



## EUROPE

THE ARTS  
CHILD POLICY  
CIVIL JUSTICE  
EDUCATION  
ENERGY AND ENVIRONMENT  
HEALTH AND HEALTH CARE  
INTERNATIONAL AFFAIRS  
NATIONAL SECURITY  
POPULATION AND AGING  
PUBLIC SAFETY  
SCIENCE AND TECHNOLOGY  
SUBSTANCE ABUSE  
TERRORISM AND  
HOMELAND SECURITY  
TRANSPORTATION AND  
INFRASTRUCTURE  
WORKFORCE AND WORKPLACE

This PDF document was made available from [www.rand.org](http://www.rand.org) as a public service of the RAND Corporation.

[Jump down to document](#) ▼

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

### Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

### For More Information

Visit RAND at [www.rand.org](http://www.rand.org)

Explore [RAND Europe](#)

View [document details](#)

### Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.

This product is part of the RAND Corporation technical report series. Reports may include research findings on a specific topic that is limited in scope; present discussions of the methodology employed in research; provide literature reviews, survey instruments, modeling exercises, guidelines for practitioners and research professionals, and supporting documentation; or deliver preliminary findings. All RAND reports undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

TECHNICAL  
R E P O R T

---



# The Evidence Base for the Classification of Drugs

Ruth Levitt, Edward Nason, Michael Hallsworth

Prepared for the UK House of Commons Committee on Science and Technology

The research described in this report was prepared for the UK House of Commons Select Committee on Science and Technology.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

**RAND**® is a registered trademark.

© Parliamentary Copyright House of Commons 2006

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the copyright holder. Applications for reproduction should be made to the Licensing Department, HMSO, St. Clements House, 2-16 Colegate, Norwich NR3 1BQ.

Published 2006 by the RAND Corporation  
1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138  
1200 South Hayes Street, Arlington, VA 22202-5050  
201 North Craig Street, Suite 202, Pittsburgh, PA 15213-1516  
Newtonweg 1, 2333 CP Leiden, The Netherlands  
Westbrook Centre, Milton Road, Cambridge CB4 1YG, United Kingdom  
Uhlandstraße 14, 10623 Berlin, Germany  
RAND URL: <http://www.rand.org/>  
RAND Europe URL: <http://www.rand.org/randeuropa>  
To order RAND documents or to obtain additional information, contact  
Distribution Services: Telephone: (310) 451-7002;  
Fax: (310) 451-6915; Email: [order@rand.org](mailto:order@rand.org)

# Preface

---

This report, prepared for the House of Commons Select Committee on Science and Technology, presents the results of four case studies examining the evidence base for the classification of illegal drugs in the context of the 1971 Misuse of Drugs Act. The objective is to identify the main evidence base on the selected drugs and to examine the use of that evidence in classifying each drug. The report also briefly examines the classification systems in three other countries, to provide a context through other drug classification systems.

The report is divided into three sections:

- i. an introduction describing the history of drug classification in the UK and general issues surrounding the types of evidence used in classifying drugs;
- ii. four individual drug case studies (amphetamines and ecstasy, cocaine, magic mushrooms and cannabis) examining the evidence of physical, social, psychological and economic harm associated with each drug and the use of evidence in government policy;
- iii. an international learning section examining the classification systems in three other countries (the USA, the Netherlands and Sweden) and the penalties and treatment regimes associated with them.

This report does not aim to provide a comprehensive review of all the evidence available for the drugs or countries studies; rather it provides an overview of the evidence on drugs and classification systems. This will assist the Members of the Committee to direct questions to witnesses in areas of specific interest to them for more in depth view information.

This report may also be of wider interest to parliament and others.

RAND Europe is an independent not-for-profit policy research organisation that serves the public interest by improving policymaking and informing public debate. Its clients are European governments, institutions, and firms with a need for rigorous, impartial multidisciplinary analysis. This report has been peer-reviewed in accordance with RAND's quality assurance standards (for more information, see <http://www.rand.org/about/standards/>) and therefore may be represented as a RAND Europe product.

For more information about RAND Europe or this document, please contact:

Dr. Jonathan Grant  
Director  
RAND Europe Cambridge  
Westbrook Centre  
Milton Road  
Cambridge. CB4 1YG. UK

Tel: +44 (0)1223 353 329  
Fax: +44 (0)1223 358 845  
Email: [jgrant@rand.org](mailto:jgrant@rand.org)

Dr. Ruth Levitt  
Research Leader  
RAND Europe Cambridge  
Westbrook Centre  
Milton Road  
Cambridge. CB4 1YG. UK

Tel: +44 (0)1223 353 329  
Fax: +44 (0)1223 358 845  
Email: [levitt@rand.org](mailto:levitt@rand.org)

# Contents

---

Preface.....	iii
Table of Figures.....	ix
Table of Tables.....	xi
Executive Summary.....	xiii
Drug case studies.....	xiv
Amphetamines and ecstasy.....	xiv
Cocaine and crack.....	xv
Cannabis.....	xv
Magic mushrooms.....	xv
<b>CHAPTER 1    Introduction to drug classification.....</b>	<b>1</b>
1.1    Drugs legislation.....	1
1.2    Why examine drug classification?.....	3
1.3    History of legislation.....	5
1.4    Drug harm.....	7
1.5    Prevalence of drug use in the UK.....	8
1.6    Drugs and crime.....	9
1.6.1    Punishment versus treatment.....	9
1.7    Drugs education.....	10
1.8    Economic issues.....	11
<b>CHAPTER 2    Amphetamines and ecstasy.....</b>	<b>13</b>
2.1    Classification, penalties and street names.....	13
2.1.1    Amphetamines.....	13
2.1.2    Ecstasy.....	14
2.2    Taking amphetamines and ecstasy.....	14
2.3    Scientific issues.....	16
2.4    Other health issues.....	18
2.5    Social issues.....	19
2.6    Economic issues.....	19
2.7    Government response to evidence and recommendations.....	20
<b>CHAPTER 3    Cocaine.....</b>	<b>23</b>
3.1    Classification, penalties and street names.....	23
3.1.1    Cocaine.....	23
3.1.2    Crack.....	23

