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# MONOGRAPHS

A cannabis reader: global issues and local  
experiences

Perspectives on cannabis controversies, treatment and  
regulation in Europe

**Editors**

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VOLUME I

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# Chapter 11

## Cannabis: a harm reduction perspective

**Keywords:** cannabis – education – harm reduction – information – vaporisers

### Setting the context

‘Harm reduction’ means many things to many people. A useful and concise definition is provided by the UN’s Glossary of Terms on Demand Reduction <sup>(1)</sup>, which mentions ‘policies or programmes that focus on reducing the harm resulting from the use of alcohol or other drugs, both to the individual and larger community (...) without necessarily requiring abstinence’. The definition clarifies that harm reduction may ‘precede subsequent efforts to achieve total abstinence’ and ‘is neutral regarding the wisdom or morality of continued drug use and should not be synonymous with moves to legalize, decriminalize or promote drug use’.

With regard to cannabis, harm reduction is more difficult to define than, say, programmes to reduce needle injuries, hepatitis and HIV transmission among heroin users. One problem is that harm reduction for cannabis is often a bottom-up phenomenon that is delivered via unofficial rather than governmental or central sources, for example, cannabis magazines, websites and headshops. Harm reduction is also transferred via word of mouth. Long before a user comes into contact with a drugs professional, information will be delivered by dealers, fellow cannabis users, peers and siblings.

Among the more formal harm reduction programmes, there is considerable overlap across harm reduction, prevention and early treatment interventions. For example, low threshold interventions such as drugs helplines, the Jellinek self-screening test and French [cannabisetconduite.fr](http://cannabisetconduite.fr) campaign (see Burkhart, and Beck and Legleye,

<sup>(1)</sup> UNODCCP (2000), *Demand reduction: a glossary of terms*, UNODCCP, Vienna. Available at: [www.unodc.org/pdf/report\\_2000-11-30\\_1.pdf](http://www.unodc.org/pdf/report_2000-11-30_1.pdf)

this monograph) could be loosely defined as harm reduction initiatives. Although the nature of harm reduction programmes varies greatly across the EU, many programmes borrow from the fields of alcohol and tobacco. Actions include advice on safer modes of administration (e.g. on the use of vaporisers, on rolling safer joints, on less risky modes of inhaling); skills to prevent confrontation with those who disapprove of use; encouraging users to moderate their use; discouraging mixing cannabis with other drugs; drug driving prevention and controls; reducing third-party exposure to second-hand smoke; education about spotting signs of problematic use; and self-screening for problematic use.

First and foremost, harm reduction centres on helping users to make informed decisions with information that is understandable, accurate and non-judgemental. For example, a recent initiative, the Evidence-based Electronic Library for Drugs and Addiction (EELDA) <sup>(2)</sup>, attempts to filter the huge body of scientific literature on cannabis, cocaine and ecstasy into a more accessible format using relatively simple language. It includes discussion of the risks of cannabis use as it relates to medical conditions (while pregnant, if epileptic, if suffering from liver, lung or heart problems) and to specific use settings (at work, when driving).

This chapter focuses on specific work on harm reduction at the HIT project in the United Kingdom. Its discussion of the need to communicate effectively, to empathise with cannabis users and to understand the motivations for using cannabis will be relevant to drugs practitioners everywhere.

## Further reading

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<sup>(2)</sup> See <http://en.eelda.org/index.aspx?o=5809>

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# Cannabis: a harm reduction perspective

**Andrew Bennett**

Harm reduction forms a part of many European countries' response to licit and illicit drug use: drinkers are advised to consume alcohol at safe levels; heroin users receive substitute drugs such as methadone; and drug injectors are encouraged to use clean injecting equipment.

## Defining harm reduction

There is not a generally accepted definition of harm reduction. Historically, the main stimulus to the development of harm reduction policies and programmes was the identification of the role of injecting drug use and the sharing of needles and syringes in the transmission of HIV (Hunt, 2003). This led to the introduction of a range of practical initiatives such as needle and exchange schemes, low threshold services and programmes offering safer injecting advice. Thus, harm reduction strategies were seen as concerned with providing services to drug users at the individual level intending to reduce risk or rates of harm (e.g. needle exchange), while also aiming to reduce harm to others, e.g. preventing HIV among the wider community; and reducing public nuisance connected to drug taking.

Harm reduction definitions often do not describe whose harm should take priority: the user, the family or the wider community, and what type of harm it refers to — health, social, economic. Harm reduction also posits that individuals are able to make rational decisions about their behaviour. Once informed about the risks associated with drug use and how to avoid them, drug users are expected to be able to act on this information (Rhodes, 2002). While some commentators have seen abstinence as an ideal goal, most harm reduction strategies do not require abstinence.

