers the cannabinoids much more efficiently than does smoke. In theory, you need less herb for the same effect and, after extended use, will be com-

pensated for the initial cost of the vaporizer. The right models potentially save you money, and, more importantly, save your lungs. Their main selling point is this: puff for puff, **smolder is considered less harmful than smoke.**

Depending upon the brand of vaporizer, upon analysis the cannabis smolder might contain as much as 90% cannabinoids. That means none of the tar or noxious gases such as benzene, toluene, and naphthalene, far less carbon monoxide, and a scant percentage of a few other unwelcome components that otherwise are found in cannabis smoke. THC is the crucial cannabinoid upon which cannabis' psychoactive effects most depend, but most models of vaporizers deliver an unusually low proportion of the available THC. Most models instead deliver unusually high proportions of the available cannabitol (CBN) and cannabidiol (CBD), upon which cannabis' medicinal effects most depend. **Thus most vaporizers are more useful to pot patients,** but less appropriate for potheads.

It's much a question of brand of vaporizer. Just as the effects of the same sample of herb when smoldered may differ than when burned, it also may differ from one vaporizer to another, and may even differ from the same vaporizer when adjusted to two different temperatures. While many marijuana users still state a clear preference for the effects of smoke compared to smolder, regardless of the model used, advocates for vaporizers suggest that such smokers simply have tried the wrong models.

So which are the right models most likely to deliver the cleanest toke in town? It's wise to discount review articles in magazines in which the product reviewed is also advertised. That's a valid admonition whether the product is a digital camera, a hybrid car, a bar of soap, or a lump of coal. As yet, Consumer Reports has not tested and rated the many models of vaporizers currently on ▶

the market, nor is it likely to do so anytime soon. Nor has this author. The best advice? Try before you buy. Find a friend who has one with which he or she is satisfied. In order to compare its results from vaporizing, you must provide the herb whose attributes you already know from smoking. Among many variables, this much is certain: neither smoke nor smolder belongs in human lungs. Surely even the best of vaporizers still pose some risks.

A great leap forward in technology beyond vaporizers is found in an oral misting device being brought to market by GW Pharmaceuticals (gwpharm.com – be sure to view the obscure sub-sub-menus under the heading Research and Development). They call their spritzer a nebulizer, which delivers their cannabis extract called Sativex. Both names might alert us to some of the hocus-pocus surrounding vaporizers. But unlike some vaporizers, GW's Sativex nebulizer actually works. The spray is directed under the tongue, and effects are noted within three minutes, same as for smoke. Sativex already is available by prescription to cancer and MS patients in Canada. Hey, FDA of the USA, do you hear that?

But here's the catch, or two catches. Sativex is predominantly an extract of cannabidiol (CBD), with only enough THC included in order to moderate the sedative properties of CBD. Sativex consequently is of little value to recreational users, who well may wonder, what is GW doing with all of its surplus THC? Furthermore, Sativex is "standardized in composition, formulation, and dose," is administered from a non-refillable mechanical device, and is medically prescribed, so involves doctors, pharmacists, health insurers, and government administrators. All this comes with a big price tag. Dose for dose, Sativex costs more than black market marijuana. If you grow your own and compare the cost effectiveness of whole cannabis to Sativex extract, Sativex can't hold a candle to marijuana.



LIGHTERS, MATCHES, CANDLES AND SCREENS

Light Pollution

No scientific study sheds any light upon the health hazards of lighters and matches. Still, the noxious fumes of these ignition systems inform us that it is a safe assumption that they are unsafe. The aforementioned reported cases of mouth and throat cancers potentially were caused by the incendiary devices instead of or in addition to the marijuana. Research someday may prove this hypothesis. But what government agency might fund such research?

Lighters fueled by petroleum distillates are subminiature flamethrowers that belong in a soldier's armory, not in your pocket, purse, or face. **Your first toke, when you suck in the fumes from the combustion of butane, surely is more harmful than the rest of the joint or bowl.** Lighten your toxic load, and discard that lighter.

Matches are potentially safer. In theory, you can wait for the enflamed sulfur-tip to burn out before you hold the match to your med. In practice, however, that toxic-tip still glows even as the shaft nearly burns your fingertips. Beware that first toke! Even if you patiently wait for that sulfur-tip to burn out, because you are nearby you still potentially inhale it as second-hand smoke. So while waiting for that match to burn down, hold it away from your face. Indeed, because hot air rises, hold it above your head.

A pipe can multiply the problem. Smoked leisurely, and especially during solo sessions, marijuana snuffs out frequently, requiring several light ups per bowl. That's toxic buildup. So here's a tip about sulfur-tip

matches: avoid them! Use just one, not to light your pipe, not to curse the night, but to light a candle.

