k**NO**w CANNABIS



An information booklet on the harmful effects of cannabis

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FOREWORD

Singapore's comprehensive approach to tackling both drug supply and demand has allowed us to remain relatively drug-free. In 2019, the number of drug abusers arrested comprised less than 0.1% of our resident population.

However, youths today tend to have a more liberal view on drugs due to the influence of media and legalisation of cannabis in some countries. Misinformation of cannabis online may also further shape youths' perception that cannabis is not harmful and is less addictive.

It is important to differentiate between products containing unprocessed or raw cannabis marketed as "medical cannabis", and pharmaceutical products containing cannabinoids. Cannabinoids are chemical compounds found in the cannabis plant which can be medically administered through pharmaceutical products such as oral solutions and sprays.

There is some published research on the potential therapeutic uses of cannabinoids to manage seizures and epilepsy, and frameworks have been put in place for the supply, prescription and dispensation of such products for medical purposes in Singapore.

On the contrary, there is no evidence to support the medical efficacy of raw, unprocessed extracts of cannabis, despite some countries legalising such products.

Our drug control policies are underpinned by evidence and research. A literature review conducted by the Institute of Mental Health experts (published in 2016) affirmed the addictive and harmful nature of cannabis, and that it damages the brain. These findings reiterate our position that cannabis should remain an illicit drug. Decriminalisation of drugs and legalisation of cannabis are not the way forward, especially when our drug situation is well under control.

We hope that you will find this information booklet useful in equipping you with the knowledge of the harmful effects of cannabis, and in turn, pass on the knowledge to your students so that they will not be misled by inaccurate information online.

Mr. Ng Ser Song
Director
Central Narcotics Bureau

#DidYouKnow

Cannabis

Cannabis, derived from the Cannabis Sativa plant, is one of the oldest psychotropic drugs in human history.

Tetrahydrocannabinol (THC) is the main psychoactive substance in cannabis that causes abusers to feel "high". It also has adverse health impacts and is listed as a Class A controlled drug in the First Schedule of the Misuse of Drugs Act.

Worldwide, there were an estimated 188 million users of cannabis in 2017, corresponding to 3.8% of the global population aged 15-64. In Singapore, cannabis is amongst the top three drugs abused by new abusers.

"Medical Cannabis"

The so-called medical benefits and alleged harmlessness of cannabis have been in the spotlight, with some countries legalising the medical, and even recreational use of cannabis. It is important to differentiate between products containing unprocessed or raw cannabis and pharmaceutical products containing cannabinoids.

Some countries have legalised raw, unprocessed cannabis and extracts passing them off as "medical cannabis" and allowed them to be supplied as medication. To date, there are no studies which have validated the claims of raw, unprocessed extracts of cannabis being able to treat any medical conditions.

A limited number of pharmaceutical products contain cannabinoids, the chemical compounds found in the cannabis plant. One such potentially useful cannabinoid is cannabidiol (CBD) which does not cause intoxication or the "high" that comes from THC.



Singapore's Position On "Medical Cannabis"

There are pharmaceutical products containing cannaboids such as CBD which are designed to manage specific medical conditions such as certain forms of epilepsy and seizures. These are usually administered via oral solutions and sprays. As these products currently still contain some THC content, they are deemed as controlled drugs.

Despite it being a controlled drug, the prescription of such pharmaceutical products are viable, but subjected to strict health guidelines and assessment by the relevant authorities.

In Feb 2019, the Ministry of Home Affairs (MHA) and Ministry of Health (MOH) issued a joint statement clarifying the Singapore Government's position on the use of pharmaceutical products containing cannaboids.





KEY POINTS INCLUDE

- Evidence shows that raw cannabis is harmful and addictive, and there are no studies validating its use to treat medical conditions.
- CBD pharmaceuticals that may have medical value need to be reviewed by the Health Sciences Authority (HSA).
- There is avenue for safe and controlled access to evidence-based medical treatment programmes based on CBD pharmaceuticals.

