**CANNABINOIDs: Drug Comparison Chart**

Cannabis contains 100s of compounds including ~70 cannabinoids, of which Delta-9-tetrahydrocannabinol (aka dronabinol or THC) is most psychoactive. Two less psychoactive cannabinoids are Delta-8-THC & cannabinol. Another active agent is cannabinol (CBD), a potential analgesic & anti-inflammatory. These agents act at the cannabinoid receptors (CB1, & CB2). General dosing considerations: start low & go slow.

### GENERIC/TRADE (Strength & Formulations)

<table>
<thead>
<tr>
<th>Therapeutic Use/Comments</th>
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</tr>
</thead>
</table>
| Dronabinol/MARINOL® |gov | 2.5, 5 mg cap (sesame oil)~synergistic THC D/C 2012 in Canada

### THERAPEUTIC USE/COMMENTS

<table>
<thead>
<tr>
<th>POSSIBLY EFFECTIVE</th>
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<tbody>
<tr>
<td>Treat severe N/V from cancer chemotherapy</td>
<td>Treat severe N/V from cancer chemotherapy</td>
</tr>
<tr>
<td>Treat AIDS related anorexia</td>
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</tr>
<tr>
<td><strong>COMMENTS:</strong></td>
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<tr>
<td>Oral form – some abuse potential</td>
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<tr>
<td>Schedule III USA, was schedule II when available</td>
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<tr>
<td><strong>ADVERSE EVENTS:</strong></td>
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</tr>
<tr>
<td><strong>AE/DRUG INTERACTIONS:</strong></td>
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</tr>
<tr>
<td>Initial: 2.5mg po HS</td>
<td>Initial: 2.5mg po HS</td>
</tr>
<tr>
<td>Usual:</td>
<td>Usual:</td>
</tr>
<tr>
<td>– chemo N/V: 2.5-5mg po TID-QID (“5mg/m”)</td>
<td>– chemo N/V: 2.5-5mg po TID-QID (“5mg/m”)</td>
</tr>
<tr>
<td>– appetite: 2.5mg BID ac lunch &amp; supper</td>
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</tr>
<tr>
<td>Maximum: 20mg/d</td>
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</tbody>
</table>

### ADDITIONAL INFORMATION

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<td>Statement: Cannabis is classified as a hallucinogen in the category of psychoactive substances. Regular use is known to cause harmful health effects, including addiction, with its associated co-occurrences, among susceptible individuals. Available literature &amp; clinical experience indicate more risk than benefit in the use of cannabis products for medicinal purposes. Ongoing clinical research into possible medicinal uses of cannabis products is essential, using the same standards to determine appropriateness to any therapeutic agent before introducing into general clinical practice.</td>
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### REGULATIONS

| 2001 to 2014: | 2001 to 2014: |
| MMAR | MMAR |
| patients authorized for medicinal marijuana (e.g. cancer patients and life-threatening conditions) | patients authorized for medicinal marijuana (e.g. cancer patients and life-threatening conditions) |
| & multiple sclerosis, spinal cord injury, cancer, AIDS, seizures) were able to grow own product at home. | & multiple sclerosis, spinal cord injury, cancer, AIDS, seizures) were able to grow own product at home. |
| For cancer patients | For cancer patients |
| MMAR = patients authorized for medicinal marijuana (e.g. cancer patients and life-threatening conditions) | MMAR = patients authorized for medicinal marijuana (e.g. cancer patients and life-threatening conditions) |
| to only if 16y & avoid synthetic CBD, avoid combatul cannabis, inhale shallow. | to only if 16y & avoid synthetic CBD, avoid combatul cannabis, inhale shallow. |

### POSSIBLE APPROACH

A close review of 1) the indications, 2) what meds were previously used & 3) the efficacy of the "therapeutic trial" of marijuana. These people should have a urine screen prior to this treatment. A careful assessment of the potential risks and benefits is essential. The decision to use cannabis should be made in consultation with a qualified healthcare professional. The use of a "treatment agreement" is recommended to address the potential risks and benefits of this approach.

