

CANNABINOID CHRONICLES



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Medical Cannabis News and Information

Canada – Cannabis Eases Nausea/Vomiting in Pregnancy

A UK-based medical publication, *Journal of Complementary Therapies in Clinical Practice*, has published the results of a survey carried out in British Columbia that examines the use of cannabis for relief of nausea, vomiting, and appetite loss during pregnancy.

The study was prompted by Victoria sociologist Rachel Westfall, who wanted to obtain cannabis to conduct a study on how it might address nausea with pregnant women.

"I knew right away that that was going to be an impossibility," said Philippe Lucas, director of the Vancouver Island Compassion Society (VICS) in Victoria. There's no way, he said, that the federal government would allow a clinical trial on determining if cannabis could effectively treat nausea and vomiting during pregnancy.

So, Lucas moved forward with a survey to determine its effectiveness. The survey was distributed to women who were active members of the Vancouver Island Compassion Society and the Vancouver-based British Columbia Compassion Club Society (BCCCS) between Nov. 2003 and May 2004. Rielle Capler and Meredith Burney of the BCCCS and UBC professor Patricia Janssen made up the rest of the research team.

The study also focused on a particular severe form of pregnancy and vomiting called hyperemesis gravidarum, affecting 2% of

women who go through pregnancy. Lucas said that there are not any effective pharmaceutical treatments available for this condition at the present.

85 women responded in total, ranging from 19 to 64 years of age; 75% reported having more than one child. All use cannabis in one form or another for their respective medical condition; 95% smoked cannabis and 31% used an edible preparation.

For cannabis use in general (not specific to pregnancy): a total of 92% of the respondents who had an opinion on the effectiveness of cannabis as therapy for nausea (72 women) rated it 'extremely effective' (54%) or 'effective' (38%); a total of 75% of the respondents who had an opinion on the effectiveness of cannabis as therapy for vomiting (57 women) rated it as 'extremely effective' (31%) or 'effective' (44%); a total of 95% of the respondents who had an opinion on the effectiveness of cannabis as an appetite stimulant (74 women) rated it as 'extremely effective' (68%) or 'effective' (27%) as an appetite stimulant.

For cannabis use during pregnancy: a total of 65% of the 79 respondents used cannabis recreationally and/or therapeutically

while pregnant; 59 women (77%) reported they had experienced nausea and/or vomiting of pregnancy; most described their symptoms as quite severe. Of the 59 respondents who had experienced morning sickness (nausea and vomiting), 37 respondents (63%) said they used cannabis to treat the condition. Of those 37 respondents, 43% found it 'extremely effective', and 49% rated it as 'effective'.

Though the study is self-reported and the sample population is biased towards medical cannabis use, the findings are unique and valuable. The survey results suggest that clinical trials investigating cannabis therapy for nausea and vomiting during pregnancy should occur.

Source: Summary document ahead of publication; Victoria News, October 5, 2005

Canada - Neurogenesis and Cannabis

Cannabinoids may promote the development of new brain cells. According to animal research at the University of Saskatchewan,

cannabinoids that bind to the CB1 receptor promote the development of new nerve cells in the hippocampus, a region of the brain that is very important for memory and behaviour. This cannabinoid effect may decrease anxiety and depression.

Scientists used the synthetic cannabinoid HU210 that acts similar to THC on CB1 receptors in the brain. Chronic, but not acute treatment with this cannabinoid

promoted nerve cell proliferation in the hippocampus of adult rats and exerted anxiolytic- and antidepressant-like effects.

Other illegal and legal drugs, including opiates, alcohol, nicotine and cocaine, have been shown to suppress the formation of new brain cells when used chronically, but the effect of cannabis on that process was uncertain. Cannabis appears "to be the only illicit drug whose capacity to produce increased ... neurons is positively correlated with its (anti-anxiety) and anti-depressant-like effects," Dr. Xia Zhang and his colleagues wrote in an article for the November issue of the *Journal of Clinical Investigation*.

Sources: Jiang W, Zhang Y, Xiao L, Van Cleemput J, Ji SP, Bai G, Zhang X. Cannabinoids promote embryonic and adult hippocampus neurogenesis and produce anxiolytic- and antidepressant-like effects. *J Clin Invest*. 2005 Oct 13

VITCRI Trial Update

Three days in the Colwood courthouse (starting, perhaps appropriately, on Halloween) came to an end....without a decision. Disappointingly, we'll have to wait until 2:30 pm on Nov. 30, Victoria courthouse, to hear the verdict.