Source

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¹ World Drug Report 2019, United Nations Office on Drugs and Crime

CANNABIS IS HIGHLY ADDICTIVE

"(Cannabis abuse) can lead to physical and psychological withdrawal (symptoms). Although the physical withdrawal may not be as severe as other substances, the psychological withdrawal is similar (as bad) as other substances.

(The) psychological withdrawal is the main part of the addiction. Once somebody gets addicted, it is very difficult to overcome the psychological withdrawal — the craving or the urge to continue marijuana abuse and the related mood problems, and (he) will take a long time to recover from the addiction."

Dr. Guo Song Senior Consultant National Addictions Management Service Institute of Mental Health





NEWS ARTICLES

True Account of An Ex-Abuser



• Story of Mr. Bruce Mathieu

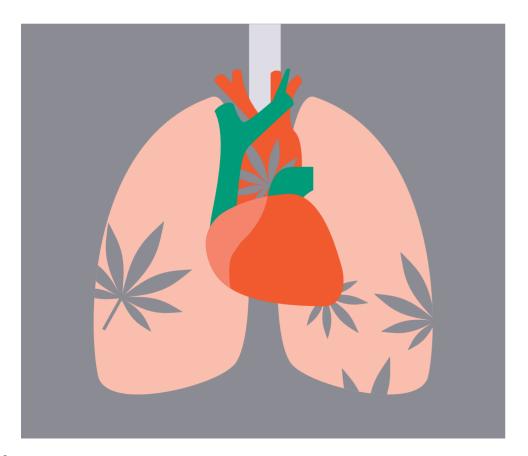


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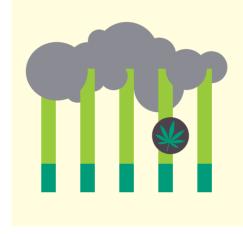
A Literature Review on Medical Cannabis: Conducted by a team of psychiatrists and researchers from the Institute of Mental Health, Singapore, 2016

CANNABIS IS HARMFUL TO THE BODY

Smoking cannabis is associated with symptoms of bronchitis such as morning cough, phlegm and chest wheeze. Reducing or quitting cannabis abuse is associated with reductions in the prevalence of the symptoms.



Smoking cannabis is associated with symptoms of bronchitis such as morning cough, phlegm and chest wheeze. Reducing or quitting cannabis abuse is associated with reductions in the prevalence of the symptoms.³



Cannabis abuse in pregnancy is linked to low birth weight in babies.⁴



Sources

- 3 Effects of quitting cannabis on respiratory symptoms. European Respiratory Journal 46:80-81, https://www.ncbi.nlm.nih.gov/pubmed/2587035, 2 Apr 2015
- 4 Prenatal exposure to cannabis and maternal and child health outcomes: A systematic review and meta-analysis. Gunn, J. K. L., C. B. Rosales, K. E. Center, A. Nunez, S. J. Gibson, C. Christ, and J. E.Ehiri., 2016

CANNABIS SMOKING IMPAIRS BRAIN DEVELOPMENT IN TEENS

Regular abuse of cannabis before the age of 18 leads to an average IQ of 6-8 fewer points at age 38 relative to those who did not abuse cannabis before 18 years old.



Teens who were heavy cannabis abusers (i.e. smoking daily for three years) had abnormal changes in their brain structures related to working memory and performed poorly on memory tasks ⁵

Studies have shown that adolescents who report regular cannabis abuse perform more poorly in tests on working memory, visual scanning, cognitive flexibility, and learning.⁶





Regular abuse of cannabis before the age of 18 leads to an average IQ of 6-8 fewer points at age 38 relative to those who did not abuse cannabis before 18 years old.⁷

Sources

- 5 Cannabis-related working memory deficits and associated subcortical morphological differences in healthy individuals and schizophrenia subjects. Schizophrenia Bulletin, Volume 40, Issue 2, 15 Dec 2013
- 6 Does cannabis consumption negatively affect cognition? A review of the scientific evidence. ASEAN Journal of Psychiatry Vol. 18 (2). Attilio Rapisarda, Keanne Lim, Jimmy Lee, Jul-Dec 2017
- The Dunedin Multidisciplinary Health and Development Study, https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC3479587/, 27 Aug 2012

CANNABIS ABUSE IS LINKED TO SCHIZOPHRENIA OR OTHER PSYCHOSES

"There are some evidence to suggest that cannabis usage – heavy and long term usage – can precipitate psychiatric conditions, or disorders like schizophrenia."

