

THIS PRIMER WAS PREPARED BY THE **SEATTLE CANNABIS ASSOCIATION** [SCA] AND THE **SEATTLE CANNABIS RESEARCH ALLIANCE** AS EDUCATIONAL INFORMATION FOR SCA MEMBERS, THEIR PATIENTS AND THOSE “STAKEHOLDERS” INVOLVED IN UNDERSTANDING AND INTERACTING WITHIN SEATTLE’S CANNABIS COMMUNITY.

QUESTIONS WE IN THE SEATTLE CANNABIS COMMUNITY...SHOULD BE ASKING AND ANSWERING ARE:

CANNABIS BUSINESS PROVIDERS [COLLECTIVES, CO-OP’S, PATIENT NETWORKS ETC]

- ARE THE PRODUCTS AND SERVICES I AM PROVIDING TO PATIENTS SAFE, ESPECIALLY FOR PATIENTS WITH DEBILITATING OR TERMINAL MEDICAL CONDITIONS?
- ARE THE PRODUCTS AND SERVICES I AM PROVIDING ROUTINELY TESTED FOR QUALITY AND POTENCY? IF SO BY WHOM?

CANNABIS BUSINESS GROWER SUPPLIERS

- ARE THE PRODUCTS I AM SUPPLYING SAFE AND CULTIVATED ACCORDING TO ESTABLISHED INDUSTRY OR COMMUNITY BASED STANDARDS?

SEATTLE’S CANNABIS MEDICAL PATIENTS

THREE THINGS EVERY CANNABIS PATIENT SHOULD ASK THEIR DESIGNATED PROVIDER:

- WHAT IS MY TREATMENT PLAN? [I.E. WHAT CANNABIS STRAINS ARE RECOMMENDED FOR MY MEDICAL CONDITION AND WHY?, HOW WILL A PARTICULAR STRAIN’S POTENCY AND DOSAGES EFFECT ME?]
- WHAT IS THE PREFERRED DELIVERY METHOD? [I.E. WHAT IS THE MOST EFFECTIVE DELIVERY METHOD IN TREATING MY ILLNESS? INHALE, INGEST AND/OR TOPICAL APPLICATION METHODS BASED UPON MY SYMPTOMS]
- WHAT TYPE OF TEST HAVE BEEN CONDUCTED TO VERIFY OR CERTIFY STRAIN QUALITY AND POTENCY AND ENSURE MY MEDICINE IS SAFE?

[I.E. HAS THE CANNABIS STRAIN BEEN TESTED TO VERIFY/CERTIFY POTENCY?]

We at SCA believe “every medical cannabis patient and stakeholder has a right to know” the answers to these basic questions. That is why every SCA Member can answer these questions confidently. SCA Member answers to these questions:

CANNABIS BUSINESS PROVIDERS [COLLECTIVES, CO-OP’S, PATIENT NETWORKS ETC]

- **ARE THE PRODUCTS AND SERVICES I AM PROVIDING TO PATIENTS SAFE, ESPECIALLY FOR PATIENTS WITH DEBILITATING OR TERMINAL MEDICAL CONDITIONS?**

SCA MEMBER ANSWER: YES, OUR PRODUCTS ARE INSPECTED AND TESTED TO ENSURE THEY ARE SAFE AND APPROPRIATE FOR THOSE WITH DEBILITATING OR TERMINAL MEDICAL CONDITIONS.

- **ARE THE PRODUCTS AND SERVICES I AM PROVIDING ROUTINELY TESTED FOR QUALITY AND POTENCY? IF SO BY WHOM?**

SCA MEMBER ANSWER: YES, OUR PRODUCTS ARE ROUTINELY TESTED BY SCA A THIRD PARTY INDEPENDENT NON-CONFLICTING PATIENT SAFETY ORGANIZATION WHOSE TESTING SERVICES INCLUDE A QUALITY CONTROL PROCESS AND A SCIENTIFIC CANNABINOID ANALYSIS FOR CANNABIS POTENCY TESTING. FURTHER, SCA COORDINATES THEIR TESTING ACTIVITIES WITH: WASHINGTON STATE DEPARTMENT OF HEALTH [DOH], WASHINGTON STATE DEPARTMENT OF AGRICULTURE [WSDA] AND THE CITY OF SEATTLE.

CANNABIS BUSINESS GROWER SUPPLIERS

- **ARE THE PRODUCTS I AM SUPPLYING SAFE AND CULTIVATED ACCORDING TO ESTABLISHED INDUSTRY OR COMMUNITY BASED STANDARDS?**

SCA MEMBER ANSWER: YES, OUR PRODUCTS ARE SAFE. OUR CULTIVATION METHODS ADHERE TO ACCEPTED COMMUNITY QUALITY AND SAFETY BASED STANDARDS.

