ncpic e-zine
national cannabis prevention and information centre
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contents

what's new in cannabis?

GP screening resource: Is cannabis the missing piece?

Click here to access NCPIC's new resource which encourages GPs to screen their patients for cannabis use. Material available includes GP and patient factsheets, the Severity of Dependence Scale, referral information and a flowchart which sets out the steps in the assessment and brief management of cannabis-related problems. See page 5 for this project's mini-site.

Cannabis use: Making an informed decision

Jan Copeland (PhD), *Professor/Director, NCPIC*

This is adapted from Professor Copeland's opinion piece that appeared in the Australian on 9 February, 2011.

Cannabis is a drug guaranteed to polarise public opinion. This is not surprising given the very different policy approaches to cannabis currently being debated internationally. The one thing most sides of this debate seem to have in common is their concern about adolescent cannabis use.

The higher rates of cannabis use amongst those with a psychotic illness and conversely the higher rates of psychotic illness amongst those that smoke cannabis has been the subject of much research and debate. Today we have a number of studies that followed individuals from birth or very early adolescence into adulthood. These have enabled scientists to examine all the known factors that might influence the onset of psychotic illnesses, particularly schizophrenia.

There is growing consensus that any cannabis use increases the risk of experiencing psychosis by 40 per cent and regular use doubles this risk. Using cannabis in early adolescence increases the risk even further. Despite the strengthening of the evidence for the important association between cannabis use and psychotic illnesses, as Donald Rumsfeld famously observed, the "unknown unknowns" that were not included in the studies will always be raised as a possible confounding factor.

An important study reported in early February by Dr Matthew Large and colleagues sheds light on one of these possible confounding factors. This latest research has brought together the findings of 83 studies that explored the nature of the relationship between cannabis, alcohol and other drugs and the onset of psychotic illnesses (typically schizophrenia). Using improved statistical techniques they were able to conclude that overall, cannabis use is associated with an earlier onset of psychotic illness by up to 2.7 years. Interestingly, alcohol use did not have any effect on age of onset. The study was also able to show that known influences such as gender or age differences between the samples of cannabis and non-cannabis users with psychosis were not responsible for the effect on age of illness onset.

The importance of adolescence and early adulthood for brain development is only recently being recognised. The adolescent period is characterised by rapid changes in brain growth and connectivity especially in those parts of the brain involved in the development of cognitive, affective and social processes. There is evidence that cannabis can disrupt this brain development which may explain the mechanism responsible for the earlier age of onset of psychosis among adolescent cannabis smokers. In particular, studies of a particular gene and environment interaction, that has a critical window in adolescence, are also helping to explain the mechanism behind this finding for some people.

A less well recognised consequence of adolescent cannabis use is the effect on educational attainment. A recent study combining three large Australian and New Zealand studies found that if there was no cannabis use there would be

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research publications

Relevant publications examining issues to do with cannabis that have been published in the last month include the following:

Agrawal, A., Nurnberger, J.I.Jr. & Lynskey, M.T. (2011). Cannabis involvement in individuals with bipolar disorder: The Bipolar Genome Study. *Psychiatry Research 185*, 459-461.

Ballard, M.E. & de Wit, H. (2011). Combined effects of acute, very-low-dose ethanol and delta(9)-tetrahydrocannabinol in healthy human volunteers. *Pharmacology Biochemistry and Behavior 97*, 627-631.

Berridge, B.J., Hall, K., Dillon, P., Hides, L., & Lubman, D.I. (2011). MAKINGtheLINK: A school-based health promotion programme to increase help-seeking for cannabis and mental health issues among adolescents. *Early Intervention in Psychiatry 5*, 81-88.

Buccellato, E., Carretta, D., Utan, A., Cavina, C., Speroni, E., Grassi, G., Candeletti, S., & Romualdi, P. (2011). Acute and chronic cannabinoid extracts administration affects motor function in a CREAE model of multiple sclerosis. *Journal of Ethnopharmacology 133*, 1033-1038.