Swift et al. (2004) provide practical criteria for assessing whether a policy or programme practises harm reduction that encompasses some of the above key points. Their central defining characteristic of harm reduction is the reduction of harm as a primary goal rather than the reduction of use per se. It must include strategies for those that continue to use as well as those aimed at reduction of use or abstinence. There should also be some attempt to evaluate whether these strategies will result in a net reduction in drug-related harm.

While harm reduction is often associated with schemes to reduce the harms of opioid use, strategies have also addressed other substances, in particular tobacco and alcohol. These include alcohol campaigns promoting sensible drinking and discouraging drink driving, training bar staff and door staff in avoiding incidents of drunkenness, and public space smoking bans to reduce people's exposure to second-hand smoke. While experience and practical measures are still limited, harm reduction may also have a role to play in helping with cannabis-related problems.

## Health-related harm reduction and cannabis

### Information, education and communication

Citizens in the EU will have varying degrees of access to a range of materials and media designed to impart knowledge about cannabis. However, drug related information, education and communication is an area of practice that is widespread yet seriously under-researched. In his review of harm reduction research, Hunt concludes that the existing evidence says very little about what sort of approaches work; for whom; to what extent; and whether they are cost-effective (Hunt, 2003).

In the United Kingdom, a small number of government-funded but independent organisations, such as DrugScope, HIT and Lifeline, produce and distribute booklets, leaflets and posters; host websites; and run multi-component campaigns that focus specifically on cannabis or include cannabis amongst other drug communications. Schools have a mandatory responsibility to educate young people about drugs, including cannabis. While guidance exists regarding school-based education and drug communication, the nature and extent of both activities can vary enormously. Increasingly, much health information is disseminated through non-official channels. Cannabis users, activists, 'headshops' and seed suppliers inform and educate about cannabis. Increasingly, websites and other multimedia publications offer information on the health effects of cannabis <sup>(3)</sup>.

Information, education and communication approaches are not necessarily strategies of harm reduction.

Producing information materials that aim to reduce harm rather than prevent use per se is challenging, especially when the target audience is young people. Politicians, the media, parents and others can easily misconstrue a resource as condoning or

<sup>(3)</sup> While web resources on cannabis vary greatly, some sites offer strong harm reduction materials, for example [www.seedsman.com/en/health/cannabis-and-health](http://www.seedsman.com/en/health/cannabis-and-health) and <http://en.eelda.org/index.aspx?o=5809>

encouraging drug use. Below is an extract from HIT's *The Stuff on Cannabis* booklet, which is aimed at young people aged 14 and above. The objective of the booklet (in its entirety and not just the extract) is to provide accurate, acceptable and useful information about cannabis for young people. The goal of the resource is to reduce harm.

To avoid the dangers of cannabis:

Don't use it. But if people do use cannabis the advice is ...

Don't take too much or use too often. Don't smoke every day.

Be aware that some types are very strong and could make you feel bad.

Remember it is still illegal and you could get into trouble with the law.

Don't smoke it with tobacco.

Avoid using it when you feel really down. It will probably make you feel worse.

Don't operate machinery or drive whilst stoned.

Avoid sexual situations you may later regret. If you have sex, use condoms.

Don't take other drugs at the same time, particularly alcohol. Mixing drugs can be dangerous.

If you are trying to cut down or stop, avoid people using it and places where they go.

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## Consumption methods and techniques

The potential long-term harmful consequences of cannabis use are strongly related with the consumption method, that is respiratory risks associated with smoking the drug without, or simultaneously with, tobacco. A UK House of Lords Cannabis Report (1998) proposed the following hierarchy of risk:

Smoking a cannabis and tobacco joint is the most risky way of using the drug because the tars and toxins (plus the cigarette paper) is inhaled. Smoking a cannabis only joint enables the user to avoid inhaling tobacco. If cannabis is smoked in a pipe, no papers are burnt and inhaled and a proportion of tars and toxins may remain in the pipe. Water pipes or bongs may have advantages since the smoke will be inhaled at a cooler temperature and some tars may remain suspended in the water. Vaporisers are designed to heat cannabis to a point where the THC will be released without the plant combusting. Finally, the respiratory risks of cannabis smoking would be completely eliminated if users adopted oral methods of use.

Although research shows that cannabis may be a risk factor for the development of respiratory-related diseases (see Witton, this monograph), cannabis smoking is not thought to have a major public health impact on respiratory risks, including cancer, because most cannabis users stop their use in their 20s, few smoke more than a few joints in each session and the number of people who use in a chronic way is currently relatively small (Hall and MacPhee, 2002).