SEATTLE’S CANNABIS MEDICAL PATIENTS

THREE THINGS EVERY CANNABIS PATIENT SHOULD ASK THEIR DESIGNATED PROVIDER:

- **WHAT IS MY TREATMENT PLAN? [I.E. WHAT CANNABIS STRAINS ARE RECOMMENDED FOR MY MEDICAL CONDITION AND WHY?, HOW WILL A PARTICULAR STRAIN’S POTENCY AND DOSAGES EFFECT ME?]**

SCA MEMBER ANSWER: CANNABIS TREATMENT PLANS ARE DEVELOPED FOR EVERY PATIENT AND ARE DOCUMENTED IN PATIENT RECORDS AFTER EACH PATIENT VISIT.

- **WHAT IS THE PREFERRED DELIVERY METHOD? [I.E. WHAT IS THE MOST EFFECTIVE DELIVERY METHOD IN TREATING MY ILLNESS? INHALE, INGEST AND/OR TOPICAL APPLICATION METHODS BASED UPON MY SYMPTOMS]**

SCA MEMBER ANSWER: PREFERRED METHOD OF DELIVERY IS DISCUSSED WITH PATIENTS AT INITIAL AND SUBSEQUENT APPOINTMENTS AND ARE REFLECTED IN THE PATIENT’S CANNABIS TREATMENT PLAN.

- **WHAT TYPE OF TEST HAVE BEEN CONDUCTED TO VERIFY OR CERTIFY STRAIN QUALITY AND POTENCY AND ENSURE MY MEDICINE IS SAFE? [I.E. HAS THE CANNABIS STRAIN I’M TAKING BEEN TESTED TO VERIFY/CERTIFY POTENCY?]**

SCA MEMBER ANSWER: OUR MEDICINE IS INSPECTED FOR SAFETY AND TESTED USING ESTABLISHED SCIENTIFIC POTENCY TESTING METHODS. UPON SUCCESSFUL TEST COMPLETION, WE PLACE PRODUCT LABELS NEXT TO TESTED CANNABIS PRODUCTS TO CERTIFY OUR CANNABIS WAS TESTED AND IS CONSIDERED CERTIFIEDCANNABISSAFE™.

The following is a brief description of pertinent and relevant information prepared by our members for their patients and those who provide cannabis related products and services to those in the Seattle Cannabis community. This information could prove to be an invaluable resource regarding cannabis education and typically takes less than 15 minutes to read this in its entirety. We guarantee it will be time well spent.

SCA Executive Director E.R. Young

WASHINGTON STATE MARIJUANA ACT COVERED MEDICAL CONDITIONS & CANNABIS TREATMENT – PRIMER

DISCLAIMER: The following are very brief descriptions of those conditions covered by the Washington State Marijuana Act and reflect the opinions of SCA Members, their patients and those involved in cannabis education and research. In no way should this information be considered as authoritative medical advice.

This information is made available to stimulate dialog between Medical cannabis patients, their Caregivers, Healthcare providers, Attorneys, Law/Health/Agriculture enforcement officers/inspectors, Cannabis researchers and those who provide cannabis related products and services.

This information serves as a basic foundation on which SCA members educate and discuss treatment alternatives with their patients and peers. The scope of this primer is limited to only those conditions pertaining to the Washington State Marijuana Act [and are described below]. However your SCA Provider is able to discuss cannabis treatment alternatives for most medical conditions which cannabis has and is proving effective. These additional conditions [Not covered in the Washington State Marijuana Act] include but are not limited to:

Amyotrophic Lateral Sclerosis [ALS]

Alzheimer's Disease

Anxiety Attacks

Arthritis

Asthma

Bipolar Disorder

Constipation

Depression

Diabetes

Hypertension

Insomnia

Intestinal Cramps

Meniere's Syndrome

Schizophrenia

Migraine Headaches
Neuralgia
Neurodermitis
Night Sweats

Talk to your SCA Provider for additional information on any of the above listed medical conditions or if you would like to add additional medical conditions to our on-going list for educational purposes.

Washington State has defined [with regards to the Washington State Marijuana Act] "terminal or debilitating medical condition" as:

- (a) Cancer, human immunodeficiency virus (HIV), multiple sclerosis, epilepsy or other seizure disorder, or spasticity disorders; or
- (b) Intractable pain, limited for the purpose of this chapter to mean pain unrelieved by standard medical treatments and medications; or
- (c) Glaucoma, either acute or chronic, limited for the purpose of this chapter to mean increased intraocular pressure unrelieved by standard treatments and medications; or
- (d) Any other medical condition duly approved by the Washington state medical quality assurance board as directed in this chapter.