Science: Survey on medical use of cannabis in sickle cell disease

An anonymous questionnaire survey was conducted at the Central Middlesex Hospital in London among adults suffering from sickle cell disease (SCD). 86 subjects aged 23 to 39 years participated in the study. 31 had used cannabis in the previous 12 months to relieve symptoms associated with SCD. The main route in all but two patients was by smoking. The main reasons for use were to reduce pain in 52%, and to induce relaxation or relieve anxiety and depression in 39%.

SCD is a blood condition caused by a cell mutation, which is seen most commonly in people from Africa and India. Sickle cell syndromes also occur in people of Mediterranean and Middle Eastern background. This mutation causes a change in haemoglobin, the oxygen-transport protein in red blood cells.

Pain is one of the predominant symptoms in SCD. It can be severe enough to require opioid analgesics for relief, can recur acutely at unpredicted intervals, is associated with inflammation and can become chronic.

Source: Howard J, Anie KA, Holdcroft A, Korn S, Davies SC. Cannabis use in sickle cell disease: a questionnaire study. *Br J Haematol* 2005;131(1):123-8.

Science: Endocannabinoids and obesity

Research at the Charité Hospital in Berlin showed that the concentrations of circulating endocannabinoids (anandamide and 2-AG) were significantly elevated in obese compared to lean women. On the other hand, expression of the CB1 receptor and of the enzyme fatty acid amide hydrolase (FAAH), which is mainly responsible for the degradation of anandamide, were significantly increased in fat tissue of obese subjects compared to controls. Researchers note that their "findings support the presence of a peripheral endocannabinoid system that is upregulated in human obesity."

Source: Engeli S, et al. *Diabetes* 2005;54(10):2838-43.

Science: Body mass index and cannabis

US researchers investigated the correlation between cannabis use and body mass index (BMI). The BMI is a measure for the relationship between weight and height. A high BMI is found in obese subjects. The study with 297 women showed that despite cannabis is known to increase appetite, cannabis use in the past year was more common in subjects with low BMI (slim women).

Source: Warren M, et al. *J Addict Dis* 2005;24(3):95-100.

Science: Physicians' attitudes

960 US family physicians, general internists, gynaecologists, psychiatrists, and addiction specialists offered opinions about the legal prescription of cannabis for medical purposes. 36% believed prescribed marijuana should be legal and 26% were neutral to the proposition. Internal medicine and gynaecology specialization was associated with support for the medical use of cannabis, whereas psychiatrists and addiction specialists opposed it more often. The authors write that "physicians are, in general, less supportive than the general American public regarding the use of medical marijuana." However, the study data are more than four years

old. Sources: Charuvastra A, et al. *J Addict Dis* 2005;24(3):87-93; Reuters 23 April 2001



Australia: Survey on cannabis for medical purposes

Researchers of the University of New South Wales conducted a questionnaire survey on the medical use of cannabis. Data were available for 128 participants. Long term and regular medical cannabis use was frequently reported for multiple medical conditions including chronic pain (57%), depression (56%), arthritis (35%), persistent nausea (27%) and weight loss (26%). Cannabis was perceived to provide "great relief" overall (86%), and substantial relief of specific symptoms such as pain, nausea and insomnia. It was also typically perceived as superior to other medications in terms of undesirable effects, and the extent of relief provided. However, nearly one half (41%) experi-

enced conditions or symptoms that did not improve with the use of cannabis. Issues related to the illegality of the drug caused the most concerns. Participants reported strong support for their use from their physicians and their family.

Source: Swift W, Gates P, Dillon P. Survey of Australians using cannabis for medical purposes. *Harm Reduct J* 2005;2(1):18.

Science: Cannabis and driving

In a study by researchers of the University of Maryland the use of cannabis was not associated with the risk to cause a traffic accident. 6,581 drivers who were hospitalized at a shock trauma center in the years 1997 through 2001 form the basis of this analysis. Results on the presence of alcohol and illegal drugs obtained for patient care were linked to police crash reports. Crash culpability was strongly associated with alcohol use. In contrast, this study did not find an association between crash culpability and cannabis use. Since only urine tests on cannabinoids were performed it is not known, whether drivers were actually under the influence of cannabis.

Source: Soderstrom CA, et al. *Annu Proc Assoc Adv Automot Med* 2005;49:315-30.