Nonetheless, recent information of the comparative pulmonary risks of cannabis smoking vis-à-vis cannabis smoking has improved, and suggests that cannabis has a similar effect on airflow obstruction to the lungs of two-and-a-half to five cigarettes (Aldington et al., 2007). Moreover, the low overall impact of cannabis smoking assumes that existing low-intensity patterns of use, together with a tendency for users to quit in their 20s, will continue. If more people smoked cannabis more frequently and for longer periods of their lives, the public health impact associated with respiratory-related diseases would be greater. It is also important to consider that cannabis consumption affects public health in other ways, for example its contribution to mental health problems and the consequences to users of a criminal conviction.

A number of cannabis resources provide information about specific techniques and tips that may reduce potential harm linked to airflow obstruction and inhalation of toxins. The rationale for such advice by necessity is often based on ‘common sense’ rather than research evidence. Below is an extract from HIT’s cannabis booklet, which is aimed at cannabis users aged 16 and above.

You should:

Avoid holding the smoke in your lungs – you won’t get any more stoned and this just makes more tar and other dangerous chemicals stick to your lungs.

Avoid inhaling too deeply – sucking on a bong or buckets may cool the smoke, but it forces it deeper into your lungs, so you breathe in more tar.

Clean weed properly – the bulk of THC is in the sticky tops and flowers, so you should take out the stem, leaves and other bits.

Avoid using a cigarette filter for a roach – filters may reduce the amount of THC you smoke. As a result you inhale more deeply which may increase the amount of tar you breathe. Avoid using anything printed (printers’ ink gives off dangerous fumes when heated). A piece of plain card, loosely rolled up for a roach, allows the smoke to flow easily.

Avoid using too many papers — three-skinners are big enough and you will inhale less burnt paper.

Avoid using plastic bottles, rubber hoses, PVC, aluminium or foil to smoke cannabis — these all give off toxic fumes when hot (you run fewer health risks with a pipe made from glass, steel or brass).

Clean bongs and pipes properly after use – germs can hang around long enough to infect you and your friends.

Warning: Just because you like to get high, it doesn’t mean everyone does. Show some respect and don’t smoke around others, particularly children, who may be affected by you sparking up.

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## Assessing the evidence that one mode of consumption is safer than another

In theory, the risk of damage to the respiratory system could be reduced if users adopted consumption methods and techniques that reduced the inhalation of cannabis (and tobacco) and related tars and toxins. The evidence for proposing that one mode of consumption is safer than another is, however, limited.

Laboratory studies suggested vaporisers provided the safest delivery of cannabis when compared with unfiltered and filtered joints and waterpipes (Gieringer, 1996; 2001). Vaporisers heat cannabis to temperatures between 180°C and 200°C and above, enabling the release of THC and other cannabinoids as a fine mist while reducing the toxic byproducts of smoked cannabis. While vaporisers are becoming increasingly available for cannabis smokers, a need for a safe delivery mode for therapeutic cannabis products have also prompted interest in this technology.

Perhaps surprisingly, the unfiltered joint 'performed better' than the waterpipes, that is, the ratio of THC to tar was less in an unfiltered joint compared with the waterpipes. The performance of the filtered joint was similar to the waterpipe, that is, the filter reduces the amount of THC, thus leading to the user inhaling more vigorously, resulting in increasing the amount of tars. The two vaporisers performed better than the unfiltered joint. A follow-up study by Gieringer (2001) confirmed that vaporisers offer the best prospects for reducing the harm from cannabis smoke. However, the researchers stress caution with these findings. They point out that the findings in the laboratory may not be reflected in humans, for example, the potency of cannabis used may be different than street cannabis.

Further research has been done on vaporisers as a delivery method. A laboratory study found that a vaporisation device provided an efficient and reproducible mode of delivery of THC (Hazekamp et al., 2006). A further pilot human laboratory study comparing a vaporiser to smoked cannabis found that the vaporiser was as effective as delivering THC but with little or no increase in carbon monoxide levels, a marker for toxins that may be generated by smoking (Abrams et al., 2007). Further suggestive evidence for the value of vaporisers emerged from a large Internet survey, which found that the use of vaporisers was associated with fewer respiratory symptoms than other modes of delivery used by respondents, although the self-selecting nature of the sample and the self-report basis of the data limits the generalisability of the study's findings (Earleywine and Barnwell, 2007).

