Canadian patients, through their doctors and with Health Canada authorization, have had access to medicinal marijuana since 1999. Meanwhile, study results in July 2007 confirmed earlier work linking marijuana use by young people to a significantly increased risk of schizophrenia and other psychotic disorders.

This month’s "Research Watch" examines current research into medicinal cannabis and renewed alarm about the potential danger of recreational use for certain groups.

Cannabis has been used recreationally and medicinally for thousands of years. Among the oldest known psychoactive plants, cannabis was the primary pain reliever before the development of Aspirin. Though outlawed in the United States in 1937, it was part of the US Pharmacopoeia until 1942.

POT PROS AND CONS
Medicinal cannabis is a useful anti-emetic for some patients with AIDS or hepatitis or for those undergoing chemotherapy. Beyond pain and nausea relief, various claims for cannabis’ medicinal uses include glaucoma prevention, reduced muscle spasm, appetite stimulation, and anticonvulsive properties.

Dozens of key medical organizations such as Health Canada, the American Academy of Family Physicians, and the British Medical Association have supported and lobbied for increased availability of medical marijuana. Even so, the US FDA concluded in 2006, “Marijuana has a high...
potential for abuse, has no currently accepted medical use in treatment in the United States, and has a lack of accepted safety for use under medical supervision."

PAIN CONTROL
In contrast to the strong anticannabis position by the US government, Health Canada funded one of the first studies to investigate the pain relief efficacy and safety of cannabis. The COMPASS study, launched in 2004 at the McGill University Health Centre Pain Centre, followed 1,400 patients across the country with chronic pain. For one year, 350 of these patients added research-grade herbal cannabis to their pain management program. Study results are expected in 2008.

Since 2004, several studies have examined pain relief for patients suffering from HIV or multiple sclerosis. For example, a small, randomized, placebo-controlled trial of 50 patients suffering from HIV-associated sensory neuropathy showed that cannabis reduced their levels of chronic pain at least as well as other oral medications.

Many newer studies are looking at the analgesic effects of specific substances of the cannabis plant called cannabinoids. Scientists are still not entirely certain about cannabinoids' exact mechanism of action. Health Canada has approved the cannabinoid drug Sativex for use as an adjunctive analgesic for patients with cancer or multiple sclerosis.

CANNABIS AND SCHIZOPHRENIA
In contrast to its promising analgesic benefits, results from studies on the relationship between cannabis use and schizophrenia are more troubling. Research has revealed two groups at very high risk of developing schizophrenia from cannabis use—anyone under the age of 21 and people with a certain genetic makeup.

Scientists in Great Britain have recently confirmed the results from a 1987 study that established a link between age, drug use, and schizophrenia. In the original study, respondents who reported heavy consumption of cannabis before their 18th birthday were six times more likely to be diagnosed with schizophrenia than those who had not used the drug. The 2007 study, reported in The Lancet, found the more cannabis used, the greater the risk of psychotic episodes.

A gene-related risk exists for individuals with at least one bad COMT gene. Cannabis use by individuals with two normal copies of COMT showed little effect. Those with one normal and one bad form of the gene had a slightly elevated risk of psychosis, but individuals with two copies of the bad gene who used cannabis saw their likelihood of developing psychosis increase by a factor of 10.

WHAT LIES AHEAD
Like many drugs, cannabis benefits some while harming others. Though street cannabis is widely available, it is unregulated, uncontrolled, and often adulterated. If most recreational users report few negative effects, a vulnerable few may find themselves on a downward spiral into mental illness.

One hope for those seeking relief from pain and suffering may be cannabis-based drugs. In this form, regulators can control purity of ingredients and establish dosages to ensure patient safety. Whether pill or herb, however, considerably more study is needed on the benefits and detriments of cannabis.

Deborah Cramer has been a science and technical writer for more than 20 years. She is fascinated by scientific breakthroughs and believes that accurate information empowers us all.