The Washington State Medical Quality Assurance Commission has added the following conditions:

- Crohn's Disease with debilitating symptoms unrelieved by standard treatments or medications (November 5, 1999)
- Hepatitis C with debilitating nausea and/or intractable pain unrelieved by standard treatments or medications (January 28, 2000)
- any disease, including anorexia, which result in nausea, vomiting, wasting, appetite loss, cramping, seizures, muscle spasms, and/or spasticity, when these symptoms are unrelieved by standard treatments or medications (June 19, 2000)

2010 Legislative Changes to Medical Marijuana Law Substitute Senate Bill 5798 Medical Marijuana, passed the legislature in the 2010 session. This bill makes the following changes to the Washington State Marijuana Act [Chapter 69.51A RCW]:

- Adds advanced registered nurse practitioners, naturopathic physicians, medical physician assistants, and osteopathic physician assistants to the list of health care providers who can recommend medical marijuana.
- Requires recommendations for medical marijuana written on or after June 10, 2010 to be written on tamper-resistant paper. Patients are no longer

allowed to use a copy of their medical records in lieu of a written recommendation.

CANCER

Cancer is a broad term that refers to a wide range of cellular diseases typified by the abnormal development of a group of cells. Abnormal cells can eventually disable the host organ leading to severe health problems. Cancerous cells are continually created in the body, but natural regulatory defenses usually counteract the disorganized cellular development in its incipient stages. Some cancers are thought to be hereditary in origin, but specific irritants, called carcinogens, can antagonize the body's natural defenses, leading to the continued development of renegade cells. Unchecked, these outlaw cells frequently spread to surrounding tissue and may enter the lymphatic and circulatory systems, thereby spreading to other parts of the body. Removal of cancerous issue by surgery and destruction of cancerous tissue by powerful chemotherapy and radiation therapy are the most common medical treatments. Radiation and chemotherapy often include violent, gut-wrenching nausea.

Delta-9 THC is legally prescribed for counteracting the severe side effects of cancer therapies, and is prescribed by doctors under its trade name, Marinol. Marinol pills, which are taken orally to control vomiting, were shown to be a superior anti-emetic [anti-nausea drug]. In earlier scientific studies, Marinol was also proven superior to other anti-emetics. However, Marinol falls short of perfection because of its super high potency, which often leads to intoxication and sedation. Also, oral administration is the least preferable method in this circumstance.

Medical cannabis is commonly smoked, which is a quicker and more effective method than oral administration. Medical cannabis "joints" have been used to treat chemotherapy-induced nausea and vomiting, and research has shown that THC is more quickly absorbed from cannabis smoke than from an oral preparation. Recent studies have shown that smoked cannabis is more effective than Marinol tablets. It is well known the anti-nausea effects smoked cannabis has, cannabis also often relieves the physical pain associated with some cancers. Many cancer survivors claim that continued use of medicinal cannabis helps keep their disease in remission. Recent findings indicate that THC inhibits the growth of some types of cancers and indicate that medical cannabis might actually help prevent cancer. Cannabinoids, the active components of cannabis and their derivatives have received renewed interest in recent years due to their diverse pharmacologic activities such as cell growth inhibition, anti-inflammatory effects

and tumor regression. Furthermore, compounds found in cannabis have been shown to kill numerous cancer types including: lung cancer, breast and prostate, leukemia and lymphoma, glaucoma, skin cancer, and pheochromocytoma.

There is strong evidence to suggest that the cannabinoids in medical cannabis may actually suppress certain forms of cancer, however more studies are needed to settle the question one way or another.

Acquired Immune Deficiency Syndrome [AIDS] is caused by the Human Immunodeficiency Virus [HIV]

The virus is usually contracted through sexual contact, intravenous needle sharing, maternal transmission to newborns, or transfusion of contaminated blood products. HIV/AIDS is now considered the worst plague in human history. The United Nations estimates that more than 16,000 new victims are infected everyday. The United States has one of the largest epidemics in the world.

The mounting HIV/AIDS crisis was the prominent driving force behind most states adoption of Compassion laws. A majority of American citizens in statewide ballot initiatives have all voiced support for the use of medical cannabis.

Thousands of people with HIV/AIDS have sworn by medical cannabis. Malignant lymphoma is a common ailment in AIDS cases, as is Kaposi's sarcoma, a rare form of vascular cancer, both of these cancers have been treated successfully with the adjunctive application of natural cannabis.

More commonly, however, AIDS patients suffer from severe anorexia. They become unable to eat and frequently drop weight at an alarming pace. This pattern, called "the wasting syndrome," is the major contributor to death through AIDS-related conditions. Cannabis has been known to stimulate the appetite and promote gastrointestinal reflexes, many HIV/AIDS researchers credit medical cannabis use with promoting efficient digestion. Many studies are available which verify cannabis' remarkable appetite stimulating properties. Marinol, a pill containing synthetic THC, the most powerful of naturally occurring cannabinoid compounds, is routinely prescribed for HIV/AIDS patients when other medications fail, yet the source of THC, the marijuana plant, is officially classified by the US government as having "no medical value."