> Dr. Lim Boon Leng Psychiatrist & Medical Director Centre for Psychological Wellness



Daily cannabis abusers and high-potency abusers face higher risks of developing mental health issues.

In the largest study to date that involved 2,000 participants from 11 sites across Europe and Brazil, it was found that 50% of new cases of psychotic disorder in Amsterdam and 30% in London were linked to the abuse of high-potency cannabis.⁸

It was also found in the same study that daily cannabis abusers and high-potency abusers were respectively 3 times and 5 times more likely to develop psychotic disorder than those who had never abused the drug.



Source

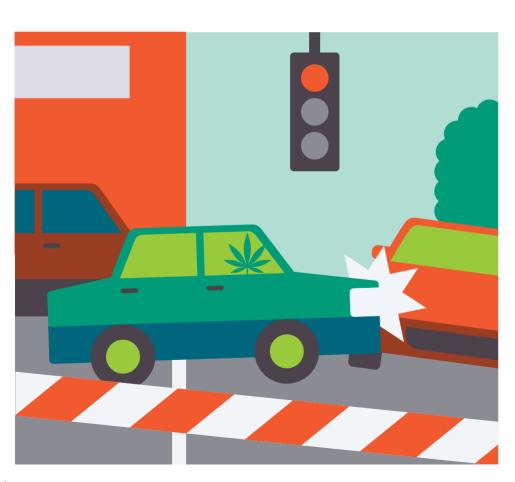
⁸ The Lancet Psychiatry Journal, https://www.thelancert.com/journals/lanpsy/article/PIIS2215-0366(19)30048-3 fulltext, 19 Mar 2019

CANNABIS ABUSE INCREASES RISK OF MOTOR VEHICLE ACCIDENTS

Based on a review of scientific evidence, cannabis abuse can increase the risk of a fatal accident by two- to seven-fold.⁹



In Colorado, there is a 151% increase in cannabis-related traffic deaths after cannabis legalisation.



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There is also a higher rate of police-reported crashes (5.2% higher) in Colorado, Washington DC and Oregon than neighbouring states that have not legalised recreational cannabis.¹¹



Sources

- 9 Does cannabis consumption negatively affect cognition? A review of the scientific evidence. ASEAN Journal of Psychiatry Vol. 18 (2). Attilio Rapisarda, Keanne Lim, Jimmy Lee, Jul–Dec 2017
- 10 The Legalization of Marijuana in Colorado: The Impact. Rocky Mountain High Intensity Drug Trafficking Area. Vol. 5 - 2018 Update
- 11 Effect of recreational marijuana sales on police-reported crashes in Colorado, Oregon, and Washington. Insurance Institute for Highway Safety. Samuel S. Monfort. Oct 2018

MEDICAL BENEFITS ARE NOT CONCLUSIVE

There is some evidence to support the use of CBD for certain limited conditions, but insufficient evidence to prove the effectiveness of cannabis use for most medical conditions.

There is some evidence to support the use of CBD for certain limited conditions, but insufficient evidence to prove the effectiveness of cannabis use for most medical conditions.

Pharmaceuticals containing cannabinoids need to undergo rigorous scientific review by the HSA before they can be registered for supply in Singapore.