Candles are true drug paraffin-alia! Light a candle, stoke up a toothpick in its flame, and **to toke up your pipe use the burning toothpick, not the candle, not the match. No sulfur-tips in your face, nor in your lungs.** Wood, a natural fiber, again to the rescue. Thin flat toothpicks burn truer than thicker round ones. Regarding the candle itself, as yet no



craftsuppliesforless.com

study exists comparing differences in the fumes between candles made from beeswax or from paraffin. We do know that paraffin is a petroleum distillate, so it's a safe assumption that beeswax is safer. Also, no study exists comparing candles containing scents and dyes with those containing none and those made from animal fats with those made from vegetable oils. We do know that practitioners of Wicca prefer vegetable oil-based candles in order to avoid the tortured spirits of factory-farmed animals. Similarly, adherents to Kosher dietary laws prefer vegetable oil-based too, and candles intended for observance of the Sabbath are even labeled Kosher.

Screens should never be made from aluminum foil punctured with pinholes. After just one use, the foil disintegrates as though into thin air. Where did it go? Your lungs. Screens instead should be made from other more durable metals such as brass or non-galvanized steel. Circular screens sold in smoke shops come in various diameters and in meshes of various densities. But beware a thin layer of an added ingredient that coats the metal which goes unmen- ▷

tioned. That coating consists of plastic, which is applied to afford a grip to the sharp blade that cuts the circles. For this reason, first toast your screen over your candle before inserting it into the bowl of your pipe. If asked about what you are doing, just say you are screening for drugs.



THE AFTER-SMOKE DINNER

Some smokers consider “a good cigar” a final part of their meal to savor after dessert, the “after-dinner smoke.” **A more beneficial arrangement would be the after-smoke dinner.** Include in your diet ample servings of fresh fruits and vegetables. Fruits should be consumed only raw, and vegetables preferably raw. Such raw foods are rich in antioxidants that are known to neutralize the damage to our bodies caused by free radicals. Free radicals are present in air pollution, radiation, and of course smoke. All smoke, any smoke. Antioxidants and an array of other health-protecting plant-based nutrients not only can prevent lung damage, but also can reverse it. From among fruits, be sure to include berries, especially blueberries, credited as the most potent source of antioxidants among all fruits. From among veggies, lean toward the family of cruciferous vegetables (also called brassicas, or Coles) such as cabbage (Cole slaw), broccoli, cauliflower, and the array of dark leafy greens, notably collards and kales.

If you smoke almost daily and do not always eat a wholesome diet, then you might consider taking nutritional supplements, though bitter pills to swallow. Two common combinations are especially warranted: a **vitamin B-complex, and vitamins A-C-E.** These are the skin vitamins, and the lungs are skin turned

outside-in. An undervalued nutrient is ever-important water. Find fresh, clear water from springs, well, or rain, and if flavored at all, flavored only by nature. Fruit and vegetable juices are fruits and vegetables, not water. Milk, coffee, tea and booze are beverages, not water. **Drink water daily, and drink your water straight.** Undiluted water. Once you “develop a taste” for water, you will learn to appreciate water as the Planet Earth’s milk. As you sip, you are suckling at the breast of Mother Nature. If you are fully hydrated, your respiratory tract will remain moist and your excreted mucus thin, despite smoking.



And drink especially after smoking, when moisture in the mouth and throat need to be replenished. A dry mouth and throat increase susceptibility to tooth decay and gum disease. Look at the teeth of meth and crack addicts, if you dare, and if they have any teeth left to look at. After smoking, in addition to or instead of drinking water, try chewing on a dark green leafy vegetable. If you are outdoors, pluck a leaf from a nearby bush or a blade of grass from a nearby lawn. Whatever the leaf or blade, its chlorophyll is a powerful cleanser and breath freshener. A sprig of parsley decorates any dinner plate, but its real function is to cleanse the palette, especially after a dish containing garlic. No vegetation nearby? Oh yes there is. What do you think you’ve been smoking? Rather than discard it, chew on that twig you earlier sifted out from the leaf

and bud. And if your batch at hand contains an overabundance of leaf, chew on that.

CONCLUSION

And chew on this. Marijuana is a gateway drug. It is a gateway to courtrooms and jail cells. But when marijuana is fully re-legalized for both medicinal and recreational use, we no longer will be threatened by this. Smoking marijuana surely has much to commend when compared to smoking tobacco or drinking alcohol or popping pills. But smoking marijuana has less to commend when compared to breathing fresh air.

Not smoking is better than smoking. But if light up you must, then follow some precautions to assure your good health, and you’ll also lighten up. Don’t get caught, and don’t get coughs. ■

BIBLIOGRAPHY

Nicholas V. COZZI, Ph.D., “Effects on Water Filtration on Marijuana Smoke: A Literature Review,” *Newsletter of the Multidisciplinary Association for Psychedelic Studies (MAPS)*, 1993, Volume 4 Number 2. This 3 page summary of previous studies, with 10 citations, is itself very widely cited. It is reprinted several places on the web, one at: <http://www.ukcia.org/research/EffectsOfWaterFiltrationOnMarijuanaSmoke.html>

Mitch EARLEYWINE, M.D., *Understanding Marijuana: A New Look at the Scientific Evidence*, 2002, Oxford University Press, Chapter 7, “Marijuana’s Health Effects – The Pulmonary System,” pages 154-158. This objective and insightful book should be read by everyone on both sides of the chasm who engage in the debate about marijuana.