Marinol is effective for some but not all HIV/AIDS patients. One problem with synthetic THC is its high potency. Marinol is considered about five times more psychoactive than natural cannabis, often causing intoxication to the point of incapacity or sedation: perplexing to patients attempting to maintain their

lifestyles. Because the body's ability to assimilate THC fluctuates throughout the day, a cannabis smoker is better able to accurately judge dose effectiveness and thereby avoid excessive and prolonged intoxication. However, the difference in potency between Marinol and natural cannabis is not simply a matter of different dosages. Orally ingested THC is assimilated by the liver, producing cannabinoid metabolite by-products that are active intoxicants remaining in the bloodstream for up to 30 hours following ingestion. When cannabis is smoked rather than eaten, the medicinal compounds enter the bloodstream from the respiratory system, bypassing the liver. Smoked cannabis is also less overwhelming than the THC pill because of its natural complexity. Along with THC, cannabis contains other medicinal cannabinoids that are known to offset the over-stimulation of THC. These complementary cannabinoids are not found in Marinol.

Pharmaceutical companies prefer to patent synthetic cannabinoid analogues rather than naturally-occurring cannabinoid compounds that can be produced at home in a small garden. Many HIV/AIDS patients are finding that ingesting natural cannabis is far more effective than Marinol, and that natural cannabis relieves not only the deadly "wasting syndrome", but also the side-effects of protease inhibitor therapy, [a daily regimen of powerful chemotherapy drugs that cause severe nausea in many cases]. One AIDS physician has remarked, "Not only is cannabis the safest drug an AIDS patient takes, inhalation [vaporization] is the perfect delivery system because it is rapidly effective, easy to dose for the individual patient, and it bypasses complicating factors in the digestive tract."

Patients with HIV Infection taking protease inhibitors do not experience short-term adverse virologic effects from using natural cannabis. Medical cannabis does not appear to alter viral loads of HIV patients taking protease inhibitors.

The National Institutes of Health has officially recognized the medical utility of cannabis in combating the HIV/AIDS epidemic, and the Institute of Medicine [IOM] has reported that cannabis is effective in fighting the many symptoms of wasting syndrome. AIDS wasting patients would likely benefit from a medication that simultaneously reduces anxiety, pain, and nausea while stimulating appetite.

The legal position being accepted in many jurisdictions is that "There is a class of people with serious medical conditions for whom the use of cannabis is necessary in order to treat or alleviate those conditions or their symptoms; who will suffer serious harm if they are denied cannabis; and for whom there is no legal alternative to cannabis for the effective treatment of their medical conditions because they have tried other alternatives and have found that they are ineffective or that they result in intolerable side effects".

Many recognize the medical necessity of cannabis use for victims of the HIV/AIDS epidemic. Further, despite management with opiates and other pain modifying therapies, neuropathic pain continues to reduce the quality of life and daily functioning in HIV-infected individuals. Smoked/Vaporized/Ingested/Topically Applied cannabis appears to be effective in reducing neuropathic pain in HIV/AIDS patients.

Multiple Sclerosis

Multiple Sclerosis is a progressively degenerative nerve disease that slowly cripples its victims and ultimately leads to death in many cases. The cause of Multiple Sclerosis remains a mystery, and there is no specific therapy for Multiple Sclerosis. Treatment typically consists of symptom management, commonly including steroids, tranquilizers, sedatives, barbiturates, and opiates, all of which stabilize the neurological disorder for a limited time but cause serious side effects. Recently, an experimental regimen involving daily injections has been found to have some benefit in forestalling the onslaught of debilitating symptoms, but those treatments also have powerful side-effects that completely disrupt any normal routine.

Many Multiple Sclerosis patients attest that cannabis quells their uncontrollable tremors better than barbiturates and reduces the pain caused by their degenerative condition better than opiates. Research confirmed that symptomatic muscle spasms were reduced by cannabis in clinical measurements of multiple sclerosis patients' symptoms.

The evidence supporting the use of cannabinoids for Multiple Sclerosis or spinal injury is promising.

Multiple Sclerosis sufferers often exhibit disorderly voluntary muscle coordination, called ataxia, a condition aside from pain and muscle spasms, which also shows to be clinically improved by cannabis use in some patients. Conventional antispasmodic medications used to treat the muscle spasms have powerful side effects that actually contribute to the debilitating symptoms of Multiple Sclerosis.

Recent clinical trials suggest that cannabis has potential to relieve, pain, spasms and spasticity in Multiple Sclerosis,” One Multiple Sclerosis researcher wrote “CB (1) and CB (2) cannabinoid receptor stimulation may have anti-inflammatory and neuroprotective potential. Therefore cannabinoids may not only offer symptom

control but may also slow the neurodegenerative disease progression that ultimately leads to the accumulation of disability. A recent expert opinion paper published by the US National Multiple Sclerosis Society concluded that cannabis possesses the potential to treat Multiple Sclerosis symptoms as well as moderate disease progression.