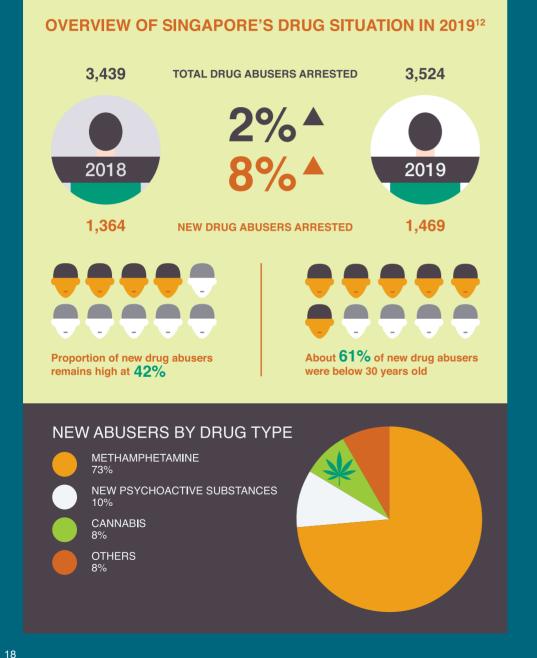
In the United States, the Food and Drug Administration (FDA) has only approved one CBD-based pharmaceutical for the treatment of specific medical conditions.



Many non-FDA-approved products are sold as "medical cannabis" and there is a lack of control over its access and quality, and no scientific basis for their alleged efficacy. The FDA has warned consumers that these products are not approved for diagnosis, cure, mitigation, treatment, or prevention of any disease. CBD products could contain THC despite claims that they are THC-free. The FDA has also conducted tests on several CBD products and many were found to not contain the levels of CBD they claimed to contain.



STATISTICS & TRENDS



WORRYING GLOBAL TRENDS (CALLS FOR LEGALISATION OF CANNABIS, DECRIMINALISATION OF DRUG USE)



- The World Drug Report 2019 by the United Nations Office on Drugs and Crime has highlighted that the most widely used drug worldwide is cannabis, and in most regions, there is an increasing proportion of people entering treatment for cannabis use disorders.
- There is an increasing number of foreign jurisdictions legalising cannabis for recreational use, especially in the Americas. Cannabis was first legalised for recreational use in Colorado and Washington in Nov 2012. Canada legalised it in Oct 2018.
- Internationally, some countries are decriminalising drug use and adopting harm reduction approaches, such as needle exchange programme. The priorities of these countries are to minimise costs from HIV and other blood-borne infections, rather than preventing drug abuse because drug abuse is often already pervasive. However, each country has the right to determine the best approach it needs to deal with its drug problems.

CHANGING PROFILE OF DRUG ABUSERS



- Cannabis is one of the most commonly abused drugs in Singapore.
- CNB is also seeing more cases of drug clusters amongst youths.
 Many of these youths had abused cannabis.
- The profiles of youth abusers have also evolved, with more coming from middle-class families and who are doing well in school.

Source

¹² The latest annual statistics are available at www.cnb.gov.sg

MORE LIBERAL VIEWS AMONGST YOUTHS

- 0
- Older youths seem to have more liberal views towards cannabis: that it
 is a "soft and cool" drug, is less harmful and less addictive than tobacco,
 and are hence more willing to experiment with it. These views are wrong
 and dangerous.
- The Ministry of Home Affairs (MHA) conducted a survey between Jul and Oct 2018 to study Singapore residents' perception of the drug situation in Singapore, and their support for Singapore's anti-drug policies. While the public's support for Singapore's tough stance against drugs was strong at 98%, only about 68% of youths perceived the consumption of cannabis to be harmful.
- Such views could have been influenced by what they read on the internet
 and social media that normalise drug-taking behaviour, by celebrities
 (e.g. Rihanna, Justin Bieber, Lindsay Lohan) glamourising a drug-taking
 lifestyle, and by the growing calls of support from pro-drug lobbyists
 seeking to decriminalise drug use and even legalise certain drugs.
- Many sources advocating cannabis use have hidden agendas. Very often, they may be sponsored by entities that would benefit commercially from cannabis legalisation. Teach your students to be discerning readers, and to take a step back to think critically when reading information from these sources.

NEWS ARTICLE

138 arrested in drug blitz.
 Cannabis chocolate and strawberry taffies seized.

