



# MARIJUANA

**DEMYSTIFIED**

## INTRODUCTION

Marijuana has recently been legalised for medical use in Canada and the United States. The legalisation of marijuana is a hotly contested issue globally. In Singapore, marijuana, also known as cannabis, was included as a Schedule I drug in the 1961 Single Convention on Narcotic Drugs. Currently, grave punishments are meted out to individuals who abuse or possess the drug, with a fine of up to \$20,000 or imprisonment of up to ten years. In addition, individuals are liable to the death sentence if they import or export more than 500 g of cannabis or 200 g of its resin, or more than 1,000 g of the two combined.<sup>1</sup>

In 2015, the Central Narcotics Bureau noted an increase in the absolute number of cannabis users locally. More importantly, the media has reported a changing profile of these abusers. Instead of the dated perception of drug users being less educated and of a lower socio-economic status, cannabis abusers

these days are young and well-educated. Many abusers, however, have the perception that cannabis is not addictive. Clearly, such myths surrounding cannabis can be attributed in part to the legalisation efforts for its therapeutic use overseas. In this article, we will look at the current therapeutic applications of medical cannabis and the issues associated with cannabis abuse.

## MEDICAL USE OF CANNABIS

Medically, cannabis has been proposed for use in the treatment of paediatric developmental and behavioural disorders such as autistic disorder.<sup>2</sup> However, evidence of its effectiveness to date is limited only to single case studies and reports. Cannabis has also been purported to be of use for cancer treatment.<sup>3</sup> Studies have advocated that cannabis might help in the inhibition of cancer-related growth as well as curb the spread of cancer cells. These are largely initial findings that need to be validated by more

rigorous clinical trials. Cannabis has also been reported to aid in the treatment of neurological conditions such as epilepsy and headache.<sup>4</sup> It has also been advocated as a treatment modality for multiple sclerosis-associated spasticity. Despite these initial findings, more rigorous clinical trials are needed to prove its clinical efficacy before the drug can be integrated as part of a recommended treatment.

Cannabis has also been reported to be helpful for individuals experiencing digestive-related issues (eg, nausea and vomiting) arising from chemotherapy.<sup>5</sup> One of the main reasons for the legalisation of cannabis overseas is its purported usefulness in patients with terminal conditions. Thus, despite the problem of addiction associated with its use, therapeutic usage for this group of patients clearly outweighs the risks, due to the potential improvement in quality of life that this group of individuals will experience.

It is important for medical professionals to be cognisant that, while cannabis does have its therapeutic purpose, there are inherent risks associated with its use. This is especially important given the growing incidence of cannabis abuse locally and the changing perception of the young and educated towards this drug of abuse. It is pertinent for clinicians to be updated and informed, so that they can provide their patients with the latest information and the appropriate education.

## CANNABIS-INDUCED PROBLEMS

There is a multitude of psychiatric manifestations that could arise from the use of cannabis, apart from the addiction itself. Cannabis use may predispose individuals to depressive and anxiety disorders,<sup>6</sup> in addition to heightening the chance of them developing psychosis.<sup>7</sup>

Cannabis usage might result in a twofold increment in the risk of acquiring schizophrenia and a corresponding fourfold increase in the risk of psychosis. However, there are ethnic and genetic variants. It should be noted that individuals who are homozygous for the VAL/VAL alleles in the catechol-O-methyltransferase (COMT) genotype tend to be at enhanced risk. Those individuals who are homozygous for the MET/MET alleles in the COMT genotype tend to be not at enhanced risk. In addition, the usage of cannabis has been linked with an earlier age of onset of psychosis. Individuals who use cannabis tend

to develop psychosis earlier as compared to the norms in the general population. Prior meta-analyses have reported that these individuals develop psychosis three years earlier than the general population.<sup>8</sup> More recent research has highlighted the association between cannabis use and suicide, although it does predispose one to an increased risk of suicide.<sup>9</sup>

The use of cannabis can result in adverse medical complications such as cannabis-induced arteritis, cannabis-induced posterior circulation stroke and even myocardial infarction.<sup>10</sup> It can also lead to respiratory issues such as bullous emphysema and chronic obstructive lung disorder. Developmentally, youths who start using cannabis at a younger age may suffer from neurological complications and executive functioning deficits.

## CONCLUSION

While there is some evidence supporting the clinical efficacy of medical cannabis, the evidence needs to be carefully considered. Medical cannabis may be safe for a special subgroup of patients. However, for medical professionals at large, it is important to recognise not only the changing trend of drug usage, but also the worrying trend of cannabis abuse among young, educated individuals. As medical professionals, it is essential for us to be aware of the adverse effects of cannabis abuse and to counsel patients whom we suspect are at risk. ◆

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## PROFILE



TEXT BY

## DR MELVYN ZHANG

Dr Melvyn Zhang is currently a senior resident (Year5) in psychiatry with the National Healthcare Group. He has a special interest in addictions and E-health. To date, he has 33 publications, with major publications in the *British Medical Journal*, *Lancet Psychiatry* as well as the *Journal of Internet Medical Research (JIMR)*.



TEXT BY

## CHRISTOPHER CHEOK

Dr Christopher Cheok is currently the Vice-Chairman, Medical Board (National Addictions Management Service) of the Institute of Mental Health. He is a visiting consultant to the Singapore Armed Forces and a member of the medical board of the Civil Aviation Authority of Singapore. He has a special interest in child and adolescent psychiatry, psychological trauma and research.