Dale GIERINGER, Ph.D., coordinator of California NORML, has written seminal research articles about both the health benefits of medicinal marijuana and the health hazards of smoking it. • *Health Tips for Marijuana Smokers*, revised 1994, published by California NORML, is a 35 page anthology of several articles by Gieringer, most of them previously published elsewhere. • “Marijuana Water Pipe and Vaporizer Study,” *Newsletter of the Multidisciplinary Association for Psychedelic Studies (MAPS)*, Summer 1996, Volume 6 Number 3. This 5 page report of research funded by MAPS & California NORML challenges many popularly held assumptions, but the research now is outdated, as testing needs to be applied to the latest generation of vaporizers. Reprinted on the web at: <http://www.ukcia.org/research/pipes.htm>

Donald P. TASHKIN, M.D., and his colleagues at UCLA School of Medicine have conducted extensive research and published many papers on the effects of marijuana smoke on the lungs. • “The Effects of Marijuana Smoke,” a noteworthy summary in a single 3 page article of all their research until 1994 was compiled in 1995 by DrugScience.org. That summary is reprinted on the web at: <http://www.drugscience.org/Petition/C2B.html> • “The effects of marijuana on the lung and its immune defenses” a 20 page article with 49 citations to other studies related to tobacco and marijuana smoke was published in 1997 and is reprinted on the web at: <http://www.ukcia.org/research/EffectsOfMarijuanaOnLungAndImmuneDefenses.html>

J.P. ZACNY and L.D. Chait of the Pritzker School of Medicine at the University of Chicago have conducted much research about marijuana, with two studies showing that holding one’s breath is ineffective in increasing the desired effects of marijuana smoke. • “Breathhold duration and response to marijuana smoke,” in *Pharmacology, Biochemistry and Behavior*, 1989, volume 33, pages 481-484. A summary is posted on the web at: <http://www.ophsource.org/periodicals/ophtha/medline/record/MDLN.202792> • J.P. ZACNY and L.D. Chait, “Response to marijuana as a function of potency and breathhold duration,” in *Psychopharmacology*, 1991, volume 103, pages 223-226. A summary is posted on the web at: <http://www.ophsource.org/periodicals/ophtha/medline/record/MDLN.2554344>

Lynn ZIMMER, Ph.D. and John P. Morgan, M.D., *Marijuana Myths, Marijuana Facts: A Review of the Scientific Literature*, 1997, The Lindesmith Center, Chapter 15, “Marijuana Smoking and the Lungs,” pages 112-116. A short book which says it all.

Publisher/ Editor in Chief
Marco Renda
weedmaster@treatingyourself.com

Assistant to Editor
Jef Tek
jeftek@treatingyourself.com

Copy Editor
Aendrew Rininsland
submit@treatingyourself.com

Magazine design & layout
Ivan Art
ivan@treatingyourself.com

Director of Sales & Marketing
Michelle Rainey
Michelle.rainey@treatingyourself.com

Technical Writer
Ally a.k.a Pflöver
ally@treatingyourself.com

Krysanja
krysanja@treatingyourself.com

Q&A Advisor
Shantibaba
shantibaba@treatingyourself.com

Recipe Guru Chef Uni
chefuni@treatingyourself.com

Text & photography Contributors
Jef Tek, Subcool, MzJill, Eddy Lepp, Pflöver, IvanArt, D.A.MD., Gerald Bosacker, Zardo, Chef Uni, Shiva, Krysanja, Carrie, Shantibaba, Jeremy Norrie, Joe Shmoe, Wendel Grant, Leonard Peltier, Slips, Soma, Sammet, Ackola, Neutrino99, Pydepiper, Brian Long, Michael Knodt, Storm Crow, Aaron Cox, moose, Mullaway, John Rolling Thunder, Russell Barth, Pim & Silly, Cheryl Herbalicious, Gregorio Fernandez "Goyo", Edward Kelly, Sauron The Blue, Mark Braunstein, Mark Heinrich, Jay Generation, Aendrew Rininsland, Bill Durban, Dr.Dog, Marco Renda, Lawrence Berry Jr., Terry Mosher

Cover Pic
Jef Tek

Submissions
submit@treatingyourself.com

Treating Yourself
250 The East Mall,
P.O. Box 36531
Etobicoke, Ontario
M9B 3Y8 Canada
T: + 416 620 1951
F: +416 620 0698

Printed in Canada

Treating Yourself magazine and treatingyourself.com were created to provide adults with information to assist them in their responsible use of medical marijuana.



Subscribe online now:
www.treatingyourself.com

Subscription Prices
1 year subscription for USA & Canada
\$45.00 USD
1 year subscription International
\$75.00 USD

Mail your subscriptions to:
Treating Yourself
250 The East Mall
P.O. Box 36531
Etobicoke, Ontario
M9B 3Y8
Canada



Contact us:
(416) 620 1951 Mon - Fri 8am - 8pm (Eastern)
(416) 620 0698 Fax