Croche Santander, B., Alonso Salas, M.T. & Loscertales Abril, M. (2011). Accidental cannabis poisoning in children: Report of four cases in a tertiary care center from southern Spain. *Archivos Argentinos de Pediatria 109*, 4-7.

Donoghue, K., Medley, I., Brewin, J., Glazebrook, C., Mason, P., Cantwell, R., Jones, P.B., Harrison, G., & Doody, G.A. (2011). The association between substance misuse and first-episode psychosis in a defined UK geographical area during the 1990s. *Social Psychiatry and Psychiatric Epidemiology 46*, 137-142.

Farrimond, J.A., Mercier, M.S., Whalley, B.J., & Williams, C.M. (2011). Cannabis sativa and the endogenous cannabinoid system: Therapeutic potential for appetite regulation. *Phytotherapy Research 25*, 170-188.

Fernández-Fernández, F.J., Caínzos-Romero, T., Mesías Prego, A., & Sesma, P. (2011). Ectopic atrial rhythm associated with cannabis use. *Minerva Cardioangiologica 59*, 119-120.

Genetic Risk and Outcome in Psychosis (GROUP) Investigators. (2011). Evidence that familial liability for psychosis is expressed as differential sensitivity to cannabis: An analysis of patient-sibling and sibling-control pairs. *Archives of General Psychiatry 68*, 148-157.

Girling, S.J. & Fraser, M.A. (2011). Cannabis intoxication in three green iguanas (Iguana iguana). *The Journal of Small Animal Practice 52*, 113-116.

Ignatowska-Jankowska, B., Jankowski, M.M. & Swiergiel, A.H. (2011). Cannabidiol decreases body weight gain in rats: Involvement of CB2 receptors. *Neuroscience Letters 490*, 82-84.

Kelly, D.L., Gorelick, D.A., Conley, R.R., Boggs, D.L., Linthicum, J., Liu, F., Feldman, S., Ball, M.P., Wehring, H.J., McMahon, R.P., Huestis, M.A., Heishman, S.J., Warren, K.R., & Buchanan, R.W. (2011). Effects of the cannabinoid-1 receptor antagonist rimonabant on psychiatric symptoms in overweight people with schizophrenia: A randomized, double-blind, pilot study. *Journal of Clinical Psychopharmacology 31*, 86-91.

Lansbergen, M.M., Dumont, G.J., van Gerven, J.M., Buitelaar, J.K., & Verkes, R.J. (2011). Acute effects of MDMA (3,4-methylenedioxymethamphetamine) on EEG oscillations: Alone and in combination with ethanol or THC (delta-9-tetrahydrocannabinol). *Psychopharmacology (Berl) 213*, 745-756.

Le Guen, P.Y., Gestin, S., Plat, E., Quéhé, P., & Bressollette, L. (2011). Renal and spleen infarction after massive consumption of cannabis and cocaine in a young man. *Journal des Maladies Vasculairs 36*, 41-44.

Madsen, M.V., Peacock, L.P., Werge, T., Andersen, M.B., & Andreasen, J.T. (2011). Effects of cannabinoid CB_1 receptor agonism and antagonism on SKF81297-induced dyskinesia and haloperidol-induced dystonia in *Cebus apella* monkeys. *Neuropharmacology 60*, 418-422.

Temple, E.C., Brown, R.F. & Hine, D.W. (2011). The 'grass ceiling': Limitations in the literature hinder our understanding of cannabis use and its consequences. *Addiction 106*, 238-244.