This may have important health implications if, as is reported in Australia, users believe waterpipes are 'safer' because the water cools the smoke and dissolves some tar (Hall and Solowij, 1998). The study raised concerns about waterpipes not necessarily

protecting users from dangerous tars since they filter out more psychoactive THC than they do tars, thereby requiring users to smoke more to get the desired effect. The research raises doubts about the likelihood of an improved high by using waterpipes because some of the THC is lost in the water. However, as Gieringer (1996) and Iversen (2000) recognise, this 'loss' may be compensated by simply using more cannabis and holding the fumes in the lungs for longer periods.

Some studies also highlight the possibility that increased cannabis potency may have a potentially protective effect, since the concentration of tars relative to THC will be reduced. If this is the case, it would suggest a contradictory perspective to that which is most commonly highlighted in scientific and popular debate regarding increased THC potency, namely that potency increase causes increased adverse health effects (Hall and Swift, 2000; see also King, this monograph).

### **Will cannabis users adopt safer ways of administration?**

The consumption modes significantly associated with respiratory risks — cannabis and tobacco joint or cannabis joint — are the most frequently used in Europe. Conversely, only a minority of cannabis users choose to vaporise or swallow the drug as their main method of use, even though they offer a means to avoid respiratory risks. Hence, it is important to pose the question: will users adopt safer ways of administration?

Smoking is an effective way of delivering drugs to the brain and the rapid delivery of the drug to the brain by smoking seems to be an important factor in determining the subjective experience of the 'high' (Iversen, 2000). The effects are felt almost instantly and it is relatively easy to control or titrate the dose, for example if the cannabis is stronger than anticipated, the user will know this within a matter of seconds. By contrast, taking cannabis by the mouth is less reliable in delivering a consistent dose of the drug. Most of the drug when swallowed will be processed in the liver before general circulation takes it to the brain. The peak levels of the drug, and thus the 'high', will occur 1–4 hours after taking the drug (Stafford, 1992; see also Corrigan, this monograph).

However, the behaviours and consequences of cannabis consumption are not just determined by the drug and its method of use. Individual beliefs, expectations and reasons for using, as well as the social environment in which it is used, are also important. Surprisingly, there is a limited amount of research that explores the social context, use preferences and roles of cannabis use. Research that did explore the functions and pathways of young adult drug takers in Salford in the United Kingdom illustrates that different modes of cannabis consumption produce different effects.

I don't really take buckets <sup>(4)</sup> cos they don't really agree with me, the rush is too fast. It hits me too quick. I like to get it gradually. I'll have a bong cos it don't hit you as fast. Spliffs are just

brilliant because you get everything out of it, you get all the feeling. Buckets you don't cos it just hits you and then it's gone. Bongs hit you slow but it don't last long.

20-year-old unemployed female, as quoted in Henderson (1995).

In a *Mixmag* (2002) <sup>(5)</sup> article a 'willing guinea pig examines the merits of spliffs, bongs and cakes'. In response to the question 'how long till you're battered?' the guinea pig answers 'two minutes' (spliff), 'little under a minute' (bong) and 'two hours' (cake). In response to the question, 'how long do you feel caned for?' the subject answers 'two hours' (spliff), 'no idea ... in the morning I realise it had lasted six hours' (bong) and 'fucking ages. I'm useless for eight hours' (cakes).

Bell et al.'s (1998) research focuses on the role of friendship groups as a means of initial contact with cannabis, and learning about its use in the context of transitions to adulthood. He argues that understanding the social context of cannabis use involves examining their explanations for cannabis use, the methods of use, the physical location and the time they take it, and the social group it occurs within. Examples are provided of young people experimenting with a range of methods of using cannabis, and different ways of getting a 'hit', sometimes with unintended consequences, as one interviewee explains:

I was cookin' it and that, yeah, an' I didnae get to ma bed til about 4 am, ken and I didnae feel quite right ken, I woke up in the morning and I was still the same.<sup>(6)</sup>

Research conducted by Bennett (2002) explored the reasons why people use cannabis in the way they do and discussed the public health implications of the findings. It was concluded that a range of factors negate against the adoption of safer consumption methods. Cannabis, when inhaled in the form of a joint or spliff, is controllable in terms of the severity and length of the effect when compared with using bongs and vaporisers or eating the drug. Preparing and sharing joints is routine and a social activity. Alternative methods of smoking, including bongs and vaporisers, involve using other paraphernalia that may be inconvenient to use and expensive to buy. Further research that examines the different nuances and complexities of cannabis use, including consumption methods and techniques, is needed.

(4) 'Buckets' is a way of smoking cannabis in the UK. Usually, the cannabis smoke is captured in a plastic bottle with the bottom cut off. The plastic bottle is then pushed down into water (often in a bucket), thus causing the cannabis smoke to be released very quickly through the top of the bottle in relatively large amounts. The smoke is then inhaled.