Science/France: Largest study ever conducted on cannabis and driving found only low increased accident risk for cannabis

Drivers under the influence of cannabis are far less likely to be culpable in traffic accidents than drunk drivers. According to the newspaper "Libération" the results of an epidemiological study with approximately 8,000 accidents will be published in several weeks in the British Medical Journal.

Researchers at the French National Institute for Research on Transportation and Safety found that alcohol intoxication and speeding were nearly ten times more likely to be an attributing factor in traffic fatalities than the use of cannabis. Overall, researchers estimated that cannabis' psychomotor impairment was similar to that exhibited by drivers with blood alcohol concentrations (BAC) ranging from 0.02 to 0.05%. The relative risk for causing a fatal accident was 1.8-2.2 for cannabis, similar to that for alcohol below a BAC of 0.05. It was about 20 for alcohol above a BAC of 0.05 and speeding.

The study results have been provoking the greatest embarrassment among government officials since they always claimed that "drugs behind the wheel are responsible for more deaths than speeding." Under French law, drivers who test positive for even trace levels of THC in their blood face up to two years in prison.

Source: Libération of 3 October 2005

Science: Osteoporosis

Researchers of the University of Bonn demonstrated that the gene that encodes the CB2 receptor is associated with osteoporosis. They analyzed the genes for the CB1 and the CB2 receptor in postmenopausal women with osteoporosis. Compared with a control group the scientists found more often a certain variant of the CB2 receptor gene in patients with osteoporosis. They conclude that these results "demonstrate a role for the peripherally expressed CB2-receptor in the etiology of osteoporosis."

Source: Karsak M, et al. *Hum Mol Genet.* 2005 Oct 4

Health Canada Cancels MMAR Advisory Committee:

You won't find this out on Health Canada's website, at least for now, but they have cancelled the Expert Advisory Committee On Marihuana For Medical Purposes (EAC-MMP). This Committee was intended to provide Health Canada (HC) with "timely scientific/medical advice related to the Marihuana Medical Access Regulations/program (MMAR) and the Medical Marihuana Research Program (MMRP).

Now that whole-plant cannabis has become a pharmaceutical drug, why bother with the pretence any longer anyway?

Find us online at <http://www.thevics.com>

Philippe Lucas Running for City Council

Our director is asking for your support in the upcoming BC municipal election on November 19, 2005. Get out and vote!

New Cannabinoid May Ease Nausea:

University of Calgary scientists have discovered a new brain receptor that is manipulated by chemicals similar to cannabis and could hold the key to reducing nausea in cancer and AIDS patients. An international team of researchers, led by Calgary's Dr. Keith Sharkey, has stumbled across the previously unknown CB2 cannabinoid receptor, located in the brain stem.

"Our discovery could lead to new, therapeutic advances for vomiting," said Sharkey. Other experts in the field say the receptor could be involved in diseases of the central nervous system, such as multiple sclerosis and Parkinson's.

Scientists have long known about a cannabinoid receptor, known as CB1, which is located on immune cells. Sharkey's team was researching the effect of chemical agents on CB1 when they made an accidental discovery. After injecting laboratory animals with chemical agents, they found some surprising effects they could only attribute to the presence of a second, undetected receptor they named CB2. To prove the existence of the new receptor, the scientists injected the agents in a variety of animals, including rats, mice and ferrets. "It's widespread in every species," he said.

Located at the back of the brain, the CB2 receptor is present on nerves that control vomiting. The body has natural chemical messengers -- similar to plant-derived cannabis -- that can inhibit the vomiting nerves by acting on the receptor. Although marijuana mimics the body's chemical messengers, Sharkey says ingesting or smoking the drug doesn't have the same effect on the CB2 receptor. Instead, Sharkey said researchers will have to develop drugs to manipulate the body's own chemical messengers to act as "keys" that will unlock the CB2 receptor and bring nausea under control. New therapies could control nausea experienced by cancer and AIDS patients as well as pregnant women, he said.

Source: Calgary Herald, 14 Oct 2005. www.mapinc.org/drugnews/v05/n1633/a04.html

BC Health Officers Propose Controlled Regulatory Approach to Drug Control:

The Health Officers Council of British Columbia have released a discussion paper this month in Vancouver that is bound to be cited during the debate on Canada's drug policies. Entitled **A Public Health Approach to Drug Control in Canada**, it may be the most comprehensive, progressive and controversial report yet to be published on the issue. Taking a large page from the harm reduction book, it proposes legalization and regulation of all drugs, some with much more strict controls than others.

