

ncpic e-zine

february/march 2008

national cannabis prevention and information centre

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what's
new in
cannabis?

media coverage regarding helpline

Nearly a quarter of all adults in the EU On Friday, February 8 Channel 7 News ran a story nationally promoting the Cannabis Information and Helpline. The piece, put together by journalist Aela Callan, featured NCPIC Director, Professor Jan Copeland, Ms Robyn Balfour from Lifeline, Mr Tony Trimmingham from Family Drug Support as well as an ex-cannabis user sourced from the Salvation Army.

At the end of the story the number of the Helpline was given and as a result Lifeline was inundated by callers. In fact they needed to bring extra staff in on the weekend to cope with the demand. Unfortunately NCPIC was not mentioned in the piece, although on the bright side this will probably assist us later in the year when we have an official launch

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director's report

Jan Copeland
(Professor/Director, NCPIC)

The last month has seen the National Cannabis Information and Helpline (CIH) receive a most favourable response from the community and service providers. The Channel 7 exclusive news story on the availability of the line certainly got the phones ringing across the country – congratulations Lifeline! This week should also see the website www.ncpic.org.au go live with the updated and new resources and A4 posters advising of the contact details for the CIH and website.

Over the next few months we will have editorials from the Directors of our consortium partners and the NCPIC divisional managers. This month Etty Matalon, the National Clinical Training Manager will outline her background and plans for the roll-out of our clinical training workshops over the next two and half years.

Etty has 20 years clinical experience in the alcohol and other drug field having worked at two major teaching hospitals in Sydney; as the Clinical Co-ordinator for a women's detoxification and rehabilitation service and program manager for a private psychiatric hospital. She was also the State President of the Australian Association for Cognitive and Behaviour Therapy for five years.

Throughout her career she has worked closely with the National Drug and Alcohol Research Centre (NDARC) and has provided her clinical services in relation to several trials, as well as clinical expertise with respect to several publications. She taught Drug and Alcohol studies at the Institute of TAFE and has extensive experience in group and individual counselling as well as

facilitating over 200 workshops and training seminars within education, health services and the Defence Forces in the areas of brief interventions for cannabis use disorders and alcohol treatment guidelines. She has also conducted relapse prevention groups for inmates within Corrective Services. She has an honours degree in Psychology and a Certificate IV in Workplace Training Techniques.

Her role as the National Clinical Training Manager for NCPIC is to plan, coordinate and disseminate best practice clinical information and education and to deliver training over a range of treatment interventions for health and allied health professionals. All the training and education delivered by the Centre will use competency-based training techniques. The training will be evaluated with regard to process, content and outcome.

It is envisaged that the delivery of national clinical training seminars and workshops will encompass a wide workforce, including nursing and allied health professionals, drug and alcohol workers, and youth workers. The delivery of these workshops has necessitated the development of a number of resources related to cannabis interventions for adults and adolescents.

The description of the free half day training on brief interventions for cannabis use related problems and the Adolescent Cannabis Check-up have been made available to the Directors of Drug and Alcohol Services in each state and territory to provide us with a liaison officer for each jurisdiction. Please contact Etty on etty@unsw.edu.au or (02) 93850262 for further information. Details of up coming training venues will be available on the website.

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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:

Aldington, S., Harwood, M., Cox, B., Weatherall, M., Beckert, L., Hansell, A., Pritchard, A., Robinson, G., & Beasley, R. on behalf of the Cannabis and Respiratory Disease Research Group. (2008). Cannabis use and risk of lung cancer: A case-control study. *European Respiratory Journal* 31, 280-286.

Brambilla, C. & Colonna, M. (2008). Cannabis: The next villain on the lung cancer battlefield? *European Respiratory Journal* 31, 2227-2228.

Hii, S.W., Tam, J.D.C., Thompson, B.R., & Naughton, M.T. (2008). Bullous lung disease due to marijuana. *Respirology* 13, 122-127.

Ishida, J.H., Peters, M.G., Jin, C., Louie, K., Tan, V., Bacchetti, P., & Terrault, N. (2008). Influence of cannabis use on severity of hepatitis C disease. *Clinical Gastroenterology and Hepatology* 6, 69-75.