(5) *Mixmag* is a UK dance magazine. The phrase 'how long till you're battered?' means, how long before you feel the effect of the cannabis; and 'how long do you feel caned for?' means, how long do the effects last.

(6) The extract is in the local dialect. The word 'cookin' refers to preparing cannabis in food; and 'ken' should read 'know what I mean'.

## Cannabis and tobacco: double trouble?

It has been estimated that 70% of cannabis users in the United Kingdom smoke with tobacco (Atha and Blandhard, 1997). Two qualitative studies in Scotland with 15- to 19-year-olds have identified three links between cannabis and tobacco (Amos et al., 2004) <sup>(7)</sup>. These are:

- Cannabis is linked to starting tobacco consumption — ‘I hadn’t smoked at all, but ... I got into that (hash) and then that made me get addicted to tobacco.’
- Cannabis can reinforce tobacco consumption — ‘if you’ve no’ got any hash, you just smoke your fags.’
- Cannabis can make giving-up tobacco more difficult — ‘I’ve tried to stop smoking but ... you cannae go without a fag ... you need it for your hash.’

Recognising the cannabis-tobacco link, Health Scotland published a booklet for young people titled *Fags ‘n’ Hash: the essential guide to cutting down the risks of using tobacco and cannabis*. In some parts of the United Kingdom, the National Health Service tobacco smoking cessation services are incorporating cannabis within their interventions with adults. Faced with the difficulties in promoting safer cannabis use, secondary prevention and treatment approaches aimed at controlling, cutting down or stopping consumption could also be seen as a plausible harm reduction technique.

A number of countries have recently developed and implemented interventions designed to enable heavy, frequent users to reduce or stop their cannabis use. In the UK the government in 2004 launched the *Know Cannabis* campaign to enable users to cut down or stop their cannabis consumption. The multi-component campaign included leaflets, posters, *A Guide to Cutting Down or Stopping Cannabis* and a self-help website <sup>(8)</sup>. In the Netherlands a self-help website has been in existence for a number of years <sup>(9)</sup>. These interventions use cognitive behavioural approaches, and include: assessment of the benefits and costs of cannabis; planning and preparing for change; setting targets; identifying high-risk situations; dealing with withdrawal; and relapse prevention.

The above types of secondary prevention or treatment approaches should form a part of a comprehensive approach to reducing cannabis-related harm. Harm reduction establishes a hierarchy of goals, with the more immediate and realistic ones to be achieved as first steps toward reduced risks or, if appropriate, abstinence. Cannabis users need to be aware and have the option of accessing a range of appropriate interventions.

<sup>(7)</sup> ‘Hash’ is cannabis and ‘fags’ are cigarettes.

<sup>(8)</sup> See [www.knowcannabis.org.uk](http://www.knowcannabis.org.uk)

<sup>(9)</sup> See [www.jellinek.nl/zelfhulp/cannabis](http://www.jellinek.nl/zelfhulp/cannabis)

## Conclusion

Cannabis is the most widely used drug in Europe and many users seemingly enjoy their use of the drug without it leading to any significant negative social or health effects. However, it is not a harm-free drug. Heavy, frequent use is associated with increased susceptibility to respiratory disorders, dependency, precipitation or exacerbation of mental health problems in vulnerable people, and cognitive impairment. Some young people, especially those that use heavily and frequently, may be particularly vulnerable to mental health problems. Furthermore, a criminal record as a consequence of cannabis can also cause problems.

Harm reduction frameworks provide a useful way to appraise and respond to cannabis-related problems. However, there is a lack of information about the design and delivery of harm reduction interventions, and a greater lack of evidence of successful application. Many EU countries are beginning to recognise the healthcare needs of cannabis users. There is a need for the development of accessible interventions for cannabis-related problems including accurate, credible and targeted information; and secondary prevention for young people and adults who want to cut down or stop their cannabis consumption.

Unfortunately, the most common method of using cannabis — smoking — is also the most risky mode of administration. While some cannabis consumption methods and techniques, such as vaporiser use, may protect health to an extent, the evidence base is limited. Social, cultural and economic obstacles, and preferences by users themselves indicate that such modes of administration may not be widely adopted.

Cannabis and harm reduction has been considered in various ways in this chapter. Critical to the success of any intervention is the need to recognise that many people experience cannabis as enjoyable and trouble free, whilst accepting that some people require help to reduce or stop. Another vital aspect is to realise that non-official sources of information — cannabis-using peers, advocacy groups, headshops and websites — often play a role in educating cannabis users, and there is a need to engage such actors in delivering accurate harm reduction messages.

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