Investigators at the London School of Medicine, Neuroscience Center reported that cannabinoids likely hold therapeutic value for Multiple Sclerosis patients beyond providing temporary symptomatic relief.

EPILEPSY

Epilepsy is a recurrent disorder of cerebral function characterized by sudden, brief attacks of altered consciousness, motor activity, or sensory phenomena. Epilepsy includes a broad range of seizure disorders caused by microscopic brain lesions occurring during birth or during traumatic head injury. Epileptics often lead normal lives that are sporadically interrupted by violent seizures. Epilepsy is usually treated with barbiturates, benzodiazepines, and other powerful anti-seizure medications that render the patient incapable of normal activity. Prescription anticonvulsants are not effective for 20-30% of epileptic patients. Many patients suffer intolerable, and sometimes fatal, complications from standard pharmaceutical medications. Some epileptics find that cannabis controls their seizures without causing the physical and psychological depression typical of pharmaceutical therapies. Studies indicate that several cannabinoids not found in the synthetic THC pill [Marinol] have notable anticonvulsant properties. For example CBD, one of many medicinal compounds not available by prescription, has been shown to completely control partial seizure disorders. Cannabis is the only source of CBD and other cannabinoids that can help control the agony of epilepsy attacks.

According to a few case reports, some epileptic patients continue to utilize cannabis to control an otherwise unmanageable seizure disorder. Warning: epileptics should consult with their physician before using psychoactive drugs.

MUSCLE SPASMS

Muscle Spasms [sudden, involuntary movements or convulsive muscular contractions] may affect many areas of the body and may be caused by numerous diseases, such as multiple sclerosis and other forms of sclerosis (hardening of tissue or the nervous system), amyotrophic lateral sclerosis (Lou Gehrig's Disease), cerebral palsy, atopic neurodermatitis (chronic hardening of the skin), paraplegia, quadriplegia, cranial and spinal nerve injuries, and other

neurological impairments such as Tourette's Syndrome and symptoms caused by stroke. In addition, asthma is in part caused by spasms of muscle coating the smaller bronchi.

Several studies indicated that cannabis may be useful in treating various types of spastic conditions where conventional treatments have failed. Some patients find that cannabis is invaluable in alleviating the chronic debilitation of their uncontrollable muscle tremors. Patients suffering from severe spastic conditions have reported that cannabis actually keeps them alive. Unlike natural cannabis, powerful barbiturates and muscle relaxer currently in use for treatment of severe muscle spasms are known to have serious and life-threatening side effects.

GLAUCOMA

Glaucoma, the number two cause of blindness in the United States and is characterized by a dangerous increase of the fluid pressure within the eye. The effectiveness of cannabis in relieving intraocular pressure has been demonstrated by numerous clinical trials. One study indicates that two cannabinoids, delta-8 THC and CBN effectively reduced intraocular pressure. Cannabis does not cure the disease, but it can retard the progressive loss of sight when conventional medication fails and surgery is too dangerous.

CROHN'S DISEASE

Crohn's disease is a severe intestinal disorder typified by sluggish digestion that can lead to total failure of gastrointestinal reflexes. Intestinal bleeding can occur, and in many cases large sections of the intestines are removed in later stages. While cortisone (a steroid) and other noxious drugs may provide symptomatic relief in short-term therapy, there is no known cure for the disease and there is no pleasant prognosis in long-term treatment. Cannabis is found helpful in the management of Crohn's disease, not only as it is known to induce a healthy appetite through the endocannabinoid system, but more importantly, by reducing the swelling of irritated tissues.

HEPATITIS C

Hepatitis is characterized by an inflammation of the liver that is caused by viral and toxic contaminants. Patients suffer painful enlargement of the liver and many other symptoms, including fever, chills, vomiting, severe jaundice, fatigue, and death. The deadly Hepatitis C Virus (HCV) is transmitted through blood-to-blood contact, including unprotected sex and the sharing of needles in illicit narcotic use. HCV leads to cirrhosis, a progressive hardening of the liver similar to that in late-stage alcoholism. Symptoms can take up to 30 years to

develop, and current medical advances have yet to counter the fatal consequences of late-stage HCV infection. Early detection is the key to avoiding liver transplant surgery, which can prolong a patient's life for up to ten years.

Medical studies on the effectiveness of cannabis in the treatment of Hepatitis are lacking. However, reams of anecdotal evidence indicate that cannabis can relieve some symptoms of hepatitis and also alleviate many adverse side effects of conventional hepatitis medications. Limiting medications is imperative in managing this terminal illness, yet compassionate physicians have no compunction against approving cannabis use by HCV patients. While conventional pain medications are frequently forbidden, some patients awaiting liver transplant surgery have been allowed to use marijuana, the safe and natural pain reliever, up to ten days prior to the operation. In other cases, liver transplants have been denied to patients that tested positive for cannabis. Thus, it is imperative that patients fully discuss the impact of medical cannabis with both their primary and transplant physicians many months prior to any organ transplant operation.