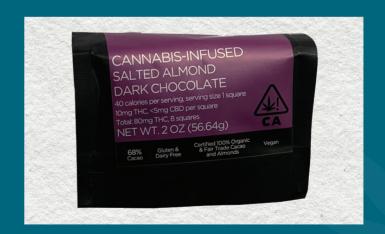


MARKETING TACTICS



- Companies use questionable marketing tactics that downplay or dismiss
 the harms of cannabis. They portray cannabis and its consumption as
 part of an active, natural lifestyle choice so as to shape public perception
 of cannabis and cannabis abusers.
- Cannabis has also been added into consumer edibles such as cookies and candies, normalising cannabis as a part of everyday edibles, making the young and impressionable think that cannabis is harmless and safe.





Cannabis-infused chocolate and strawberry taffies seized in a CNB raid.

TIPS & CONVERSATION STARTERS

CNB has the following Preventive Drug Education (PDE) offerings for schools and educators to take on an active role in keeping our young away from drugs. Contact us for more information at cnb_preventive_education_unit@cnb.gov.sg.

- After-School Engagement Programme (for Secondary students)
- Anti-Drug Ambassador Activity (for Primary 4 & 5 students)
- Augmented Reality Exhibition
 & Static Exhibition
- Drug Buster Academy (mobile exhibition bus)
- Illustrated Book "Captain Drug Buster vs Dr. Wacko: The Final Showdown" (available at all Primary School libraries & public libraries)
- Monthly PDE Newsletter (for teacher advocates)

- Message Cards
 (for educators & counsellors)
- PDE Skits (for Primary, Secondary & Post-Secondary students)
- PDE Talks (for students, educators & counsellors)
- PDE Videos on CNB.DrugFreeSG social media handles
- Small Group Sharing Sessions (for at-risk students)
- PDE Toolkit (for educators & counsellors)

LESSON PLANS & TEACHING AIDS

Lesson plans and teaching aids are available in the PDE Toolkit for Educators. To access, scan the QR code and refer to pages 104 - 142.



CNB has collaborated with the Ministry of Education (MOE) to incorporate PDE messages into some syllabi.

- "Drugs & Their Effects" module on MOE Student Learning Space
- Lower Secondary Science
 Normal (Technical) textbook
 "Science Around Us"
- Secondary 1 & 2 Character & Citizenship Education
- Primary 4 & 5 Health Education

KNOW THE SIGNS



Hangs around with a different group of friends



Sudden drop in school grades



Exhibits extreme mood swings



Displays poor body coordination



Has bloodshot / sunken eyes



Skips school regularly

WAYS TO HELP YOUTHS STAY DRUG-FREE



Listen to them when they feel stressed and suggest healthy group activities for a wider social circle.



Emphasise that substance abuse is not the right way to fit in.



Equip them with the skills to refuse drug offers.



Involve them in higher responsibility work so that they feel valued. Praise them when they deserve it.

INFOGRAPHICS

CNB has produced many useful PDE materials to aid persons of influence such as educators, counsellors and parents to raise awareness of drug abuse.

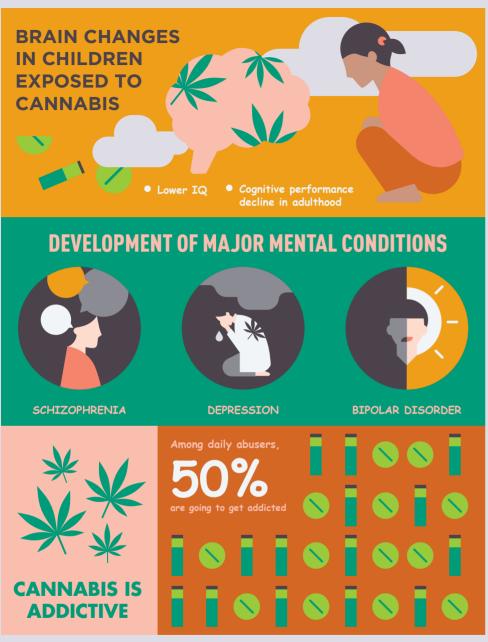
IMPACT OF CANNABIS ABUSE ON YOUR LIFE

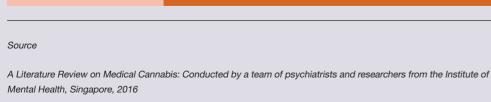
If you are a perfectly healthy person, would you jeopardize your lifestyle with...? MEN WOMEN HAIR LOSS BAD COMPLEXION Young male cannabis smokers are Acne and increased facial prone to hair loss MAN BOOBS MENSTRUAL CYCLE DISRUPTION Regular male cannabis smokers can develop Gynecomastia - aka man boobs