Sarfaraz, S., Adhami, V.M., Syed, D.N., Afaq, F., & Mukhtar, H. (2008). Cannabinoids for Cancer Treatment: Progress and Promise. *Cancer Research* 68, 339-342.

Thomson, M.W., Poulton, R., Broadbent, J.M., Moffitt, T.E., Caspi, A., Beck, J.D., Welch, D., & Hancox, R.J. (2008). Cannabis smoking and periodontal disease among young adults. *Journal of the American Medical Association* 299, 525-531.

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– director's report

The second NCPIC Bulletin will be out by the end of this month and examines the BEACH data collected on presentations to GPs for cannabis and amphetamine related presentations over the past seven years.

There will be rigorous process and outcome evaluation of the CIH and we will make these findings available in future NCPIC E-Zines and Bulletins. We will soon have available an A4 poster and business cards with the CIH number and NCPIC website address so if you wish to receive some for your service please contact Paul Dillon on p.dillon@unsw.edu.au. I hope the next E-Zine will be about the NCPIC website going live – all the initial material is developed so fingers crossed!

commentary on research cannabis use and lung disease

A comment on Hii, Tam, Thompson, and Naughton (2008)

Anthony Arcuri

Although the degree to which tobacco smoking contributes to lung disease is well understood, little is known about the effects of cannabis smoking on the lungs. To expand on this limited knowledge, Hii and colleagues (2008) examined the lungs of eight male and two female patients who presented to their respiratory unit with shortness of breath, collapsed lung, or chest infection, and who had used cannabis regularly for at least one continuous year of their lives.

Through computer imaging technology, the researchers found in all of the patients evidence of lung disease in the form of severe bullae (fluid-filled, thin-walled blisters) of different shapes and sizes. Unexpectedly, despite such lung disease, chest x-rays were normal and lung function was only mildly reduced in nearly half of the patients. Nonetheless, the authors pointed out that, compared with two previously studied groups of tobacco smokers, the cannabis users in their study were more likely to demonstrate lung abnormalities and dysfunction. In addition, this group of cannabis users was, at an average of 41 years old, considerably younger than previously researched tobacco-smoking patients with lung disease, who had an average age of between 62 and 67 years.

The authors note that the younger age of lung disease and poorer lung function among these cannabis users compared to previously examined tobacco smokers may be due in part to the different smoking patterns demonstrated by cannabis users, who have been found to inhale larger amounts of smoke, which they hold in their lungs for longer periods of time. In addition, these findings may be related to those of Moir and colleagues' (2007) study, in which

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– media coverage regarding helpline

of the Centre and its products. We thank all those who took the time to be filmed for the segment, particularly Tony Trimmingham who travelled from Leura to Parramatta for his interview.

cannabis smoke was found to have higher concentrations of dangerous chemicals than tobacco smoke, as discussed in last month's E-zine.

However, over half of the cannabis users in Hii and colleagues' study were also current tobacco smokers, and the remainder were former tobacco smokers. Therefore, it is possible that the combined effects of tobacco and cannabis use served to hasten and heighten the disease and dysfunction of the patients' lungs. Indeed, the authors acknowledged the need for future research of this nature to control for tobacco smoking, and to be conducted with larger numbers of cannabis users based in the community, in order to substantiate their findings. Nonetheless, this study provides valuable preliminary findings regarding the potentially significant contribution of cannabis use to lung disease.

references

Hii, S. W., Tam, J. D. C., Thompson, B. R., & Naughton, M. T. (2008). Bullous lung disease due to marijuana. *Respirology*, 13, 122-127.

Moir, D., Rickert, W. S., Levasseur, G., Larose, Y., Maertens, R., White, P., et al. (2007). A comparison of mainstream and sidestream marijuana and tobacco cigarette smoke produced under two machine smoking conditions. *Chemical Research in Toxicology*, 7 December, (Electronic publication ahead of print).

cannabis use and gum disease

A comment on Thomson et al. (2008)

Anthony Arcuri

Periodontal disease (or periodontitis) is a chronic bacterial infection that damages the gums and bone supporting the teeth. Left untreated, it can result in the loosening and eventual loss of the teeth. Tobacco smoking has been recognised as a significant contributor to such disease, via the indirect but deleterious effects of nicotine and other toxins on immune response and blood flow. Because cannabis has been found to contain toxins similar to those found in tobacco (at potentially more dangerous levels), and given that cannabis smoke is typically inhaled in larger amounts and held in the lungs for longer periods

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– cannabis use and gum disease

of time than is tobacco smoke, Thomson et al. (2008) examined (for the first time) the contribution of cannabis use to periodontal disease.