ANOREXIA

Anorexia is an acute loss of appetite, often associated with psychological factors. Various stomach disorders, reactions to medications, and the use of illicit narcotics such as cocaine or heroin can cause anorexia. Some forms of anorexia are thought to develop as an exaggerated response to cultural standards of beauty.

The potential for relief of anorexia with the use of cannabis may depend upon psychological factors. Cannabinoids may have minimal appetite stimulation effect in cases of classic anorexia nervosa. The overwhelming evidence of hunger-inducing properties of cannabinoids, particularly the primary ingredient, delta-9 THC, in the physical condition of appetite loss known as cachexia is well-established. Synthetic THC pills called Marinol are indicated for the treatment of anorexia, but physicians may risk losing their license by writing "off-label" Marinol prescriptions for patients suffering from anorexia not caused by the AIDS wasting syndrome or cancer chemotherapy.

RELATED

DIGESTIVE DISORDERS

Digestive Disorders, including anorexia, bulimia, the effects of cancer chemotherapy treatment, AIDS wasting syndrome, intestinal diseases such as Crohn's disease, ileitis and colitis, spastic bowel, and intestinal cramping all have

diverse causes, but include common symptoms such as severe nausea and constipation, which are generally relieved by the use of cannabis.

RESPIRATORY DISEASES

Respiratory diseases are often cited as the major health threat of smoking cannabis. Respiratory Infection is an imprecise term referring to almost any infection and disease processes involving the respiratory system including airway, nasal passages, pharynx, trachea, or bronchi.

The cause of a respiratory infection in cannabis patients may relate to smoking cannabis. However, respiratory infections are usually attributed to health risk associated with the delivery method or a contamination of the cannabis with bacteria, mold, fungi or some other toxic compound.

In reviewing pulmonary hazards associated with smoking cannabis, the mode of administration is a critical factor that is frequently ignored. To avoid respiratory issues, make sure you are using the most effective delivery method [based upon your medical history], and ensure your medicine is grown properly and tested to CertifiedCannabisSafe™ standards. It is important to note the recent development of vaporizer technology, modern vaporizers offer a potentially safer method of inhaled administration.

It has been proven that smoking cannabis, even long term is not harmful to your health. Based upon your ailments and symptoms provided to your SCA Provider, a Cannabis Treatment Plan is developed which outlines your recommended strain, potency, dosage and delivery method. As a patient of a SCA Member this document becomes part of your medical records.

PREFERRED DELIVERY METHODS - CANNABIS PATIENT TREATMENT PLAN "BEST PRACTICES"

Please consult these preferred "best practices" to understand the various cannabis treatment delivery methods and to determine the dosing technique that is right for you. If you have any questions regarding this information feel free to ask your SCA Provider.

- Vaporization - Vaporization effectively separates the THC and other cannabinoids from the plant material using hot air, rather than combustion. This eliminates the harmful byproducts of smoke, but more medicine is usually required to achieve similar results. The medicinal

effect and duration are similar to smoking. One drawback to vaporization is the complexity of equipment. Another is price, with quality vaporizers ranging from \$100-500. A viable alternative to smoking and very effective delivery method for those with a debilitating or terminal medical condition.

- **Smoking** - A fast and effective delivery method, smoking anything raises health concerns. Still, recent research indicates that smoking cannabis is far less dangerous than cigarette smoking. The medicinal effect will be fully felt in a very short time, usually less than five minutes, but some strains could take longer. It's also inexpensive. This delivery method is good for those needing fast relief or those who medicate less frequently. Not recommended for those patients with respiratory ailments.
- **Edibles** - Edibles are foods typically prepared with cannabis infused butter or oil. They typically take the form of baked goods [i.e. brownies, cookies pastries etc], candy, sweets and other comfort foods. The medicinal effect takes 30 to 90 minutes and can last up to 6 hours. Edibles are quite effective for pain relief.
- **Tinctures** - Tinctures are extractions of cannabis in alcohol or vegetable glycerin. They are consumed via eyedropper under the tongue or added to beverages like coffee and tea. They have onset and duration similar to vaporization. Tinctures tend to have less of a psychological effect than other cannabis delivery methods, making them ideal for those who find such effects unpleasant.
- **Suppositories** - Used by patients with severe nausea, suppositories are often made with pressed kief [the resin glands or trichomes of the cannabis plant] and cocoa butter. Onset is typically 15-45 minutes with a long duration of 4-8 hours.
- **Capsules** - Capsules are made with cannabis or kief. Potency varies by capsule size and the quality of the material. With onset and duration similar to edibles, capsules are a good alternative where dosage

adjustment is less critical. Especially recommended for those with sleep issues.

- Topical Application - Topical preparations are often made with cocoa butter and infused oil. They are considered effective for joint and muscle pain, including arthritis, and muscle spasms.