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Cannabinoids: Online Extras

Links for Prescribing of Medical Marijuana


College of Physicians & Surgeons of Saskatchewan: The College’s bylaw 2014

The College’s bylaw which regulates physician authorization of medical marihuana is now in effect. A summary of the bylaw follows:

1. The bylaw begins with a statement that there has not been sufficient scientific or clinical assessment to provide evidence about the safety and efficacy of marihuana for medical purposes. The bylaw begins with an acknowledgement that federal government regulations have authorized the use of marihuana for medical purposes.

2. A physician cannot authorize the use of marihuana for a patient unless the physician is also the treating physician for the condition for which the patient is authorized to use marihuana. For example, if a patient is to be authorized to use medical marihuana to deal with symptoms of MS, the physician must also be the treating physician for the patient’s MS.

3. A physician must review the patient’s medical history, review relevant records pertaining to the condition for which the use of marihuana is authorized and conduct an appropriate physical examination before authorizing the patient’s use of marihuana.

4. The patient must sign a written treatment agreement which contains the following:
   - A statement from the patient that the patient will not seek a prescription for marihuana from any other physician during the period for which the marihuana is prescribed;
   - A statement by the patient that the patient will utilize the marihuana as prescribed, and will not use the marihuana in larger amounts or more frequently than is prescribed;
   - A statement by the patient that the patient will not give or sell the prescribed marihuana to anyone else, including family members;
   - A statement by the patient that the patient will store the marihuana in a safe place;

5. The physician’s record for the patient must include the requirements for all medical records and, in addition, contain the following:
   - The treatment agreement signed by the patient;
   - A diagnosis for which the patient was authorized to purchase marihuana;
   - A statement of what other treatments have been attempted for the condition for which the use of marihuana was prescribed and the effect of such treatments;
   - A statement of what, if anything, the patient has been advised about the risks of the use of marihuana;
   - A statement that in the physician’s medical opinion the patient is likely to receive therapeutic or palliative benefit from the use of marihuana to treat the patient’s condition.

6. The physician must retain a single record, separate from other patient records, which can be inspected by the College, and which contains:
   - The patient’s name, health services number and date of birth;
   - The quantity and duration for which marihuana was prescribed;
   - The medical condition for which marihuana was prescribed;
   - The name of the licensed producer from which the marihuana will be obtained, if known to the physician.

7. Physicians who prescribe marihuana will be required to provide the College with the information referenced in paragraph 6:
   - Every twelve months if the physician has prescribed marihuana to fewer than 20 patients in the preceding 12 months;
   - Every six months if the physician has prescribed marihuana to 20 or more patients in the preceding 12 months.

8. The bylaw prohibits physicians from diagnosing or treating patients at the premises of a licensed producer;

9. The bylaw prohibits physicians who prescribe marihuana from having an economic or management interest in a licensed producer;

10. The bylaw prohibits physicians from storing or dispensing marihuana from any location where the physician practices medicine.

The bylaw is numbered Bylaw 19.2 of the regulatory bylaws of the College and is available at the College’s website.

Sample treatment agreement to comply with the College Bylaw

I __________________________________________ understand that I will be receiving a medical document from Dr. __________________________ which will authorize me to purchase marihuana for a medical purpose. I agree to the following:

A) I will not seek to obtain a medical document to authorize me to purchase marihuana from any other physician during the period for which the marihuana is authorized;
B) I will utilize the marihuana as authorized in the medical document and I will not use the marihuana in larger amounts or more frequently than is authorized in the document;
C) I will not give or sell the prescribed marihuana to anyone else, including family members;
D) I will store the marihuana in a safe place;
E) I understand that if I break any of these conditions, Dr. __________________ may refuse to provide any future medical authorization to purchase marihuana.

