Medical Marijuana

Introduction

On July 30, 2001, the Canadian Narcotic Control Regulations were amended and the Marihuana Medical Access Regulations came into force. These new regulations create a compassionate framework that allows people who are suffering from serious illnesses to use marijuana if the drug is expected to have some medical benefit that outweighs the health risks. Marijuana is still an illegal drug in Canada.

The Marihuana Medical Access Regulations define the circumstance and manner in which marihuana can be used for medical purposes by people who are suffering from grave and debilitating illnesses. The regulations describe how people can be authorized to possess and grow marijuana without legal penalty. These new regulations deal exclusively with the medical use of marijuana, not the issue of legalization.

Although marijuana is viewed as fairly benign, evidence shows that it may have adverse effects on people with psychiatric conditions and who are also taking certain therapeutic drugs. People with severe mental illness who are considering whether to apply for an “authorization to possess” medical marijuana, or are recreational users, should talk to their physician about possible conflicts with their disorder and medications.

Who is eligible to use medical marijuana?

Under the new regulations, people can apply for permission to use marijuana for medical purposes if they have a terminal illness, suffer from certain medical conditions with severe pain, seizures, or weight loss, or have a serious medical condition where conventional treatments do not relieve symptoms. Successful applicants are allowed a maximum 30-day supply of marijuana for treatment at any given time.

What is marijuana?

Marijuana is a tobacco-like greenish or brownish material made of the dried flowering, fruiting tops and leaves of the Cannabis sativa plant. The drug takes three forms: marijuana, cannabis resin (hashish), and cannabis oil. Delta-9-tetrahydrocannabinol, abbreviated as THC, is the main psychoactive ingredient in cannabis. THC is found in a resin that covers the flowering tops and upper leaves in the female plant. Marijuana, the most common form of cannabis, is the most frequently used illicit drug in Canada, with an estimated one in four Canadians using it at some time in their lives. The most frequent users are young people between 15 and 24 years of age (McKenzie and Single, 1997).

What kind of effects does marijuana have?

Marijuana can make people feel happy, relaxed, comfortable and uninhibited. It also increases appetite, alters perceptions and reduces coordination. In large doses, marijuana can cause confusion, restlessness, anxiety, hallucinations and paranoia (Hall et al., 1999). It can also contribute to poor performance at work or school, and may cause learning problems in young people (Canada. Special Committee on Illegal Drugs, 2002). Some people with mental illness use
marijuana to relieve the symptoms of their disorder or the unpleasant side-effects of their medication (Hall, 1998; Dixon et al., 1990).

**Is marijuana a benign substance?**

In some respects, marijuana is safer than other “street” drugs, in that no known overdose deaths are recorded from marijuana alone (Kalant, 2001). Although the drug is often used socially like alcohol, frequent, long-term use can lead to several problems, especially for people with certain psychiatric disorders (such as schizophrenia, bipolar disorder, or post-traumatic stress disorder), young people (Patton et al., 2002), and those who are under severe emotional distress. Although the evidence is still unclear, heavy marijuana use may make the symptoms worse for mood disorders, depressive episodes, and personality disorders, as well as more severe conditions such as schizophrenia and psychosis. Marijuana may also mix badly with some psychiatric medications (Hall, 1998).

**How does marijuana affect mental illness?**

Psychotic episodes, like schizophrenia and bipolar disorder, are thought to occur because of problems in the dopamine neurotransmitter systems in the brain. Some drugs that are used to treat psychosis (such as neuroleptics) work by lowering dopamine levels in the brain. Drugs like the THC in marijuana (a cannabinoid) have the opposite effect, increasing the amount of dopamine released in the body, which may lead to psychosis (Hall, 1998; Stahl, 1996).

In problems like obsessive-compulsive disorder, marijuana stimulates activity in the brain, especially parts that regulate starting/stopping behaviour, loss of control and compulsion (Solowij, 1999; Volkow et al., 1996). This effect is quite unique because other drugs (cocaine, heroin, amphetamines, alcohol and benzodiazepines) reduce activity in these regions, making control more difficult (Solowij, 1999).

Recent research also suggests that marijuana helps bipolar patients manage their treatment (Grinspoon & Bakalar, 1998). Some people use it to treat mania, depression, or both, and claim that it may be more effective than conventional drugs. Marijuana also helps relieve the side effects of those drugs. These findings must be viewed with caution. More research is required to be certain if these results can be replicated in larger samples or last over time.