Dr. Richard Mathias, a specialist in community medicine and a professor of public health at the University of BC, said he envisions a regulatory framework that looks at drugs on an individual basis. Cannabis, for instance, would be legally sold and regulated because the "benefits outweigh the harms."

Dr. Mathias agrees that part of the national debate will centre on the concern that by legalizing these drugs you will only encourage their use.

"We don't believe this will create more users," he said. "We sell cigarettes and we've cut down usage substantially over the years through education. We'd do the same here."

The VICS has a copy of the report if members wish to see it.

Source: Globe & Mail, 18 Oct 2005. www.mapinc.org/drugnews/v05/n1651/a01.html

Got questions about growing? Our resident guru Mat has made available an e-mail address where you can direct queries -

askmat@hotmail.com

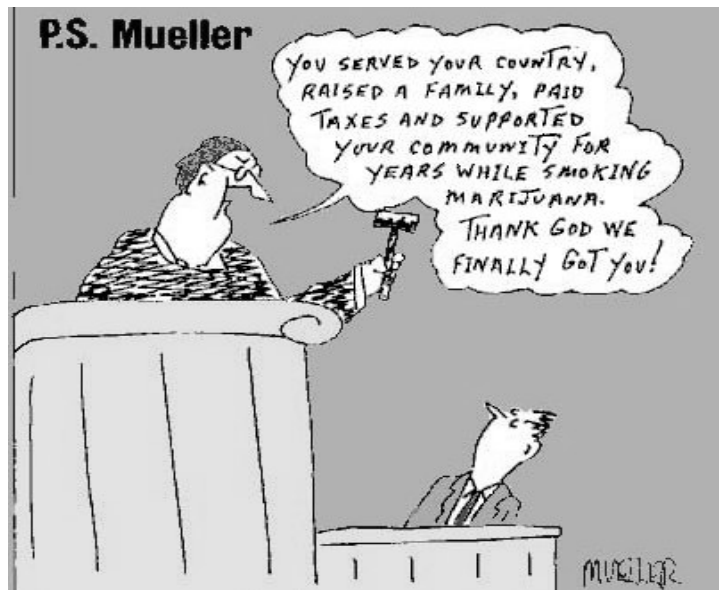
Your Bed As Swampy Ecosystem:

It's common knowledge that most beds are home to thousands of microscopic dust mites that can add up to a kilogram of excrement a year to your mattress. We humans feed the mites with our dead skin and water from roughly 100 litres of sweat annually.

However, researcher Ashley Woodcock at the University of Manchester (UK), was surprised at both the amount and variety of fungi when he tested ten pillows. Woodcock and his colleagues found up to 16 species of fungi, including types normally found in bread and bathrooms, and a more worrisome species called *Aspergillus fumigatus*, which is the leading cause of death from infection in patients with leukemia and bone-marrow transplants. Sleeping with fungi isn't necessarily bad, if you're healthy. But it can be deadly for those with compromised immune systems, and it may also worsen asthma.

By testing pillows of various ages, it was discovered that newer pillows did not have significantly less spores than the old ones. And, contrary to popular belief, pillows made from synthetic materials had five times as much dust-mite fecal material than feather pillows. Fortunately, good hygiene and regular washing of bedding (weekly for sheets, monthly for blankets) will keep the mites in check. People may also want to consider switching back to feather pillows, or bedding that can be easily cleaned.

Source: The Globe and Mail, Oct. 20, 2005.



Definitions:

credible *a.* (Of person or statement) believable, worthy of belief; (of threat etc.) convincing; hence or cognate *credibility n.* (credibility gap, seeming difference between official statements and the facts), *credibly adv.* [Middle English, from Latin *credibilis* (*credere* believe)] (The Concise Oxford Dictionary, 7th ed., 1983)

deserve *v.t.* do an ill turn to, especially when intending to help; serve (person) badly or imperfectly; so *deserve n.* [from DIS- + SERVE] (ibid.)

reckless *a.* lacking caution, regardless of consequences, rash; heedless of danger etc.; hence *recklessly adv.*, *recklessness n.* [Old English *reccleas*] (ibid.)

xylem *n.* Wood. Mixed vascular tissue, conducting water and mineral salts taken in by roots throughout the plant, which it provides with mechanical support. Of two kinds: primary and secondary. In mature woody plants, makes up bulk of vascular tissue itself and of entire structure of stems and roots.