3.2	Taking cocaine and crack.....	24
3.3	Scientific issues .....	24
3.4	Other health issues.....	26
3.5	Social issues .....	26
3.6	Economic issues.....	28
3.7	Government response to evidence and recommendations .....	29
<b>CHAPTER 4</b>	<b>Cannabis.....</b>	<b>31</b>
4.1	Classification, penalties and street names .....	31
4.2	Taking cannabis.....	32
4.3	Scientific issues .....	32
4.4	Other health issues.....	38
4.4.1	Multiple sclerosis and chronic pain relief.....	38
4.4.2	Sativex .....	39
4.4.3	Legal aspects .....	40
4.5	Social issues .....	41
4.5.1	The ‘gateway’ theory.....	41
4.5.2	Cannabis use and driving.....	42
<b>CHAPTER 5</b>	<b>Magic Mushrooms .....</b>	<b>45</b>
5.1	Classification, penalties and street names .....	45
5.2	Taking magic mushrooms.....	46
5.3	Scientific issues .....	47
5.4	Other health issues.....	51
5.4.1	Physiological and psychological effects .....	51
5.4.2	Therapeutic uses .....	52
5.5	Economic issues.....	53
<b>CHAPTER 6</b>	<b>International drug control legislation .....</b>	<b>54</b>
6.1	Why look at international experience? .....	54
6.2	USA .....	56
6.2.1	Overview .....	56
6.2.2	Legislation and drug classes.....	56
6.2.3	Punishment scales .....	57
6.2.4	Treatment regime .....	58
6.2.5	Drug courts .....	58
6.2.6	Scientific evidence for policy.....	59
6.2.7	Drug usage statistics.....	60
6.3	Netherlands .....	61
6.3.1	Overview .....	61
6.3.2	Legislation and drug classes.....	61
6.3.3	Punishment scales .....	62
6.3.4	Treatment regime .....	63
6.3.5	Scientific evidence for policy.....	63
6.3.6	Drug usage statistics.....	63
6.4	Sweden.....	65



6.4.1	Overview .....	65
6.4.2	Legislation and drug classes.....	65
6.4.3	Punishment scales.....	65
6.4.4	Treatment regime.....	66
6.4.5	Scientific evidence for policy.....	67
6.4.6	Drug usage statistics .....	67



# Table of Figures

---

Figure 1 Case study framework.....	5
Figure 2 Percentage of 16-59 year olds reporting having used Class A drugs in the last year since 1996.....	27
Figure 3 Magic mushroom usage in the UK, 2001-5.....	47



# Table of Tables

---

Table 1 Overview of International approaches to controlling drug use .....	xiv
Table 2 Summary of drug case studies.....	xvi
Table 3 UK classification of drugs, 2005 (drugs in <b>bold</b> are those considered in this report) .....	2
Table 4 Timeline (UK in <b>bold</b> ; International in italics).....	7
Table 5 Overview of International approaches to controlling drug use .....	55
Table 6 Schedule of narcotics in the US Controlled Substances Act, selected substances and federal recommended punishments .....	57
Table 7 Drug quantities (grams) for different offence levels under Swedish law.....	66



# Executive Summary

---

The House of Commons Select Committee on Science and Technology aims to hold the government to account over matters of science and technology legislation and policy. It does this mainly by taking oral evidence from ministers, civil servants, and other experts. Written statements may also be invited by the Committee. In the current (2005-2006) session of Parliament, the Committee is examining the use of evidence in policy making. One aspect of this the Committee is studying is the use of evidence in the classification of illegal drugs.

The Committee commissioned RAND Europe to produce a report on the evidence surrounding amphetamines, ecstasy, cocaine, cannabis and magic mushrooms, and the use of that evidence by the government in policy making. The Committee also requested an international context of classification legislation in 3 different countries (the USA, Netherlands and Sweden) in order to provide other examples. These case studies and international comparisons were chosen specifically by the Committee in order to inform their further examinations of drug classification in the UK.

The aim of this research is not to evaluate the policy of classification itself, but to provide the evidence that should underpin it and Government's use of that evidence. Since this is not an evaluation, the report produces no conclusions as to the effectiveness of drug classification. The report provides an overview of the current situation and does not constitute an in depth study of all the evidence available or a full international benchmarking study. It is designed to assist the Committee to pursue further enquiry on particular issues of interest to the Committee.

The four case studies of drugs are based on a framework that defines the evidence to be gathered for each, and enables a case comparison to be performed. The case studies examine the scientific, medical and social harms caused by drugs, as well as the context of users and the economic issues associated with drug use. For each drug, the use of this evidence in policy making has been assessed. The international studies assess the legislation and drug class equivalents, the treatment and punishment regimes, use of scientific evidence in policymaking and the drug usage statistics for each country. This provides a comparison of different countries drug legislations and priorities. A summary of international comparison is presented in Table 1.

All the evidence was gathered in a literature review, using publicly accessible documents available through the Internet. This data came mainly from peer-reviewed scientific documents, official government publications or official documents from impartial observatories. There are media stories mentioned during the report, and although these are

not peer-reviewed evidence, they are a form of evidence to take into account. We acknowledge that media reports are subjective and as such would not constitute scientific evidence, but they do constitute social evidence. A section on the history of drug legislation in the UK was produced in association with the Committee Staff, using Hansard sources. For this we would like to thank Celia Blacklock.

**Table 1 Overview of International approaches to controlling drug use**

	<b>USA</b>	<b>Netherlands</b>	<b>Sweden</b>
<b>Aim of drug legislation</b>	To cut off supply of drugs to users	To reduce harm to individuals and society	To create a drug free state
<b>Drug class equivalent</b>	Five schedules (I to V): based on abuse, dependence and medical use	Two schedules: I for drugs with unacceptable health risk; II for negligible risk drugs	Five lists; list I is narcotics with no medical use; list V is drugs that lie outside international conventions
<b>Punishment regimes</b>	Maximum penalties dependent upon the amount of drug possessed. Different penalties in different States. Penalties increase with the number of offences	Maximum penalties dependent upon amount of drug possessed. Penalties increase with the number of offences	Maximum penalties dependent upon the amount of drug possessed
<b>Differential penalties for classes?</b>	Yes	Yes	No
<b>Maximum imprisonment for possession</b>	Up to life imprisonment for large quantities	Up to 2 years' imprisonment for possession	Up to 10 years for large quantities
<b>Treatment regime</b>	Drug courts recommend treatment regimes over prison sentences	Can be enforced for addicts with drug crime history	Mandatory for offenders who are a danger to themselves or society
<b>Use of scientific evidence in policy making</b>	Large budget for research. Specific scientific criteria for scheduling	Government commissions research into drug harm and facilitates meetings between scientists and policy makers	Scientific evidence on treatment is used, not on drug harm

## Drug case studies

The four case studies each addressed the same questions on the types of evidence and the use of evidence in policymaking. The overall results are summarised in Table 2. The main findings from the case studies were that cannabis is the most used drug in the UK, and that crack cocaine (the most dangerous drug) is the least used of the study drugs; the gateway theory has little evidence to support it despite copious research; treatment for addicts to drugs other than opiates is lacking; classification is not based upon a set of standards for harm caused by a drug, it varies depending upon the drug in question.

### Amphetamines and ecstasy

Amphetamines straddle classes A and B, with those drugs prepared for injection being in Class A. Ecstasy is Class A. Together, they are the third and fourth most common drugs used in the UK, with a larger number of ecstasy users. On average there are around 40 ecstasy deaths per year, mainly due to dehydration; amphetamine deaths are around 20 per year. Injecting users risk HIV or hepatitis infection. Government policy on amphetamines



has been affected by the recent Advisory Council on the Misuse of Drugs (ACMD) review of methamphetamine, with the Home Office stating that it will take on its recommendations. The Home Office has heard evidence and recommendations on ecstasy classification, and has given reasons for not accepting them.