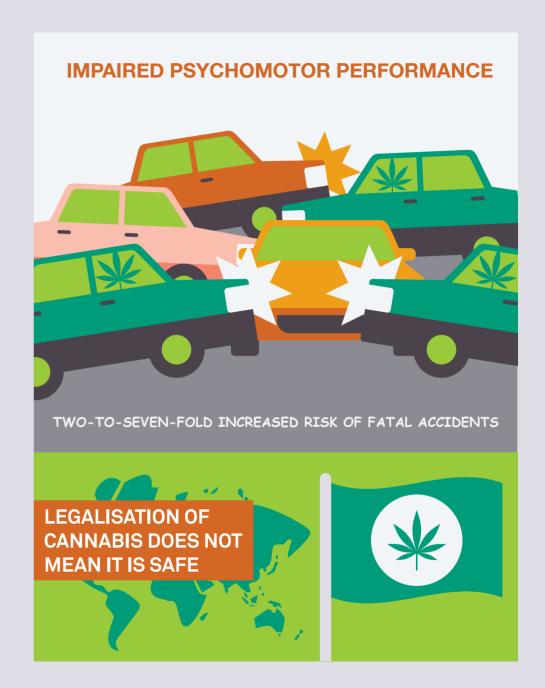
STRONG SUPPORT AGAINST LEGALISATION **OF CANNABIS** agreed that cannabis abuse should remain illegal in Singapore PERCEIVED CONSUMPTION OF **CANNABIS TO BE HARMFUL** (13 - 30 YEARS OLD) *Youths displayed more liberal attitudes towards drugs

Source

Public Perception Survey on Singapore's Anti-Drug Policies 2018







PHARMACEUTICAL PRODUCTS CONTAINING CANNABINOIDS



WHAT SHOULD YOU KNOW?

The International Narcotics Control Board (INCB) has warned about the risks of pharmaceutical products containing cannabinoids, and the dangers of legalising cannabis for recreational use.



Singapore adopts a zero-tolerance stance against illicit drugs, including cannabis. Cannabis is harmful, addictive and there is no scientific evidence on the safety and efficacy of cannabis use.



Cannabis use has adverse impact on public health. Effects of short-term use include intoxication and panic attacks, while long-term use is associated with dependence, stroke and increased risk of cancer.



Cannabinoids should only be approved for medical use on the basis of scientific evidence.



Clinical trials suggest that while some cannabinoids may relieve the symptoms of certain illnesses, they do not address the underlying diseases.



Attempts to market and promote the medical use of cannabis products as "herbal medicines" are inconsistent with the classification of cannabis and its deriatives under the 1961 and 1971 United Nation International Drug Control Conventions.



The legalisation of cannabis use contravenes international drug control treaties.

Source

Annual Report 2018, International Narcotics Control Board

VIDEOS

 Lancet Study: The Link Between Cannabis Use and Psychosis

0:43 min

Findings from the largest study of its kind to date show that daily cannabis abuse, as well as the abuse of high-potency cannabis, increase the risk of mental health problems.



Cannabis use is 'harmless' recreation?

2. Impact of Cannabis Legalisation

1:36 min

Learn what really happens when cannabis becomes legal in the neighbourhood.





3. Slow Motion Disaster

2:32 min

Kevin Sabet, President of Smart Approaches to Marijuana, shares about the harms of cannabis legalisation.





4. Dangers of Marijuana - Mental Health Issues

1:21 min

Dr. Jimmy Lee from Institute of Mental Health shares about the effects cannabis has on mental health.





5. Dangers of Marijuana Addiction

1:22 min

The video shows that although the risk of cannabis addiction may not be the same as heroin, there is still a high risk of developing psychological dependency on the drug.





6. Dangers of Marijuana - Medical Marijuana

1:31 min

Dr. Jimmy Lee from Institute of Mental Health shares about the harmful effects of "medical cannabis".