WHAT TYPE OF TEST HAVE BEEN CONDUCTED TO VERIFY OR CERTIFY STRAIN QUALITY, POTENCY AND ENSURE MY MEDICINE IS SAFE? [I.E. STRAIN TESTING TO VERIFY/CERTIFY QUALITY, SAFETY AND POTENCY]

SCA Members believe the most critical component to receiving “*competent and capable cannabis care*” is knowing and having confidence in the medicine that you are putting into your body is safe and free of any substance that could potentially harm or cause harm to you.

SCA Members strongly advocate and enforce appropriate community based growing standards for their Grower’s. This includes the development, implementation and monitoring of the over-all Cannabis Treatment Supply Chain which includes: Grower/supplier Growing Methods; Informed Patient Decision Making; Accountable and Transparent Provider Distribution; and Seattle Cannabis community Third Party Standard Enforcement & Testing. We believe this “process” strikes a balance between all of Seattle’s Cannabis community stakeholders and results in “quality cannabis products that are produced and supplied, to quality cannabis service providers who ensure that the cannabis provided to their patients is safe, medical grade cannabis at the right dosage with the correct strain of cannabis”.

SCA Members believe the only way to accomplish this is to have a thorough knowledge of the Grower/supplier methods and routinely screen/inspect cannabis for foreign matter and biological contaminants [bacteria, mold, mildew, fungi etc] and test the cannabinoids levels of the supplied and/or distributed cannabis.

Each SCA member flows down State/City/Community requirements to their Growers/suppliers [in the form of a signed agreement] which identify the standard that SCA Grower/suppliers must meet. Testing is accomplished either at the Grower/supplier level [for those SCA members who are more proactive with their growers] or testing is done at the Provider distribution level.

The following list both the Preferred Growing Methods and SCA Third Party Quality Testing procedures used by SCA and its members to ensure product and patient safety within the Seattle Cannabis community.

SCA PREFERRED GROWING METHOD & GENETICS

We at SCA believe there is room for every SCA member to “do their own thing” and produce high quality medical cannabis. Our member Growers are some of the most ingenious, innovative grower’s in Seattle. So from the outset let me state that the purpose of describing a “preferred growing method & genetics” is not from a grower’s perspective. The intent of this information is simply to provide a “newbie” medical cannabis patient with enough information to intelligently discuss growing operations with his/her Grower and/or Provider as it relates to understanding the safety and quality impacts of their growing methods and genetics on the medicine he or she is about to put in their body. Nothing more, nothing less. Most patients I know say “I just want to know it’s safe, potent and is it targeted to treat my specific symptom or ailment.

GROWING METHOD

The majority of SCA Grower supplier members prefer to grow hydroponically and indoors, thus being able to control environmental conditions and have the ability to grow throughout the year. Hydroponics simply put, is growing plants without soil. Basically hydroponics is just another way of providing all the nutrients needed by a plant where soil is no longer necessary. In fact, normal soil may harbor pathogens and other harmful organisms that can damage cannabis plants. An additional benefit of indoor hydroponics is that the plants often grow faster and healthier because nutrients are immediately available, and therefore can be assimilated quicker. Resulting in higher yield and higher quality medicine.

When it comes to starting a grow, the strain you choose is very important.

A cannabis plant's natural genetics can be bred and enhanced for specific traits, the base gene pool for all modern varieties stem from either pure strains [indica and sativa] or hybrids [indica/sativa]. Seeds or clones can grow some great medicine, but not knowing its genetic background or traits, could be a total waste of time for an inexperienced grower. Purchasing seeds or clones is a safe bet for quality genetics and the best chance for great results, but the only way to really know what you are growing is to test it. With so many choices from so many vendors and varieties, it can be confusing and overwhelming. SCA Members however, choose the best strains of cannabis for a specific environment [indoor] and traits [medicinal use].

Our membership due to advances in science and technology have decided to focus on producing certain "medicinal cannabis strains" that contain very specific levels [percentages and ratios] of cannabinoids that target ailments that seek symptomatic relief. This can only be accomplished by knowing the chemistry and genetics behind a strain's, specific [or desired] ranges of THC, CBD and CBN levels. SCA is currently working with cannabis researchers to identify other cannabinoids that are beneficial and are targeted toward medicinal cannabis strains. This can only be accomplished by scientifically measuring these levels, through appropriate testing methods.

SPECIFIC MEDICINAL CANNABIS STRAIN APPLICATION

Although cannabis is best known for its recreational use and mind altering effects, scientific evidence shows that it has enormous medicinal and therapeutic potential. Unfortunately due to a current controversy around the cannabis laws, medical cannabis researchers are in the early stages of categorizing the best medicinal cannabis strains. The lack of clinical experience is a serious impediment to a realistic appraisal of the therapeutic potential of various cannabinoids. To understand why the different strains may have different effects, and help different types of medical conditions it is necessary to understand the basic chemistry of cannabis. The active compounds in cannabis consist of over 85 cannabinoids [as cannabis research advances we at SCA will be adding additional cannabinoid standards to our existing testing capabilities]. Currently we only test for three primary standards [THC, CBD and CBN] which profile strain quality [potency].