### **Cocaine and crack**

Cocaine is a Class A drug, now the second most common drug used in the UK after cannabis. It is a strong stimulant that in chronic users leads to psychological dependence. It can cause multiple health problems including increased risk of heart attacks and, as with amphetamines, injecting users risk HIV or hepatitis infection. Cocaine is responsible for around 100 deaths per year in the UK. It is associated with increased acquisitive crime in addicts, and crack cocaine has links with both violent crime and prostitution. Dealing in crack can often be a way for young people in deprived areas to make money. Government policy reflects the harm associated with cocaine and crack, although lack of new evidence means cocaine has not been recently reviewed. The national crack strategy of 2002 focused on social evidence for reducing harm.

### **Cannabis**

Cannabis was downgraded from Class B to Class C in 2002, after recommendations from the ACMD, Police Foundation and Home Affairs Committee. The evidence surrounding this decision was quite conclusive at the time. It showed that cannabis harm was not comparable to that of other Class B drugs. Harm is mainly in the form of psychological dependence and increased risk of schizophrenia in those predisposed to the trait. New evidence since 2002 has led the government to reassess the position of cannabis in the classification system. The gateway theory that cannabis leads to hard drugs has been extensively studied but not proven. It is the most commonly used drug in the UK.

### **Magic mushrooms**

Since the clarification of the position of fresh mushrooms in 2005, all forms of magic mushrooms are now all in Class A. This decision was not based on scientific evidence since it was said to be a clarification of the law rather than a reclassification. The evidence on mushrooms is small, with very little research on their effects. The positioning of them in Class A does not seem to reflect any scientific evidence that they are of equivalent harm to other Class A drugs.

Table 2 Summary of drug case studies

	<b>Amphetamines and ecstasy</b>	<b>Cocaine and crack</b>	<b>Cannabis</b>	<b>Magic mushrooms</b>
<b>Drug effect</b>	<ul style="list-style-type: none"> <li>▪ Stimulants</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stimulants</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sedative</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hallucinogen</li> </ul>
<b>Scientific evidence</b>	<ul style="list-style-type: none"> <li>▪ Amphetamines increase blood pressure, increasing the risk of stroke</li> <li>▪ Long term users experience neurological consequences including psychosis</li> <li>▪ Ecstasy deaths mainly due to dehydration</li> <li>▪ Long term neurological effects of ecstasy use are currently unknown</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not physically addictive, but lows when off the drug make it highly psychologically addictive</li> <li>▪ Crack is more addictive than cocaine</li> <li>▪ Responsible for around 100 deaths per year in the UK</li> <li>▪ Anecdotal evidence of users suffering no adverse effects of weekend cocaine use</li> </ul>	<ul style="list-style-type: none"> <li>▪ Links to schizophrenia in people with increased risk of developing mental health problems</li> <li>▪ Psychological dependency for chronic users</li> <li>▪ Chronic use can lead to anxiety and panic attacks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very little research into the scientific effects of mushrooms</li> <li>▪ Death due to overdose is not possible</li> <li>▪ No direct damage to human organs has been recorded</li> </ul>
<b>Medical harm</b>	<ul style="list-style-type: none"> <li>▪ Increased danger due injection</li> <li>▪ Methamphetamine is associated with risky sexual behaviour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased danger due injection</li> <li>▪ Damage to the nasal septum</li> <li>▪ Heart attack risk</li> </ul>	<ul style="list-style-type: none"> <li>▪ Smoking cannabis has all the dangers associated with smoking cigarettes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Can induce psychological states similar to psychosis</li> </ul>
<b>Medical benefit</b>	<ul style="list-style-type: none"> <li>▪ Amphetamines treatment for narcolepsy</li> <li>▪ Ecstasy as a cure for Parkinson's symptoms</li> </ul>	<ul style="list-style-type: none"> <li>▪ No current perceived medical benefit</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relief of MS symptoms and chronic pain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potential to treat obsessive compulsive disorder</li> </ul>
<b>Crime associations</b>	<ul style="list-style-type: none"> <li>▪ No clear associations with acquisitive crime</li> </ul>	<ul style="list-style-type: none"> <li>▪ Crack associated with violent crime</li> <li>▪ Cocaine-using criminals have higher criminal earnings than those on "soft" drugs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Main association is with drug driving</li> <li>▪ Many criminals testing positive for drugs have tried cannabis</li> </ul>	<ul style="list-style-type: none"> <li>▪ No link to acquisitive crime</li> <li>▪ Possible dangers whilst hallucinating</li> </ul>
<b>Other social issues</b>	<ul style="list-style-type: none"> <li>▪ Amphetamine and ecstasy use are high in homeless young people</li> </ul>	<ul style="list-style-type: none"> <li>▪ Crack is associated with the sex trade</li> <li>▪ Crack dealing offers job opportunities in disadvantaged communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ The "gateway theory" is unproven despite large amounts of research</li> </ul>	<ul style="list-style-type: none"> <li>▪ No major social issues</li> </ul>
<b>Users main age group</b>	<ul style="list-style-type: none"> <li>▪ 16-24</li> </ul>	<ul style="list-style-type: none"> <li>▪ 16-24</li> </ul>	<ul style="list-style-type: none"> <li>▪ 16-24</li> </ul>	<ul style="list-style-type: none"> <li>▪ 16-24</li> </ul>
<b>Number of "last 12 months" users, 2005 (% of population)</b>	<ul style="list-style-type: none"> <li>▪ Amphetamines; 1.4</li> <li>▪ Ecstasy; 1.8</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cocaine; 2.0</li> <li>▪ Crack; 0.1</li> </ul>	<ul style="list-style-type: none"> <li>▪ 9.7</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1.1</li> </ul>
<b>Economic issues</b>	<ul style="list-style-type: none"> <li>▪ Cost of treatment is low, but so is uptake</li> </ul>	<ul style="list-style-type: none"> <li>▪ Treatment is cost effective but not tailored for cocaine users</li> </ul>	<ul style="list-style-type: none"> <li>▪ Police time on cannabis offences has been cut back</li> </ul>	<ul style="list-style-type: none"> <li>▪ Loss of VAT on legal sale of mushrooms</li> </ul>
<b>Use of evidence by government</b>	<ul style="list-style-type: none"> <li>▪ Amphetamines and methamphetamine have been studied by the ACMD and reports responded to by the Home Office</li> <li>▪ Government has responded to ecstasy evidence but not taken on recommendations</li> </ul>	<ul style="list-style-type: none"> <li>▪ All evidence recently has suggested that cocaine stay in class A, although there has been no official government review</li> <li>▪ National crack strategy used evidence in formulating the strategy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reclassification in 2002 used a large amount of evidence provided by the ACMD and Home Office Select Committee</li> <li>▪ Recent evidence is feeding into new policy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very little evidence available on the drug</li> <li>▪ Recent clarification of policy did not use any scientific evidence since it was not a reclassification</li> </ul>