Valvassori, S.S., Elias, G., de Souza, B., Petronilho, F., Dal-Pizzol, F., Kapczinski, F., Trzesniak, C., Tumas, V., Dursun, S., Nisihara Chagas, M.H., Hallak, J.E., Zuardi, A.W., Quevedo, J., & Crippa, J.A. (2011). Effects of cannabidiol on amphetamine-induced oxidative stress generation in an animal model of mania. *Journal of Psychopharmacology 25*, 274-280.

van Winkel, R. & Genetic Risk and Outcome of Psychosis (GROUP) Investigators. (2011). Family-based analysis of genetic variation underlying psychosis-inducing effects of cannabis: Sibling analysis and proband follow-up. *Archives of General Psychiatry 68*, 148-157.

commentary on research

MAKINGtheLINK: a school-based health promotion programme to increase help-seeking for cannabis and mental health issues among adolescents – a comment on Berridge and colleagues (2011)

Peter Gates

The authors bring our attention to the social, educational and psychological harms associated with an early initiation to cannabis use and the protective effects of early treatment. Yet, as the authors describe, young people are known to avoid professional help and seek assistance from less informed, informal sources such as peers and key adults (parents and teachers).

With this knowledge Berridge and colleagues (2011) recognised an opportunity to provide and evaluate a cannabis intervention which targets young people's instinctive concern for their peers' well being. Following consultation with Australian experts in help-seeking, youth mental health, youth drug use, education and health promotion, the authors developed the school-based health promotion programme 'MAKINGtheLINK'. This programme was designed to help young people recognise that the benefits of seeking professional help for cannabis use concerns or mental health problems outweigh any hesitation or fear in talking to a professional. The programme activities were not envisioned to be stand-alone lessons, but rather to complement existing mental health and drug education programs in schools. Most activities were delivered in the classroom over a 96 minute period utilising fictional scenarios.

To evaluate the programme the authors utilised two facilitators with mental health and teaching backgrounds who taught ten Year 10 classes (182 students divided evenly between the facilitators) with the usual class teacher observing. Students were a mean age of 15 years and mostly (69%) male. Immediately following the programme, the school staff (n=40), students (n=182) and observing teachers (n=11), were each asked to complete a programme satisfaction survey.

Over 90 per cent of students thought learning about help-seeking was important, 80 per cent were more aware of how to seek help, and 70 per cent were more confident to seek help following the programme. All staff agreed that teaching students about help-seeking was important and over 80 per cent were satisfied with the programme overall and felt that it helped their confidence in assisting a student to seek help. All the observing teachers were satisfied with the programme overall and felt they would consider using the programme with their students and 90 per cent felt confident to do so.

As indicated by the authors, the MAKINGtheLINK programme appeared to be a promising way to improve student help-seeking behaviours but must still be evaluated when delivered by classroom teachers and in more disparate school settings. Currently the MAKINGtheLINK programme is being disseminated across Australia so the importance of further research is critically important.

Berridge, B.J., Hall, K., Dillon, P., Hides, L., & Lubman, D. (2011). MAKINGtheLINK: A school-based health promotion programme to increase help-seeking for cannabis and mental health issues among adolescents. *Early Intervention in Psychiatry 5*, 81-88.

The MAKINGtheLINK program was developed by Orygen Youth Health, a Consortium Partner of NCPIC. The package can be accessed from the NCPIC website by clicking here.

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Cannabis use: Making an informed decision cont.

a 17 per cent reduction in the rates of high school drop-out. Possible reasons for this robust association may be that early use of cannabis sets in train biological, individual or social processes which affect motivation, learning or commitment to education that are independent of other known influences on educational outcomes.

These new findings provide further evidence that avoiding cannabis use, particularly in adolescence, can significantly delay the onset of psychosis and improve educational attainment. As the average age of onset for schizophrenia in males is around 18 years (later in females) these are critical years for brain development, achievement of social and cognitive maturation and educational attainment. Earlier onset of psychosis is also associated with poorer outcomes of the illness as is continued cannabis use. The need for public awareness of the significant risks associated with adolescent cannabis use is now even clearer. This would be important in reducing the individual and social burden arising from psychotic disorders and vocational under-achievement. The question remains of how best to communicate this information and more importantly, influence behaviour.