**Can marijuana use bring on psychotic disorders?**

The connection between marijuana use and psychosis is under debate. However, researchers agree that heavy use of marijuana can bring on an acute, passing, psychotic state in healthy people. Research shows that THC can cause normal people to experience psychotic symptoms, such as visual and auditory hallucinations, delusional ideas, and thought disorders (Hall et al., 1999). How often this happens is not known, and how it happens is not well understood.

The psychotic disorders caused by marijuana are brief episodes which begin suddenly, sometimes in association with a physical or psychological event. They may also happen with or without changes in how much of the drug is used, and they can last from a week to two months. Regular users are more likely than occasional users to experience psychotic events, with symptoms like behavioural problems, aggression, visual hallucinations, and delirium. Researchers think that marijuana psychosis only happens to people who are vulnerable to psychotic disorders (Channabasavanna et al., 1999; Hall et al., 1999).

**Is marijuana use related to schizophrenia?**

The evidence suggests that marijuana use can trigger schizophrenia in people with a family history of the disorder who are under severe stress, and it can aggravate schizophrenia symptoms in people who already have the disorder (Channabasavanna et al., 1999; Hall et al., 1999). Young
people who frequently use marijuana in high doses (Hall et al., 1999) are also more likely to
develop schizophrenia later in life (Hall, 1998; Andreasson et al., 1987; Arseneault et al. 2002).
People who have responded well to schizophrenia treatment may be prone to relapse while using
marijuana (Dixon et al., 1990).

The most contentious issue is whether or not marijuana use causes schizophrenia symptoms
which would not otherwise appear if the drug were not used. Researchers cannot rule out this
possibility (Channabasavanna et al., 1999; Hall et al., 1999; Zammit et al., 2002).

**Does marijuana conflict with drugs used in the treatment of mental illness or other health
problems?**

Psychoactive and therapeutic drugs share metabolic pathways with marijuana, making interactions
likely when they are used together (NIH. Ad Hoc Group of Experts, 1997). Used in conjunction with
marijuana, a prescribed drug may become toxic, lose its benefit, or have its effects increased. The
person’s age, weight, liver and kidney function, health and genetic makeup all contribute to what
happens.

Marijuana is known to interact with a wide range of drugs, including alcohol, barbiturates, nicotine,
amphetamines, cocaine, phencyclidine (PCP or “angel dust”), opiates, and tricyclic agents like
clozapine (for obsessive-compulsive disorder) (Fehr and Kalant, 1983). Anti-psychotic drugs
may be less effective when marijuana is used at the same time (Grotenhermen, 2003; Sutin &
Nahas, 1999). Marijuana also interacts with therapeutic drugs such as cancer chemotherapies,
drugs that control seizures, and tricyclic antidepressants. Tricyclic antidepressants and marijuana,
for example, both make the heart beat abnormally fast. When they are combined, there is an
additive effect, making the heart beat even faster.

Researchers believe that marijuana inhibits a particular enzyme in the body that is necessary to
metabolize antidepressants. If the enzyme is not doing its job, the antidepressant medication is not
broken down and may become toxic, making the person severely ill.

**Can people become addicted to marijuana?**

Heavy and frequent use of marijuana can lead to physical and psychological dependence
(Canada. Special Committee on Illegal Drugs, 2002; Channabasavanna et al., 1999; Hall et al.,
1999). Dependence happens when a person continues to use a drug heavily, even when they
suffer severe problems as a result. Physical dependence occurs when a person’s body chemistry
changes after repeated use of a drug and larger amounts of the drug are needed to get the same
effect that smaller doses achieved in the past. Psychological dependence occurs when a person
feels they cannot cope with normal life without having the drug. If marijuana use is stopped
suddenly, the person may experience a mild withdrawal syndrome, which may include loss of
appetite and weight loss, anxiety, sleep disturbance, irritability, sweating, and upset stomach. The
withdrawal syndrome may last less than a week, although sleep disturbances may last longer. In
this way, marijuana dependence resembles other dependence syndromes, such as alcohol or
heroin syndrome, as described in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*
of the American Psychiatric Association (Canada. Special Committee on Illegal Drugs, 2002).

Research suggests that the greatest consequences from marijuana are not related to health risks,
but arise from the criminal penalties for using, cultivating, or possessing an illegal product. The
possible consequences include having a criminal record, incarceration, restrictions on employment
and international travel, and family discord caused by arrest (CCSA, 2002; Hall et al., 1999).
References


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