### 1.1 **Drugs legislation**

1. The Misuse of Drugs Act 1971 as amended is the main piece of legislation regulating the availability and use of certain drugs in the UK; some other substances are regulated through the Medicines Acts. The Misuse of Drugs Act created three categories: Class A, Class B and Class C, with different levels of penalties for possession and dealing. Drugs are divided between classes based on (i) whether the drug is being misused; (ii) whether it is likely to be misused and (iii) whether the misuse in either case is having or could have harmful effects sufficient to constitute a social problem.<sup>1</sup> The 1971 Act does not explain why certain drugs are classified in Class A, B or C. Since 1997 the Government has altered the classification of certain drugs, notably cannabis from Class B to Class C in January 2004. Magic mushrooms in all forms were classified as Class A in 2005<sup>2</sup> (previously only dried mushrooms were included in Class A). Also, since 1996, several drugs have become regulated under the Misuse of Drugs Act,<sup>3</sup> including Ketamine (a veterinary tranquiliser),<sup>4</sup> GHB<sup>5</sup> and steroids<sup>6</sup> from the Medicines Act 1968 into Class C. Some of the most common drugs controlled by the Misuse of Drugs Act and the Medicines Act are shown in Table 3. The Misuse of Drugs Regulations (1985) control the medicinal use of illegal drugs, which are placed in one of five Schedules. Schedule 1 drugs need a Home Office licence in order to be used for research; Schedules 2-5 specify the circumstances in which drugs controlled by the 1971 Act may be used for medicinal purposes (for example, drugs in Schedule 2 may be prescribed by a doctor or dentist).

---

<sup>1</sup> *Misuse of Drugs Act 1971*, Section 1.2

<sup>2</sup> *Drugs Bill 2005*, Bill 17 53/4, 2005.

<sup>3</sup> *Misuse of Drugs Act 1971*; this has been amended frequently to bring new drugs and new research findings into the classification system.

<sup>4</sup> *The Misuse of Drugs Act 1971 (Amendment) Order 2005*.

<sup>5</sup> *The Misuse of Drugs Act 1971 (Modification) Order 2003*.

<sup>6</sup> *The Misuse of Drugs (Amendment) Regulations 1996*.

**Table 3 UK classification of drugs, 2005 (drugs in bold are those considered in this report)<sup>7</sup>**

Classification	Drugs
Class A	heroin, LSD, <b>ecstasy</b> , <b>amphetamines</b> (prepared for injection), <b>cocaine</b> , crack, <b>magic mushrooms</b> , crystal meth
Class B	<b>amphetamines</b> , barbiturates
Class C	<b>cannabis</b> , Temazepam, anabolic steroids, Valium, Ketamine, methylphenidate (Ritalin), Pholcodine, GHB, mild amphetamines (such as slimming tablets)
Medicines Act	Poppers (Amyl nitrate)

2. Under the Misuse of Drugs Act it is an offence to possess a controlled drug unlawfully; to possess with intent to supply; to supply or offer to supply a controlled drug (even where no charge is made); to allow premises to be used for the purpose of drug taking; and to traffic in drugs. The Advisory Council on the Misuse of Drugs (ACMD) “carries out in-depth inquiries into aspects of drug use that are causing particular concern in the UK, with the aim of producing considered Reports that will be helpful to policy makers, practitioners, service providers and others”, and the Government usually publishes responses to these recommendations.<sup>8</sup> The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is “the central reference point for drug information in the European Union. Its role is to provide the EU and its Member States with objective, reliable and comparable information on drugs and drug addiction.”<sup>9</sup> These aspects of the research and evidence base feed into policy making on drug abuse within the UK.
3. Other main sources of evidence and information on drugs, drug use, effects of drug taking and reviews of the legislation include the Runciman report, 2000, on the Misuse of Drugs Act 1971;<sup>10</sup> the annual British Crime Survey (BCS);<sup>11</sup> *Health Statistics Quarterly*;<sup>12</sup> the

<sup>7</sup> <http://www.homeoffice.gov.uk/drugs/drugs-law/Class-a-b-c/>

<sup>8</sup> <http://www.drugs.gov.uk/drugs-laws/acmd/102234/>

<sup>9</sup> [http://www.drugs.gov.uk/organisation\\_search/europe-wide/220872](http://www.drugs.gov.uk/organisation_search/europe-wide/220872)

<sup>10</sup> Runciman (2000) *Drugs and the law: Report on the Independent Inquiry into the Misuse of Drugs Act 1971*, The Police Foundation, <http://www.policefoundation.org.uk/Publications/Drugs%20and%20the%20Law.pdf>.

<sup>11</sup> Information on the most recent BCS is available through the Home Office Research Development and Statistics site, <http://www.homeOffice.gov.uk/rds/bcs1.html>; Back catalogues of the BCS are available through the UK Data Archive, at <http://www.data-archive.ac.uk/findingData/bcrsTitles.asp>

<sup>12</sup> *Health Statistics Quarterly*, published by the Office for National Statistics, available at <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=6725&More=N>

Home Office research programme;<sup>13</sup> reports of the Home Affairs Select Committee;<sup>14</sup> and the Government's drug strategy.<sup>15</sup>

## 1.2 Why examine drug classification?

4. Since 1971 there have been several reclassifications and additions to the drugs covered by the Misuse of Drugs Act. The culture of evidence based policy making in government is well established now,<sup>16</sup> so it is important to examine the evidence base surrounding these reclassifications and decisions not to reclassify despite recommendations from various sources. The current Home Secretary, Charles Clarke, said to Parliament a year ago (18 January 2005) during a debate on the second reading of the 2005 Drugs Bill, that reclassification requires an evidence base:<sup>17</sup>
  - (1) "Of course, when we look at the analysis of the banding classification system, it is appropriate and right to consider the advice of the professionals who make the medical assessment before coming to a view. That is precisely what we will do..."
5. The structure for classifying drugs introduced by the 1971 Act created what is in effect a four-category stratification of all substances, if 'legal' drugs (i.e. those outside the legislation) are counted as one category. The illegal drugs in a particular category are not necessarily equally harmful; much depends on how harm is measured and assessed. The feature they share is the severity of prescribed maximum punishments for use, possession and dealing, not severity of harm. 'Illegal' drugs are placed in categories A, B or C on the basis of several types of evidence,<sup>18</sup> including, but not limited to, scientific or medical facts, interpretations and 'expert' opinions. Also included are political, cultural and social factors and 'popular' interpretations and opinions.
6. The scope, extent and quality of the available scientific and medical evidence varies considerably between different drugs; this is a function partly of the state of knowledge about the drug, the history and extent of research activity about it, and level of popular and

---

<sup>13</sup> The Home Office Research Development and Statistics, The Drug Analysis and Research Programme, <http://www.homeOffice.gov.uk/rds/drugs1.html> - the research for the home Office RDS is always commissioned by the HO, and is done by both the RDS and by external researchers. There is internal QA.