To do so, the researchers analysed data collected from a birth cohort of 903 New Zealanders at ages 18, 21, 26, and 32 years. Periodontal disease was checked for during dental examinations at ages 26 and 32 years using two measures (one more stringent than the other) of the reduction in connective tissue attaching the root of the tooth to the bone (a phenomenon known as ‘periodontal attachment loss’). Cannabis exposure was calculated as the average number of occasions of use in the previous year across the four times of measurement, and was divided into three categories: no exposure, some exposure (average of 1-40 occasions in the previous year), and high exposure (41 or more occasions, which represented the highest 20% of measurements). Other variables measured included tobacco smoking, gender, socio-economic status, pattern of dental service use, and oral cleanliness, all of which were controlled for when testing the ability of cannabis use to predict periodontal disease.

The results of the analysis revealed that, after controlling for the above potentially confounding variables, those in the high cannabis exposure group (compared with those in the no exposure group) were, at 32 years old, over one and a half times as likely to demonstrate periodontal disease (and over three times as likely using the more stringent measure of periodontal attachment loss). In a similar analysis for those who had never smoked tobacco, those in the high cannabis exposure group were over twice as likely to demonstrate periodontal disease (and over four and a half times as likely using the more stringent measure of periodontal attachment loss). Furthermore, those in the high cannabis exposure group (compared with those in the no exposure group) were over twice as likely to have developed periodontal disease between the ages of 26 and 32 years. Although tobacco smoking was strongly associated with the condition, there was no interaction between tobacco smoking and cannabis use in predicting periodontal disease.

The authors concluded that their findings indicate that long-term, regular cannabis use (with or without concurrent tobacco smoking) is detrimental to the gums and bones supporting the teeth. However,

this conclusion should be considered against the potential limitations of the study’s design. First, both cannabis use and tobacco smoking were determined by the participants’ retrospective reports, which could have led to inaccurate measurements. Second, periodontal attachment loss was potentially underestimated given the fractional method by which it was measured. Finally, the researchers did not measure the degree to which tobacco was mixed with the cannabis smoked by the participants; however, they noted that “the typical pattern of cannabis used in New Zealand does not involve mixing it with tobacco” (p. 530). Despite this progressive study’s limitations, its strengths (such as the 98% follow-up rate of the birth cohort) add weight to its findings, which highlight the need for further research examining the role of cannabis use in the development of periodontal disease.

references

Thomson, M.W., Poulton, R., Broadbent, J.M., Moffitt, T.E., Caspi, A., Beck, J.D., Welch, D., & Hancox, R.J. (2008). Cannabis smoking and periodontal disease among young adults. *Journal of the American Medical Association* 299, 525-531.

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 Paul Dillon at p.dillon@unsw.edu.au.

This month has seen a great deal of media interest in the area of cannabis. A number of key studies were published during that period and some of the headlines were sensational to say

the least. According to media articles cannabis could fight cancer, cure cancer, cause lung disease, rot your teeth and be as difficult to quit as tobacco! It is important for anyone who is working with cannabis users that they do not rely on media articles alone when collecting information. Make sure that you go to the article being reported and get the whole story.

hard drugs no lure for cannabis-smoking mild ones

West Australian: January 21, 2008

A study conducted by Colmar Brunton Research found that the ‘occasional puff on a joint’ was considered acceptable by almost a third of people who responded. Other drugs were not viewed in the same light. More than three quarters of the sample said that it was never acceptable to use amphetamines or cocaine, and 70% felt the same way about ecstasy. Unfortunately, the sample size for the study was not given in the article, nor was their any information on how the data was collected.

new study shows marijuana may fight cancer

West Australia: January 21, 2008

Other headlines for this story were ‘Marijuana could slow cancer’, ‘Cannabis has more benefits’, ‘Pot may inhibit tumours’ and ‘Marijuana may stop cancer’.