(The Penguin Dictionary of Biology, 10th. ed., 2000)

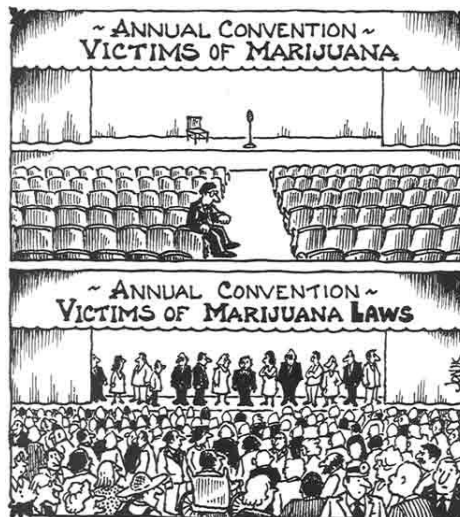
Cannabis Links To Cancer Going Up In Smoke :

Although cannabis and tobacco smoke contain cancer-causing chemicals, other qualities seem to keep it from promoting lung cancer, an American report says. The difference rests in the often opposing actions of the nicotine in tobacco and the active ingredient, THC, in cannabis, said Robert Melamede, of the University of Colorado, who reviewed the scientific evidence supporting this contention in a recent issue of the Harm Reduction Journal. Whereas nicotine has several effects that promote lung and other types of cancer, THC acts to counter the cancer-causing chemicals in cannabis smoke - it "turns down the carcinogenic potential", Dr Melamede said.

Laboratory research indicates that nicotine activates a body enzyme that converts certain chemicals in tobacco and cannabis smoke into cancer-promoting form. In contrast, studies in mice suggest that THC blocks this enzyme activity. Another key difference, he said, is in the immune-system effects of tobacco and cannabis. Smoke sends irritants into the respiratory system that trigger an immune-regulated inflammatory response, which involves the generation of potentially cell-damaging substances called free radicals. These are thought to contribute to several diseases, including cancer.

But cannabinoids - both those found in cannabis and the versions found naturally in the body - have been shown to reduce this inflammatory response, Dr Melamede said. Another difference between tobacco and cannabis smoking involves cells that line the respiratory tract. While these cells have receptors that act as docks for nicotine, similar receptors for THC and other cannabinoids have not been found.

Dr Melamede said nicotine appears to keep these cells from committing "suicide" when they are genetically damaged, by smoking, for instance. When such cells do not kill themselves off, they can become tumours. THC, however, does not appear to act this way



in the respiratory tract.

All of this backs studies that have failed to link cannabis smoking with a higher risk of lung cancer, although there is evidence that pot users have more problems such as chronic cough, and frequent respiratory infections, he said. If cannabis does not promote lung cancer, that could be a factor in the debate over the medical use of

cannabis. Dr Melamede believes "cannabis has loads of medicinal value", from conditions such as multiple sclerosis, to chronic arthritis pain, to nausea caused by cancer treatment.

Source: Sydney Morning Herald (Australia) 29 Oct 2005

<http://www.mapinc.org/drugnews/v05.n1716/a09.html>

Note: Robert Melamede's study is at www.mapinc.org/drugnews/v05.n1639.a04.html

VICS Hosting Information Sessions for WUF

The World Urban Forum (WUF) in Vancouver 2006, focussing on sustainable, inclusive urban centres, needs the input of women (VICS members or not). Two information sessions are to be held at the VICS on November 13 and 20th, starting at 12 noon. Information gathered will be used to represent the issues and concerns of this community at next year's forum.

Contact Debie at 592-4625 for more information.



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<http://www.safeaccess.ca>

Canadian Cannabis Coalition

www.cannabiscoalition.ca

Canada Medical Marijuana

www.medicalmarijuana.ca

Media Awareness Project

<http://www.mapinc.org>

Action Committee of People with Disabilities

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Health Canada

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Norml Canada

<http://www.normlcanada.org>

Cannabis Health

<http://www.cannabishealth.com>

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<http://www.cannabisresearchinstituteinc.com>

"The ultimate result of shielding men from the effects of folly is to fill the world with fools."

-- Herbert Spencer, biologist and early social philosopher