<sup>14</sup> <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/cmhaff.htm>

<sup>15</sup> Original 1998 strategy available at <http://www.crimereduction.gov.uk/drugsalcohol2.htm>; 2002 update available at <http://www.crimereduction.gov.uk/drugsalcohol60.htm>

<sup>16</sup> Cabinet Office (1999) *Modernising Government*, White Paper. <http://archive.cabinetOffice.gov.uk/moderngov/download/modgov.pdf>

<sup>17</sup> Available at [www.parliament.the-stationery-office.co.uk/pa/cm200405/cmhansrd/cm050118/debtext/50118-08.htm](http://www.parliament.the-stationery-office.co.uk/pa/cm200405/cmhansrd/cm050118/debtext/50118-08.htm)

<sup>18</sup> The *Report on a review of the classification of controlled drugs and of penalties under section 2 and 4 of the Misuse of Drugs Act 1971* (1979) states that the classification "exists solely to determine which scale of penalties shall be applicable to ... individual drugs" and that the different classes "serve as an indication ... of the importance which Parliament attaches to dealing with the mischief caused by misuse of a particular drug". Quoted in Runciman (2000), p.40.

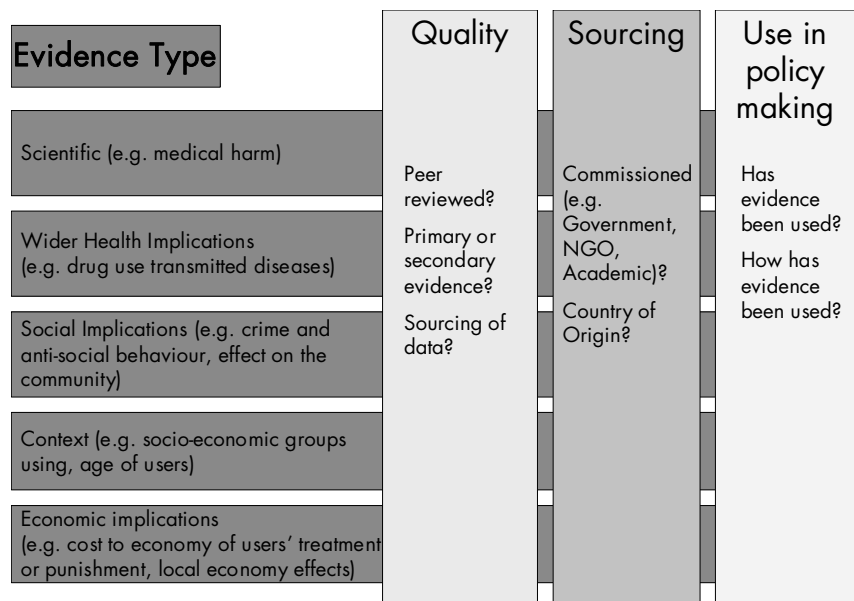
political interest in it. The strictly scientific and medical evidence base is not necessarily comparable between drugs in any one category or across the three categories.

7. In order to make consistent decisions about the severity of harm associated with individual drugs, and categorise them accordingly, it is necessary to consider scientific and medical evidence. However, this is not sufficient on its own: other evidence is required, and does influence such decisions.
8. In other words, the existence and use of a three-category classification structure itself could imply comparability of harm within each category, whereas the scientific evidence base does not necessarily support that with regards to the current classifications. Since the total body of evidence, including non-scientific information, interpretation and opinion, influences where a drug is placed in the structure, decisions to place each drug in a particular category, or to change its category, are taken even when scientific and medical information cannot provide a conclusive assessment of harm levels.
9. As the topic of drug classification is extensive, the Science and Technology Select Committee asked us to concentrate on certain aspects that highlight recent and current government actions in changing the classification of particular substances, looking in detail at the following exemplary cases.
10. **Class A:** cocaine (allegedly the drug of choice amongst many young professionals socially); magic mushrooms (now all Class A) and ecstasy (a possible candidate for downgrading to Class B).
11. **Class B:** the differential classification of ecstasy and amphetamines (since ecstasy is, in terms of its chemical structure, a type of amphetamine).
12. **Class C:** cannabis.
13. We have examined these examples in four case studies, looking at cocaine, amphetamines and ecstasy, cannabis and magic mushrooms. The case studies follow a simple framework<sup>19</sup> to present the evidence consistently for each drug studied (see Figure 1). Following the case studies are international comparisons of different drug classification laws and systems, using the examples of the USA, the Netherlands and Sweden, as requested by the committee.

---

<sup>19</sup> A framework approach allows comparison between case studies, providing comparability between case studies and ensuring that the same issues are explored in each context (Yin (1994) *Case study research: Design and methods*, second edition, Sage Publications, London.)

**Figure 1 Case study framework**



### 1.3 History of legislation

14. The main reason for the creation of the Misuse of Drugs Act 1971 was the explosion of recreational drug use in the 1960s. The 1971 Act aimed to provide a comprehensive framework for the regulation of drugs, which at the time was covered by three pieces of legislation: the Drugs (Regulation of Misuse) Act 1964, and the Dangerous Drugs Acts of 1965 and 1967. The period was one of significant drug regulation activity internationally, notably the United Nations Single Convention on Narcotic Drugs 1961, the UN's efforts to establish a Convention on Psychotropic Substances (ratified in 1971) and US President Nixon's introduction of the Comprehensive Drug Abuse and Control Act in 1970, which aimed to restrict the availability of drugs according to their medical dangers.
15. James Callaghan (the Home Secretary) first proposed the system of Classes A, B and C in 1970, and explained that the Government had used the Single Convention and the advice of the World Health Organisation as a framework to create the classes: "We have taken those lists of drugs and attempted to put them into the Bill in the order in which we think they should be classified of harmfulness and danger."<sup>20</sup>
16. The classes were intended to "...divide [drugs] according to the accepted dangers and harmfulness in light of current knowledge", and therefore the system could "provide for

<sup>20</sup> Misuse of Drugs Bill 1970 (not passed), 2<sup>nd</sup> reading debate, Hansard, 25 March 1970, Volume 798 column 1453.

changes to be made in [...] the light of scientific knowledge”.<sup>21</sup> The Act created the Advisory Council on the Misuse of Drugs to “keep the classification under review”.<sup>22</sup> There was already an expectation that certain drugs would move between classes:

(2) “The current allocation of cannabis in the Bill to Class B is not permanent. Many noble Lords have said that we need to know more about cannabis, to find out more about its effects on personality and on health and this is undoubtedly so. Once this Bill becomes law, the Home Secretary will be able, on the advice of his Advisory Council that will be set up under Clause 1, to move any drug up or down in the existing 3 classes, or indeed out of the Schedules altogether.”<sup>23</sup>

17. Two principles provide the foundation for UK drug classification: comparisons of harm, and response to emerging evidence.
18. The Home Office minister said in 2003, “the whole point of having three categories of classification is to assess scientifically the relative harms of different sorts of drugs”.<sup>24</sup> This principle of relative, rather than absolute, harm has underpinned the work of the ACMD, most notably in its 2006 decision on cannabis, where it concludes that “Although [cannabis] is unquestionably harmful, its harmfulness does not equate to that of other Class B substances either at the level of the individual or of society.”<sup>25</sup>
19. Although in practice, “clinical, medical harm is the advisory council's predominant consideration”,<sup>26</sup> more complex, holistic strategies for tackling drugs have developed, such as *Tackling Drugs to Build a Better Britain* (1998). This “acknowledge[d], for the first time, the link between drug misuse and social conditions, and the need to tackle the whole range of social problems”.<sup>27</sup>
20. The Home Secretary (Charles Clarke) signalled in January 2006 the need for wider issues to influence the classification system itself: “I do not think that medical harm is the only consideration; there is also harm to society and a range of other questions. That is why I

---

<sup>21</sup> James Callaghan, Home Secretary; Misuse of Drugs Bill 1970 (not passed), 2<sup>nd</sup> reading debate, 25 March 1970, Vol. 798, col. 1453.

<sup>22</sup> Lord Windlesham, Minister of State, Home Office; Misuse of Drugs Bill, House of Lords 2nd reading debate, 14 January 1971, vol. 314, col. 226-7

<sup>23</sup> Lord Windlesham, Minister of State, Home Office; Misuse of Drugs Bill, House of Lords, 4 February 1971, vol. 314, col. 1412.

<sup>24</sup> Caroline Flint; Debate on Draft Misuse of Drugs Act 1971 (Modification) (No.2) Order 2003, 29 October 2003, Volume 412, part 449, column 332.

<sup>25</sup> The Advisory Council on the Misuse of Drugs (2006) *Further consideration of the classification of cannabis under the Misuse of Drugs Act 1971*, Home Office, p.18. [http://www.drugs.gov.uk/publication-search/acmd/cannabis\\_reclass\\_2005?view=Binary](http://www.drugs.gov.uk/publication-search/acmd/cannabis_reclass_2005?view=Binary)

<sup>26</sup> Charles Clarke, Secretary of State for the Home Department; Ministerial Statement ‘Regulation of Cannabis’, 19 January 2006 Volume 441, Part 95, Column 988.

<sup>27</sup> The Minister for the Cabinet Office (Dr. Jack Cunningham); Adjournment debate (‘Drugs’), Volume 334, 2 July 1999, Column 544.



believe that we need to reconsider the classification system.”<sup>28</sup> A history of drug legislation is shown in Table 4.

**Table 4 Timeline (UK in bold; International in italics)**

Year	Selected events
1961	<i>UN Single Convention on Narcotic Drugs</i>
1970	<i>US Comprehensive Drug Abuse and Control Act</i>
1971	<b>Misuse of Drugs Act</b>
1971	<i>UN Convention on Psychotropic Substances</i>
1972	<i>Protocol amending the Single Convention on Narcotic Drugs</i>
1977	<b>Criminal Law Act (outlawed all parts of cannabis plant)</b>
1988	<i>UN Convention against Illicit Traffic in Narcotics and Psychotropic substances (an instrument of international criminal law)</i>
1994	<b>Drug Trafficking Act</b> (allowed the property of drug dealers to be confiscated)
1995	<b>‘Tackling Drugs Together’ White Paper</b>
1997	<b>Appointment of UK Drugs Tsar</b>
1998	<b>Government’s 10 Year Drug Strategy: ‘Tackling Drugs to Build a Better Britain’</b>
2001	<b>Misuse of Drugs Regulations 2001</b> (updated the Schedules relating to medical usage of controlled substances)
2002	<b>Select Committee on Home Affairs, ‘The Government’s Drug Policy: Is it working?’; the Government’s reply thereto.</b>
2004	<b>Reclassification of cannabis as Class C drug implemented</b>
2005	<b>Drugs Act</b> (clarified law on fresh magic mushrooms; greater emphasis on enforced treatment)
2006	<b>Review of classification system ordered</b>

#### 1.4 Drug harm

21. The classification of illegal drugs is based on the harm done by the drug, mainly in terms of medical complications associated with using that substance. The largest killers are heroin and cocaine, both Class A. Amphetamines are classified in Class B if orally administered and Class A when injected, as intravenous administration of amphetamines produces a larger effect than oral ingestion. Intravenous drug use carries a number of high risk side effects such as hepatitis and HIV infections through shared needles.
22. According to the World Health Organisation, Hepatitis C is a major problem among intravenous drug users in developed countries, where around 90% of people infected are former or current drug users.<sup>29</sup> In the UK, Hepatitis B is endemic in the drug using

<sup>28</sup> Ministerial Statement ‘Regulation of Cannabis’, 19 January 2006, Volume 441, Part 95, Column 993.

<sup>29</sup> WHO (2000), Hepatitis C; factsheet no. 164, World Health Organisation.

population and Hepatitis C is reaching epidemic proportions.<sup>30</sup> Other common problems for injecting drug users are bacterial infections (including MRSA), although there is very little research into this area.<sup>31</sup> The Health Protection Agency reported that 1 in 65 UK injecting drug users having HIV (this number is 1 in 25 in London).<sup>32</sup>

23. The Drug Harm Index (DHI)<sup>33</sup> has been developed to monitor the Home Office's Public Service Agreement target to "reduce the harm caused by illegal drugs", which was agreed in the 2004 Spending Review.<sup>34</sup> The DHI incorporates the harms that individuals and society suffer due to drug-related crime, the health impacts arising from drug abuse, and the impact of drug use and dealing on communities. The Home Office use this index to measure the progress of drug culture within the UK, by measuring a series of indicators of harm associated with drugs and comparing the social harm situation year upon year. From year to year, the change in the DHI will be due to "the growth in the volume of harms (e.g. the number of new HIV cases or the number of drug-related burglaries) and the growth in the unit economic or social cost of the harms (e.g. the rise in the expected cost per new HIV case or the average victim cost of a domestic burglary)." <sup>35</sup>

### 1.5 Prevalence of drug use in the UK

24. Around four million people use illegal drugs each year. Most of those people do not appear to experience harm from their drug use, nor do they cause harm to others as a result of their habit.<sup>36</sup> Analysis of drug use in Northern Ireland produces the most detailed information. This shows that lifetime use was most prevalent among those aged 15 to 34 in 2004, although use was higher within the previous year among 15 to 24 year olds.<sup>37</sup> Overall usage by men and women differs: the proportion of men who use an illegal drug at least once in their lifetime is 14% higher than the proportion of women. In England and

---

<sup>30</sup> Select Committee on Home Affairs (2002), section 30.