According to the stories that ran across the country, the active ingredient in marijuana may suppress tumour invasion in highly invasive cancers. Cannabinoids, the active components in cannabis, are already used medically to reduce the side effects of cancer treatment, such as pain, weight loss and vomiting. This new research from Germany, published in the *Journal of the National Cancer Institute*, finds that these compounds may also have an anti-cancer effect.

In actual fact...

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– media stories this issue

cannabis targeted

Cooktown Local News: January 23, 2008

Cannabis abuse in Cape York's indigenous communities will be targeted under a police-led project called 'Weed It Out'. The partnership between the far Northern Region Drug Squad, James Cook University researchers and members of the Cape and Torres Strait's indigenous communities will use local language and local concepts in information packages to "hammer home" the extent of drug-related problems.

pot users increase risk. cannabis smoking hastens lung disease

Courier Mail: January 25, 2008

This study reporting on 10 patients, published in the journal *Respirology* was covered widely across the country, with most stories focusing in on the finding that heavy cannabis smokers will suffer serious lung disease two decades earlier than their cigarette smoking counterparts. According to the stories the style of cannabis smoking is to blame, with the deep, slow inhalation and long breath hold predisposing cannabis smokers to lung damage much earlier in life. Of particular concern is bullous lung disease, a debilitating condition where air trapped in the lungs causes obstruction to breathing leading to its eventual destruction.

california approves marijuana vending machines

Sydney Morning Herald: January 29, 2008

Patients in California can now buy legal marijuana through a vending machine at a herbal nutrition centre in Los Angeles. Medical cannabis may be legally used & cultivated by qualified patients in California under Proposition 215, provided they have a recommendation from a licensed physician. The state limit is set at 6 mature or 12 immature plants and 8 ounces marijuana, except where physician declares more is needed, or where local governments authorize more.

marijuana overhaul

Broome Advertiser: January 31, 2008

This report discusses a study the National Drug Research Institute (NDR) which revealed that many West Australians wrongly believe cannabis use is legal.

cannabis a larger risk than smokes

Launceston Examiner: January 31, 2008

This New Zealand study received widespread attention across the country, both in the print and broadcast media. The finding that was most usually reported was that smoking a joint is equivalent to 20 cigarettes in terms of lung cancer risk. The stories quoted the researchers as warning of an "epidemic" of lung cancers linked to cannabis.

urban myths put to rest in cancer study

The Australian: February 4, 2008

This report published in *Mutation Research Reviews* received widespread coverage across the country and was designed to combat urban myths about what causes cancer. Smoking, drinking alcohol and deliberate exposure to sunlight were in the highest risk bracket. According to the report, smoking cannabis is likely to cause cancer but has not yet been definitely proven.

marijuana withdrawal rivals nicotine

The Australian: February 5, 2008

Quitting cannabis can cause withdrawal symptoms as severe as those from quitting tobacco, a small US study published in *Drug and Alcohol Dependence* suggests. The study of 12 adults who were heavy users of both cannabis and cigarettes, found that stopping either substance triggered similar withdrawal symptoms. As with nicotine withdrawal, quitting cannabis caused symptoms such as irritability, anxiety, sleep problems and difficulty concentrating, researchers found.

cannabis makes teeth fall out

Border Mail: February 6, 2008

This story received a great deal of attention and some of the best headlines we've yet seen, including

'Dope hurts gums', Teeth going to pot', an 'By gum, weed use is dopey'. The paper the story refers to is from New Zealand and published in the *Journal of the American Medical Association*. In it the authors say that the findings indicate a "strong association ... (that) indicates long-term smoking of cannabis is detrimental to the periodontal tissues." The gum disease, periodontitis, is strongly linked to tobacco smoking and eats away at the supporting tissues around the teeth. It has been thought of as a disease of middle age, but this study found 32 year olds with the highest cannabis usage were 60% more likely than non-users to have developed holes in their periodontal tissue 4mm or more

drug busts hits supply chain

The Advertiser: February 13, 2008

We don't normally cover 'drug busts' but this story that reported "man traps" being laid around a cannabis crop caught our attention. More than 430 mature cannabis plants, some up to 2m high and worth more than \$500,000, were seized over the past two days from several sites in national parks, scrub land and private farms near Port Lincoln, SA. A "witness" said the main plantation also had about a dozen sharpened steel rods about 1m high stuck in the ground and pointing upwards and spread among the cannabis plants, apparently as potential traps for unwanted visitors.

something extra...