7. Cannabis

3.20 min

Learn about the harmful effects and addictive nature of cannabis, and understand the myths surrounding its use.





8. Harms of Cannabis

2:15 min

This video provides parents with a general overview of the harms of cannabis, and the worrying trend of increasing liberal attitudes among youths towards drugs.





POSTERS

These posters are also available at www.cnb.gov.sg.



WHY NOT DOING WEED IS GOOD FOR YOU



YOU SAVE YOUR BRAIN.

Cannabis creates mood heightening causing abusers to experience delusional emotions which abusers mistake for boosting creativity. However, long-term cannabis abuse appears to affect the memory process.



YOU SAVE YOUR LUNGS

Cannabis smoke contains a range of harmful chemicals that can irritate and damage the respiratory system. Cannabis abusers tend to develop chronic cough, acute chest illness and chest infections.



YOU HAVE MORE MONEY FOR CLOTHES, FOOD, AND MOVIES WITH FRIENDS.

It is expensive to feed an addiction. Why waste it on something that harms your body when you can save the money to buy a new pair of shoes or have brunch with your friends at the new café in town?

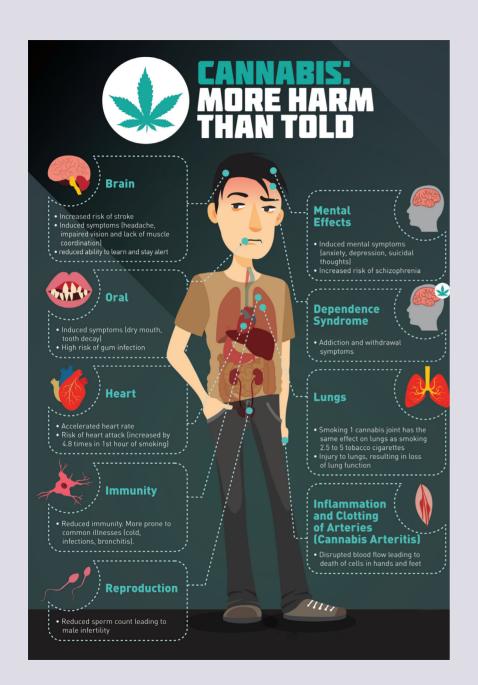


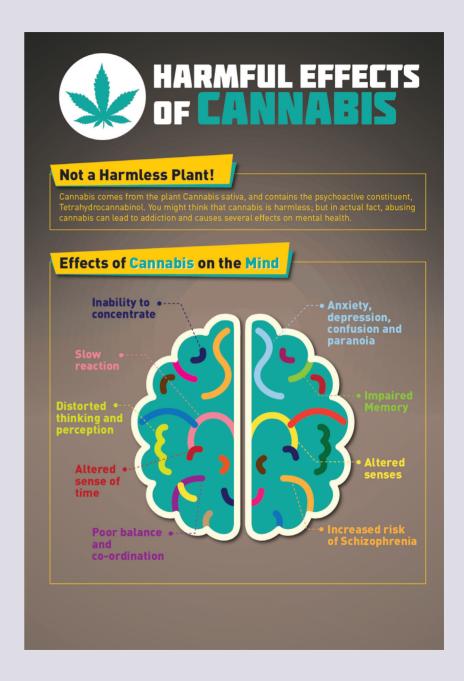
YOU HAVE MORE TIME TO SPEND WITH YOUR FRIENDS, FAMILY AND LOVED ONES.

The time you spend smoking and thinking about weed can be put to better use. Go to the movies with your friends, play a game of football with the guys or volunteer your time at the pet shelter.

DON'T GIVE ADDICTION A CHANCE TO ROB YOU OF YOUR FUTURE.







NOTES



#DidYouKnow that the colours of the anti-drug ribbon, which is a green ribbon over a white one, represent 'Health', 'Vitality' and 'Strength'?

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Visit the CNB website at www.cnb.gov.sg for more information. If you have been approached to try drugs or wish to report any information, please call the CNB hotline at 1800-325-6666







@CNB.DrugFreeSG