<sup>31</sup> Hunt, N. (2005), *Reducing drug related harms to health: an overview of the global evidence*, Report 4, The Beckley Foundation Drug Policy Programme, available at [http://www.internationaldrugpolicy.net/reports/BeckleyFoundation\\_Report\\_04.pdf](http://www.internationaldrugpolicy.net/reports/BeckleyFoundation_Report_04.pdf)

<sup>32</sup> Health Protection Agency (2005), *Shooting up: infection amongst injecting drug users in the UK 2004*, London, Health protection agency, available at [http://www.hpa.org.uk/infections/topics\\_az/injectingdrugusers/shooting\\_up.htm](http://www.hpa.org.uk/infections/topics_az/injectingdrugusers/shooting_up.htm)

<sup>33</sup> Pudney, S., *et al.* (2005) *Measuring the harm from illegal drugs using the drug harm index*, Home Office Online Report 24/05. Available at [www.homeOffice.gov.uk/rds/pdfs05/rdsolr2405.pdf](http://www.homeOffice.gov.uk/rds/pdfs05/rdsolr2405.pdf)

<sup>34</sup> 'Spending Review 2004: Public service agreements 2005-2008', HM Treasury, Section 6.4, available at [http://www.hm-treasury.gov.uk/media/E99/79/sr04\\_psa\\_ch6.pdf](http://www.hm-treasury.gov.uk/media/E99/79/sr04_psa_ch6.pdf)

<sup>35</sup> Pudney *et al.* (2005), p.v.

<sup>36</sup> Select Committee on Home Affairs (2002) *The Government's drug policy, is it working?*, paragraph 20. Available at <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/31802.htm>

<sup>37</sup> Eaton, G., *et al.* (2004) *United Kingdom drug situation: annual report to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2004 Edition*, p.23. <http://tinyurl.com/7j2eh>. The authors of this report are officials in the Department of Health and the Northwest Public Health Observatory - a publicly funded observatory set up in response to the government white paper "saving lives our healthier nation".

Scotland, reported use of drugs is similar for lifetime use, and around 10% higher for recent use. The Office for National Statistics figures on drug deaths over the last six years also suggest a difference between men and women, with around 300 women dying due to drug use (this has been growing slowly recently) compared with around 1000-1200 male deaths (this number has been falling steadily).<sup>38</sup>

25. Results from Home Office research on drug use among young offenders suggest that the main age for experimentation in drugs is between 11 and 14 years (this is not the age range of highest use).<sup>39</sup> There is no evidence that ethnic minorities have a more prevalent drug problem than others (studies of drug users show no significant differences in the numbers of users from different ethnic groups when normalised for prevalence in the population and social factors); the correlation is stronger between social exclusion and drug abuse.<sup>40</sup>

## 1.6 Drugs and crime

26. In 2004, overall drug offences fell by 21% to 105,570.<sup>41</sup> This is thought to be due to the reclassification of cannabis from Class B to Class C, as previously the majority of offences were cannabis related.<sup>42</sup> A survey of young offenders in 2002 reported that 44% said they had committed crime in order to buy alcohol, tobacco or drugs, and the highest usage rates were in persistent offenders, as opposed to occasional offenders.<sup>43</sup> There was no evidence found within this study that offenders would move onto highly addictive Class A drugs through the use of cannabis, alcohol or tobacco.

### 1.6.1 Punishment versus treatment

27. Views differ about whether drug crime is best tackled using punishment or treatment. The Drugs Act 2005 and the Crime and Disorder Act 1998 allow for compulsory treatment regimes for offenders using Class A drugs (such as cocaine or magic mushrooms). The Home Office claims that “for every £1 spent on treatment, at least £9 is saved in crime and health costs”.<sup>44</sup> This sort of cost-benefit statement is derived from extrapolations, which are open to interpretation. There is evidence to support the government’s claims

<sup>38</sup> The Office for National Statistics (2005) *Health Statistics Quarterly* 25, p.56.

<sup>39</sup> Hammersly, R., *et al.* (2003) *Substance use by young offenders*, Home Office Research, Development and Statistics Directorate, p.4. <http://www.homeOffice.gov.uk/rds/pdfs2/r192.pdf>

<sup>40</sup> Khan, K. (2000) *Mapping available scientific information on social exclusion and drugs focussing on minorities across 15 EU member states*, EMCDDA Scientific report. <http://tinyurl.com/adhlu>

<sup>41</sup> Mwenda, L. (2005) *Drug offenders in England and Wales 2004*, Home Office Statistical Bulletin, ISSN 1358-510X, p.1. <http://www.homeOffice.gov.uk/rds/pdfs05/hosb2305.pdf>

<sup>42</sup> According to the Runicman Report, in 1997 77% of all controlled drug seizures were cannabis (Runicman (2000), p.28). Home Office statistics show that 81% of all drug offences in 1994 were cannabis related; this had fallen to 60% by 2004 (Mwenda, L. (2005), p.4).

<sup>43</sup> Hammersly *et al.* (2003), p.3.

<sup>44</sup> This claim is taken from the DH funded research study the National Treatment Outcome Research Study (NTORS), reported in the academic paper – Godfrey, C., *et al.* (2004), ‘Economic analysis of costs and consequences of the treatment of drug misuse: 2-year outcome data from the National Treatment Outcome Research Study (NTORS)’, *Addiction* 99:6, 697-707, 697.

that the economic savings from treatment of drug users far outweigh the costs<sup>45</sup> for offenders who voluntarily join treatment.<sup>46</sup> However the evidence for the effectiveness of treatment on those forced to participate against their will is split, with some studies suggesting that treatment is still effective and others suggesting that it is not.<sup>47</sup>

28. Nevertheless, the Drug Misuse Research Unit<sup>48</sup> (DMRU) and the European Institute of Social Services<sup>49</sup> (EISS). The DMRU report supports government claims that treatment regimes work well in reducing re-offending, and cites a number of studies. The EISS report is more sceptical and points out that although quasi-compulsory treatment does not necessarily produce worse outcomes than voluntary treatment, its effects are variable depending on the situation.
29. Latest government policy suggests that England and Wales will move towards an American style drug court system.<sup>50</sup> Drug courts are often the reason the USA is used as a comparator. With the success of Drug Courts in Scotland, the Department for Constitutional Affairs announced in December 2005 that they were to launch dedicated Drug Courts in West London and Leeds.<sup>51</sup>

## 1.7 Drugs education

30. One of the key aims of the ten year drugs strategy launched in 1998<sup>52</sup> was to increase the education of Britain's youth about the dangers of drugs. This was reiterated in the 2002 update to the drug strategy.<sup>53</sup> There are clear guidelines within the National Curriculum

---

<sup>45</sup> Home Office (2005) *Drug strategy: Key facts*, p.1. <http://www.drugs.gov.uk/publication-search/drug-strategy/Drugsnewsletter.pdf?view=Binary> and <http://tinyurl.com/bavpe>

<sup>46</sup>For example, see Gossop, M. (2005) *Drug misuse treatment and reductions in crime: Findings from the national treatment outcomes research study*, NTA research briefing 8, [http://www.nta.nhs.uk/publications/docs/rb8\\_final.pdf](http://www.nta.nhs.uk/publications/docs/rb8_final.pdf); and Ramsay, M. (2003) *Prisoners' drug use and treatment: seven case studies*, Home Office research study 267, ISBN 1 84473 009.3, <http://www.homeOffice.gov.uk/rds/pdfs2/hors267.pdf>.

