



## Briefing Note

**Report:** Information for Health Care Professional: Cannabis (marihuana, marijuana) and the cannabinoids.

**Organization:** Health Canada

**Date of Release:** May-June 2013

### Background:

The publication is intended as a comprehensive reference for health professionals in Canada in order to provide an extensive compilation of existing evidence on effects of medical marijuana and cannabinoids.

### Methodology:

The publication is an exhaustive literature review summarizing evidence on using cannabis and cannabinoids for a wide variety of conditions. Although there is no structured format to the evaluation of the available evidence (no grading), the authors take care to point out methodological flaws/strong points of specific studies referenced. The evidence was reviewed by a team consisting of 21 contributors, including 8 physicians (one family physician). The document provides few specific recommendations for health professionals – those that do exist mostly point out cases where cannabinoids would not be beneficial.

### Summary:

Sections 1 and 2 provide a detailed description of the structure and functioning mechanisms of the endocannabinoid system. It lists the methods of absorption, distribution, metabolism and excretion of the substances, its broad effects on a variety of systems of the human body. The section on different administration methods (smoked, vapourized, oral, oro-mucosal, rectal) includes the list of different forms the substances are consumed in (including synthetic cannabinoid pharmaceuticals). Section 2 also lists general findings on the tolerance building and withdrawal symptoms associated with cannabinoids.

Section 3 contains information on dosing of the substances. No recommendations are made in regards to prescribing and suggested dosage. High variability of effects, depending on many factors including patients' previous experience with the substance and titration is noted. Minimal therapeutic dosage is established. Interchange calculations are provided between smoked and orally consumed cannabis. A note is made that "Currently, there are no clinical guidelines on monitoring patients who are taking cannabis for medical purposes.". A list of currently available synthetic pharmaceuticals (Marinol®, Cesamet®) is provided with their characteristics and comparing these to the different administration methods for plant cannabis. Summaries of prescription pharmaceuticals make the ultimate reference to the drug monographs for dosage and administration instructions.

Section 4 includes a summary of existing evidence on therapeutic effects of cannabinoids. It lists the literature review of substance use results in following areas:

- Palliative care,
- Nausea and vomiting
- Wasting syndrome (cachexia),
- Multiple sclerosis and spinal cord injury
- Epilepsy



- Acute and Chronic Pain
- Arthritides and Musculoskeletal Disorders
- Movement disorders (e.g. dystonia)
- Glaucoma
- Hypertension
- Psychiatric disorders (including schizophrenia, sleep disorders, PTSD, anxiety and depression)
- Alzheimer's disease and dementia
- Gastrointestinal system disorders

For each condition a summary of evidence from the literature is presented, although no overt recommendations are made, as that decision is left to the health professional to make, using the provided evidence. Sections for conditions for which using cannabinoids was not shown to have a therapeutic effect contain much clearer language suggesting in terms of guidance (although still not as clear-cut as it should be). Conditions for which smoked cannabis use is permitted under the current Medical Marijuana Access Regulations are highlighted. For some of these it is noted that the permission is in place despite lack of scientific evidence for the substance's benefit.

Sections 5 and 6 concisely detail precautions and warnings for the use cannabinoids. First section details patient groups for whom it is not advised (pregnant/nursing women, patients with cardio-pulmonary disease, asthma or with psychotic disorders). Section 6 offers information on restrictions use of the substance carries with it, (e.g. results vary with method of smoking, not operating heavy machinery) as well as concise information on tolerance/withdrawal information and interaction with other prescription drugs.

Section 7 outlines scientific evidence on the adverse effects of cannabinoids (with a note that majority of research was done on recreational rather than clinical users). It covers several broad categories and much like Section 4 reviews studies done on the topic and their outcomes. Sections include carcinogenesis, effects on respiratory, immune, reproductive, endocrine, cardiovascular and gastrointestinal systems. A special focus is placed on central nervous system and effects on cognition, psychomotor performance and psychiatric effects. As in Section 4, the study results are presented in a neutral empirical tone without recommendations on guidelines.

Report is wrapped up by Section 8 outlining the overdose criteria for cannabis.

#### **Observations:**

The document offers minimal guidance in terms of prescribing. In essence – it is a literature review with no recommendations for health professionals, except for the findings reported. The dosage information provides averages in currently used products and refers to pharmaceutical monographs yet does not provide explicit direction.

The role of family physicians is not addressed in this document.

#### **For further information:**

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