One story that did not get a run in this country but received widespread attention in the UK involved mental health campaigners calling for manufacturers of papers used to make hand-rolled cigarettes to print warnings about the dangers of cannabis on their product.

UK group, Rethink accused the makers of UK's best selling brand, Rizla of "being irresponsible". Jane Harris, Rethink's head of campaigns, pointed to the results of a survey which suggested that many members of the public associated the product more with cannabis use than tobacco smoking.

In response, the manufacturer of Rizla, Imperial, said it did not endorse drug use, and stressed it followed legal requirements on warnings.

cannabis and the gateway theory: what do we know?

Most people who use illegal drugs, like heroin or amphetamine, first used drugs like alcohol, tobacco or cannabis. These substances, but most usually cannabis, are seen as a 'gateway' to the use of other, more dangerous drugs. However, the vast majority of people who do use cigarettes, alcohol or cannabis never use other illicit drugs. For example, while the majority of heroin users have used cannabis, only around 4% of cannabis users have used heroin.

The risk of using other drugs is greater for cannabis users who start regularly using at a young age and those who become dependent. The link between cannabis use and the use of other illicit drugs is usually due to personal traits (possibly even genetic) that make it more likely for the person to take part in risky behaviour. Associating with people who use illicit drugs also means there are more opportunities to experiment. It does not appear that there is anything about cannabis in particular that leads to the use of other illicit drugs.

how long does it take for cannabis to leave the body: what do we know?

Depending on how cannabis is used, the body absorbs, metabolises and gets rid of THC differently. When it is smoked, the effects come on quickly, because the THC is rapidly absorbed into the lungs and enters the bloodstream within minutes. THC begins metabolising in

what do we know?

the lungs and continues in the liver, forming several different compounds (metabolites).

When it is eaten, THC takes much longer to be absorbed into the blood, so the effects come on more slowly (about an hour), and last a lot longer than when it is smoked. Because people might use more while they are waiting for the effects to come on, it is harder to control the desired dose and effects, which may be unpleasant.

Cannabis is stored in the fatty tissues, until it is slowly released back into the bloodstream and excreted from the body. As a result, traces of cannabis can be detected in urine for up to several weeks, depending on factors such as how much, how long and how often it is used. Traces of cannabis can be detected in the urine of regular users for more than a month after the last use.

Urine tests can really only identify whether cannabis has or has not been used in the recent past. They cannot accurately tell when or how much a person has smoked. Tests can also detect cannabis in blood, strands of hair and saliva, but more research is needed to establish how accurately they can measure patterns of use.

cannabis and bongs: what do we know?

Like tobacco, cannabis tars are rich in carcinogenic compounds known as polycyclic aromatic hydrocarbons, which play a part in smoking-related cancers. Cannabinoids, the chemicals distinctive to cannabis, including THC (the substance which gets you 'stoned'), are not carcinogenic. One study investigating the relative 'safety' of various smoking devices believed an obvious way to protect smokers' health was to therefore minimize the content of smoke tars to cannabinoids. They then set out to look at various cannabis paraphernalia (e.g., joints, waterpipes or 'bongs' and vaporizers) and examine how effective they were at reducing the concentration of tars relative to cannabinoids.

The study proved disappointing to bong lovers. For many the attraction to bongs is the cooler, milder smoke they produce, unfortunately this does not mean that they are actually less harmful. In fact, the study indicated that bongs may actually be counterproductive by increasing consumption of carcinogenic tars, i.e., waterpipes filter out more psychoactive THC than they do other tars, thereby requiring users to smoke more to get the same effect.

The authors were still able to find some 'positive' benefits of bongs, suggesting that they may filter out other, non-solid smoke toxins occurring in the smoke. Noxious gases known to occur in cannabis smoke include hydrogen cyanide, volatile phenols, aldehydes (which promote cancer) and carbon monoxide (a risk factor in heart disease). Some studies have indicated that smoking with a bong and the subsequent water filtration may be effective in absorbing some of these.

ncpic contact details

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

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