Based on various research, cannabis breeders, seed bank recommendations and reports from SCA Member patients, we have developed a listing of the best medicinal cannabis strains that are being used for specific medicinal and therapeutic applications. If you are a patient or stakeholder who is interested in knowing what strains are effective for specific ailments and or symptoms contact your SCA Provider who will be more than happy to discuss this topic with you.

SCA QUALITY TESTING METHODS

SCA uses a GC Chromatograph to measure specific cannabinoid levels to confirm and verify that the strain cultivated was/is in fact what they expected and/or would have the intended quality, potency and effect. A Microscopic Inspection/Screening for biological contaminants [bacteria, mold, mildew, fungi etc] is also conducted for safety. Upon successful completion of SCA testing, SCA members are provided labels which certify their cannabis as CertifiedCannabisSafe™.

CertifiedCannabisSafe™ Label

CertifiedCannabisSafe™ is a SCA certification mark indicating a particular cannabis sample has been tested and that sample met SCA's standard for safety and quality. Label content includes: Test Date; Tested By; Grower ID#; Sample Condition; Growing Method [Harvest time if known]; Preferred Delivery Methods; Strain Type; Total Cannabinoids%; Tetrahydrocannabinol [THC] %; Cannabidiol [CBD] % and Cannabinol [CBN] %. To understand and interpret this information you should know that individual THC, CBD and CBN percentages represent the percentage of that compound present in a particular sample, and when combined represent the total percentage of these three cannabinoids present in that sample [Note there is a slight deviation in sample collection due to several factors i.e. how the sample was collected, from which part of the plant it was collected from etc.].

The value of SCA Label information to any patient is it provides a baseline for effective treatment appropriate in treating a serious medical condition, rather than trial and error based upon a strains name. After discussing your medical symptoms with your SCA Provider, a Cannabis Treatment Plan is always generated. The purpose of a Cannabis Treatment Plan is to identify strains and percentage ranges [i.e. 13% to 18.6% THC/ 0.44% to 0.88% CBD/ 0.13% to 0.26%

CBN], that are appropriate in treating that specific symptom or ailment. Patients then select strains that fall within the ranges indicated on his/her Cannabis Treatment Plan.

The problem many new patients have is that they only pay attention to THC% when talking about cannabis "potency". Actually CBD plays a much bigger role [especially with regards to medicinal cannabis] than we originally thought and it's becoming apparent that in order to understand the effects of cannabis, we will need to learn more about both CBD and CBN, and how these primary cannabinoids interact with each other. We at SCA believe that the beneficial therapeutic effects of medicinal cannabis are derived from the interaction of specific cannabinoid ratios and percentages.

Tetrahydrocannabinol [THC] is the most abundant cannabinoid. It is the principal psychoactive agent in cannabis and appears to help relieve pain, stimulate appetite and has a definitive bronchodilator effect. It is also thought to be the cause of the following effects of cannabis: relaxation, euphoria and altered space-time perception. THC has anti-spasmodic, anti-epileptic, anti-tremor, anti-inflammatory, anti-hypertensive, anti-depressant and anti-emetic properties. However, THC may cause anxiety and other side effects. Medicinal cannabis with a strong therapeutic effect will usually have a THC content anywhere between 8% and 18%.

Cannabidiol [CBD] is another main cannabinoid. CBD appears to relieve convulsions, some types of inflammation, anxiety, and nausea. CBD mitigates the psychoactive effects of THC, it also has anti-inflammatory, anti-convulsant, anti-psychotic, anti-oxidant, neuroprotective and immunomodulatory effects. CBD has been shown to help stop the growth of certain cancers and CBD does not cause a "high", and its presence may reduce some of the potentially unwanted side effects of THC. SCA providers and cannabis researchers are currently trying to establish beneficial CBD ranges for medicinal strains that will aid our patients in treating specific symptoms.

Cannabinol [CBN] is a mildly psychoactive degradation of THC. So far its primary effects are as an anti-epileptic and to lower intra-ocular pressure in Glaucoma patients.

Once the THC, CBD and CBN ratio's [i.e. High THC/ Low CBD/ Low CBN, Low THC/ High CBD/High CBN, etc] become the basis for cannabis treatment, patient education and provider conversation [centered on symptoms, ailments, patient

feedback, cannabinoid percentages, and a specific Cannabis Treatment Plan] then provider's can recommend strains based on medical science and informed patient's can select the most appropriate strains. This discussion and documentation between patient and provider is what makes a SCA Designated Provider a "Competent Caregiver".