There has been a steady decline in cannabis use since the peak in 1998, especially amongst school-based young people. It is regrettable that no research has been conducted to shed light on exactly why this may have occurred in Australia and to a lesser extent in a number of other countries.

It is among the high risk and marginalised community members that rates of regular and heavy cannabis use are unchanged or increasing. Improved awareness, resilience building and support services for young people experiencing socio-economic disadvantage and marginalisation, particularly young people who are involved with the criminal justice system, Aboriginal and Torres Strait Island peoples and those with a family history of mental illness, should be the priority.

Approaches with those already involved in cannabis use need to acknowledge that like alcohol and other drugs, cannabis is generally used for its perceived positive effects. It is about making an informed decision in full knowledge of possible associated risks that may be experienced in light of their personal history and circumstances. This research adds to a growing body of evidence linking early cannabis use with multiple adverse outcomes, including psychosis, educational under-achievement, driving impairment and increased use of other illicit drugs that should inform the development of these tailored materials for communities and individuals.

Jan Copeland (PhD)

media stories this issue

Each issue we will examine some of the cannabis-related stories that have received media attention across the country. The headlines are listed below in bold, with a short summary and/or commentary regarding the content of the news story beneath.

If you are interested in obtaining a copy of a particular story, please contact Clare Chenoweth at c.chenoweth@unsw.edu.au

why it's known as reefer madness

The Australian: February 9, 2011

In this opinion piece by NCPIC's Professor Jan Copeland, she comments on UNSW researcher, Dr Matthew Large's paper 'Cannabis use and earlier onset of psychosis'. The paper, which was recently published in the *Archives of General Psychiatry*, presents the study's findings that "cannabis use hastens the onset of psychosis among young people by up to 2.7 years, often bringing mental illness forward to coincide with the critical years of adolescent brain development." Importantly, the study also found that "known influences such as gender or age differences between the samples of cannabis and non-cannabis users with psychosis were not responsible for this difference." The negative effects of cannabis use on educational attainment are also discussed. Finally, there is a pressing need to "urgently prioritise" vulnerable groups in society such as the young and those with a family history of mental illness, in public awareness campaigns and support services. Dr Large's study received widespread media coverage in both Australia and overseas.

Dutch move to weed out drug tourists

The Australian: February 14, 2011

In an effort to assuage the stem of tourists that travel to Holland to use drugs, the Dutch are "considering a law to turn their famous cannabis-vending 'coffee shops' into private clubs open only to locals." The proposed legislation would see only those with a "weed pass" allowed to buy drugs, with foreigners being banned from purchasing drugs. This proposal is not popular with the coffee shop owners as many believe that the large numbers of so called "drug tourists... boost the Dutch economy." Last year 1.4 million 'drug tourists' visited Holland.

smoking pot may make you impotent

IBN Live: February 15, 2011

A new study from the University of Ottawa and Queen's University in Canada has found that "heavy use of cannabis could actually lead to sexual dysfunction" among male cannabis users. The researchers believe that receptors for THC, which are mainly found in the smooth muscle of the penis, may be inhibited by the chemical.

study to target pot withdrawals

Northern Star: February 16, 2011

The Riverlands Drug and Alcohol Centre in Lismore and the University of Sydney are conducting a study for people who feel their cannabis use is problematic and want to cease using the drug. The researchers aim to "evaluate the safety and usefulness of the mood-stabilising medication, lithium, commonly used for the management of bipolar affective disorder in the management of cannabis withdrawal." Withdrawal symptoms such as "sleep difficulties... irritability... and anxiety" can make quitting cannabis challenging for some users so the Centre is offering a seven-day detox. The double-blind, randomised, placebo-controlled trial will administer either low doses of lithium or a placebo over seven days and participants will have access to the Centre's "back-up services, group meetings and other activities and will be closely monitored with urine, blood and saliva tests for levels of lithium, oxytocins and THC."