__________________________________________________________
Patient’s signature Date

References Cannabinoids:
Prepared by: Brent Jensen BSP, Loren Regier BSP BA for www.RxFiles.ca
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4. Natural Medicines Comprehensive Database 2012 May/01 CNNS: The average potency of marijuana, which has risen steadily for three decades, has exceeded 10 percent for the first time, the U.S. government will report on Thursday. Scientists working for the government predict that, as measured by the drug's concentration of the psychoactive ingredient THC, will continue to rise. At the University of Mississippi's Potency Monitoring Project, where thousands of samples of seized marijuana are tested every year, project director Mahmoud ElSohly said some THC levels exceed 15 percent. Average THC concentrations will continue to climb before leveling off at 15 percent or 16 percent in five to 10 years, ElSohly predicted. The average THC for tested marijuana during 2008 was 10 percent. According to the government's annual survey, THC levels will soon begin to drop off, the National Drug Policy Office said. The median potency increased from 4.8 percent in 2003 to 7.3 percent in 2007. Marijuana from Mexico and other Southern sources traditionally had lower THC content than other sources. http://www.whitehousedrugpolicy.gov/drugfacts/marijuana/index.html

5. Campbell FR, Tramer MR, Carroll D, Reynolds DJ, Moore RA, McQuay HJ. Are cannabinoids an effective and safe treatment option in the management of pain? A qualitative systematic review. BMJ. 2001 Jul 7;323(7303):13-6. Conclusion: Cannabinoids are no more effective than codeine in controlling pain and have depressant effects on the central nervous system that limit their use. Their widespread introduction into clinical practice is likely to be inadequate. In acute postoperative pain they should not be used. Before cannabinoids can be considered for treating spasticity and neuropathic pain, further validation randomised controlled studies are needed.

6. Tramer MR, Carroll D, Campbell FA, et al. Cannabinoids for control of chemotherapy induced nausea and vomiting: quantitative systematic review. BMJ. 2001 Jul 7;323(7303):16-21. CONCLUSIONS: In selected patients, the cannabinoids tested in these trials may be useful as mood enhancing adjuncts for controlling chemotherapy induced nausea and vomiting. Potentially serious adverse effects, even when taken short term orally or intramuscularly, are likely to limit their widespread use.

7. Zajko J, Fox J, P, et al.; UK MS Research Group. Cannabinoids for treatment of multiple sclerosis and other symptoms related to multiple sclerosis (CAMS study): multicentre randomised placebo-controlled trial. Lancet. 2003 Nov 8;362(9385):1517-26. n=630. 15e.\footnote{http://www.iccconferences.org/images/0337_graphs.pdf} INTERVENTION: Treatment with cannabinoids did not have a beneficial effect on spasticity when assessed with the Ashworth scale. However, this was due to the Ashworth scale having the wrong side of the denominator. Evaluating the effect of cannabinoids in the treatment groups, objective improvement in mobility and the spasticity were significantly different from placebo.


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23. Daily Amount Fact Sheet Info for Health care professionals: www.hc-sc.gc.ca/dhp-ps/marihuana/forms/health-info/information_e.html


38. Wang T, Collet JP, Shapiro S, Ware MA. Adverse effects of medical cannabinoids: a systematic review. CMAJ. 2008 Jun 17;178(13):1669-78. Short-term use of existing medical cannabinoids appeared to increase the risk of nonserious adverse events. The risks associated with long-term use were poorly characterized in published clinical trials and observational studies. High-quality trials of long-term exposure are required to further characterize safety issues related to the use of medical cannabinoids.


44. Predisposition to both psychiatric disorders and psychosis specifically contributes equally to the risk of later treatment because of schizophrenia and cannabis-induced psychoses.

45. Cannabis-induced psychosis could be an early sign of schizophrenia rather than a cause of it.

46. Selvarajah D, Gandhi R, Emery CJ, Tesfaye S. A Randomised Placebo Controlled Double Blind Clinical Trial of Cannabis Based Medicinal Product (Sativex) in Painful Diabetic Neuropathy: Depression is a Confounding Factor. Diabet Care. 2008 Oct 6. Epub before print; n=30. This first ever trial assessing the efficacy of cannabis has shown it to be no more efficacious than placebo in painful-DPN. Depression was a major confounder and may have important implications for future pain-DPN trials.


(CADTH Rapid Response: Limited evidence suggests that nabilone may be better than placebo in reliving chronic pain but its relative benefits compared to other analgesics have not been proven. Current guidelines recommend the dosage of nabilone for treating neuropathic pain be titrated gradually until target relief is obtained.)