cannabis screening urged

Australian Doctor: February 18, 2011

NCPIC's new resource for general practitioners (GPs), 'Is cannabis the missing piece?' was featured in this article. The resource, which includes a screening tool for cannabis use problems, A2 and A4 posters for doctors' surgeries, patient and doctor factsheets and GP guidelines for the assessment and management of cannabis use disorder, amongst other materials, was launched recently at the HealthEd series of conferences. GPs are seen as being in an ideal position to screen for and offer support and referral to patients who may be experiencing cannabis-related issues. Despite many patients not consulting a GP specifically for cannabis-related issues, signs such as chronic coughs, depression or anxiety, or repeated sick-day certificate requests can alert a GP to screen for cannabis use and related problems. Please click here to learn more about this resource.

Downloadable or printed resources? Striking the right balance

Clare Chenoweth

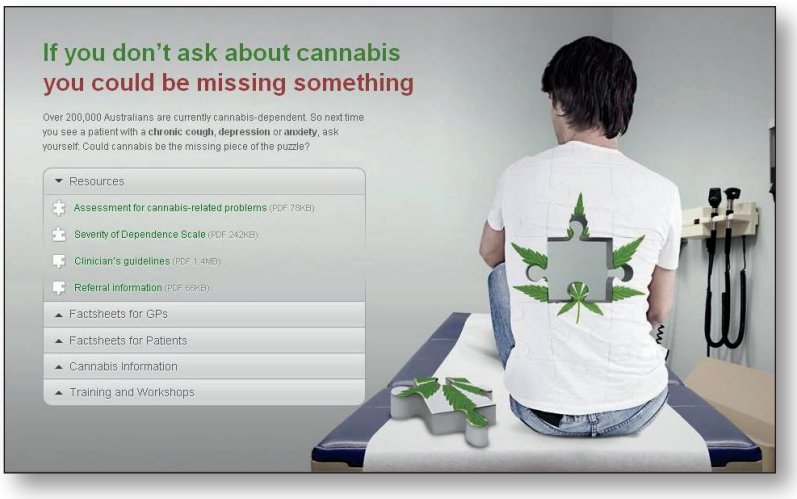
As more and more organisations come to rely on the internet for the publication and distribution of their materials and resources, the shift from printing to online dissemination of these gains momentum. The National Cannabis Prevention and Information Centre (NCPIC) designs and uploads PDFs of its diverse range of resources to its website in an effort to make them as widely accessible to the public as possible. Equity issues however, such as a lack of access to computers and the internet, necessitate the provision of printed materials which are sent free-of-charge to organisations and individuals around the country.

That said, our website (www.ncpic.org.au), houses the vast majority of our resources, which allows people to download, save and only print out documents if necessary. Sections of our website also contain pages designed to allow teachers, psychologists or alcohol and other drug (AOD) workers to view training materials, videos or conduct activities with their students/clients online. One such page, the 'Real-life stories for young people' (http://ncpic.org.au/youngpeople/stories/), features short stories and FAQs on various cannabis-related topics, which teachers can use to conduct lessons and group activities online with their students.

In the coming year, NCPIC plans to adapt a printed booklet resource designed to assist at-risk young people to quit or reduce their cannabis use into an online, interactive tool which AOD workers can work through with their clients.

Finally, rather than printing and posting NCPIC's monthly e-zine and periodical bulletins to our more than 600 subscribers, we email these out via an online campaign delivery system. This has the dual advantage of saving paper as well as facilitating a wider reach of these resources by allowing recipients to forward them on to colleagues, save the PDFs to their files or print out if necessary. We will continue to ensure we provide online versions of our resources over the coming years, while providing printed copies for those who might not otherwise have access to them online.

Is cannabis the missing piece? GP education package mini-site



Click here to view this mini-site and access the resources.

ncpic contact details

NCPIC is a consortium led by the National Drug and Alcohol Research Centre and is an Australian Government Department of Health and Ageing initiative

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