<sup>47</sup> Stevens *et al.* (2005) and Witton, J. and Ashton, M. (2002) *Treating cocaine/crack dependence*, NHS National treatment agency for substance misuse, Drug Services Briefing Research into Practice 1a. <http://www.nta.nhs.uk/publications/archive/briefing1a.pdf>

<sup>48</sup> Meier, P. (2000), *Measurement of drug misuse treatment outcome*, briefing paper from the DMRU. <http://www.stopford.man.ac.uk/epidem/dmru/>

<sup>49</sup> Stevens, A., *et al.* (2005) 'Quasi-compulsory treatment of drug dependent offenders: An international literature review', *Substance Use & Misuse* 40:3, 269-283.

<sup>50</sup> Lord Falconer Constitutional affairs secretary and Lord Chancellor (2005), Dedicated drug court pilot launch speech, 13.12.05, available at <http://www.dca.gov.uk/speeches/2005/sp051213.htm>

<sup>51</sup> Speech of Lord Falconer at the DCA drug court launch, 13<sup>th</sup> December 2005, transcript available at <http://www.dca.gov.uk/speeches/2005/sp051213.htm>

<sup>52</sup> Home Office (1998) *Tackling drugs to build a better Britain: The Government's 10 year strategy for tackling drugs misuse*, HMSO cm3945. <http://www.archive.official-documents.co.uk/document/cm39/3945/3945.htm>

<sup>53</sup> Home Office Drug Strategy Directorate (2002) *Updated drug strategy 2002*, Home Office, ISBN 1-84082-9397. <http://tinyurl.com/9uuca>.

on how to teach drug education within schools;<sup>54</sup> this builds on a wealth of evidence that effective education requires peer involvement and interaction.<sup>55</sup> By 2002 80% of primary schools and 96% of secondary schools had adopted drugs education policies. The levels of young (16-24) drug users reported in the recent British Crime Survey<sup>56</sup> and a European study into school age children using drugs<sup>57</sup> suggest that numbers of young drug users are falling. The BCS shows that the use of all drugs except cocaine had dropped since 1998. The European study found that the numbers of school children who had taken any illegal drugs fell between 1995 and 1999; this number has risen slightly in the most recent survey in 2003.

## 1.8 Economic issues

31. The amounts of money associated with the illegal drug market are vast. The United Nations suggests that the international drug market is worth around \$430 billion.<sup>58</sup> Of this the UK market is estimated at around £6.6 billion.<sup>59</sup> The drug related economic costs to the UK can be broken down into direct costs on tackling drugs (£1.2 billion<sup>60</sup>), the associated cost of drug related crime (estimated to be £10.5 billion for England and Wales<sup>61</sup>), the cost to industry (£800 million<sup>62</sup>) and the cost to the NHS (£234 million<sup>63</sup>). Of the £1.5 billion that the government pledges annually to tackling the drugs problem, around 75% of the budget is spent on enforcing drug laws, with 12% spent on education and 13% spent on treatment in 1998.<sup>64</sup>

---

<sup>54</sup> Department for Education and Skills (2004) *Drugs: guidance for schools*, DfES/0092/2004. [http://www.drugscope.org.uk/uploads/projects/documents/A5-drugs-guidance-bklet\\_AW2.pdf](http://www.drugscope.org.uk/uploads/projects/documents/A5-drugs-guidance-bklet_AW2.pdf) and <http://tinyurl.com/bavpe>

<sup>55</sup> Health Education Authority (1993) *Peers in Partnership: HIV/AIDS Education with Young People in the Community*; Hansen, W.B. and Graham, J.W. (1991) 'Preventing alcohol, marijuana and cigarette use amongst adolescents: peer pressure resistance training versus establishing conservative norms', *Preventative Medicine* 10, 414-30; Turner, G. and Shepherd, J. (1999) 'A method in search of a theory: peer education and health promotion', *Health Education Research*, 14:2, 235-247.

<sup>56</sup> Roe, S. (2005) *Drug misuse declared: Findings from the 2004-2005 British crime survey - England and Wales*, Home Office Statistical Bulletin, ISBN 1358-510X <http://www.homeOffice.gov.uk/rds/pdfs05/hosb1605.pdf>

<sup>57</sup> See the European School survey Project on Alcohol and Drugs, (ESPAD) survey website at [www.espad.org](http://www.espad.org) for full access to the school age studies. ESPAD is part of the Council of Europe

<sup>58</sup> UN Office on Drugs and Crime (2005) *2005 world drug report*, UNODC, ISBN 92 1 148200 3. [http://www.unodc.org/unodc/en/world\\_drug\\_report.html](http://www.unodc.org/unodc/en/world_drug_report.html)

<sup>59</sup> Eaton (2004), p.64.

<sup>60</sup> *Ibid.*, p.19.

<sup>61</sup> Home Office (2002) *The economic and social costs of Class A drug use in England and Wales*, Home Office Research Study 249, p.51. <http://www.homeOffice.gov.uk/rds/pdfs2/hors249.pdf>

<sup>62</sup> NTA (2004) 'Drugs and alcohol in the workplace', *Developing drug service policies*, No. 3. [http://www.nta.nhs.uk/publications/Drug\\_service\\_policies\\_3.htm](http://www.nta.nhs.uk/publications/Drug_service_policies_3.htm)

<sup>63</sup> <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/1103005.htm>

<sup>64</sup> *Ibid.*

32. The Independent Drug Monitoring Unit<sup>65</sup> has discussed how much the UK drug market might be worth in excise and duty to HM Treasury, were drugs to be legalised. It suggests that the value of taxation could be as much as £3.9 billion per year.<sup>66</sup> Official figures show that prices of illegal drugs on the UK market fell between 1985 and 1999, with street prices for nearly all substances following the same trend.<sup>67</sup> Prices in London fell more sharply than elsewhere in the UK, and have continued to fall for most drugs, but with fluctuations in some (for example LSD tablets). The only drug that has shown a major rise in use in that period is cocaine; the others show roughly constant use rates.<sup>68</sup>
33. The margin on different illegal drugs and the costs associated with their manufacture and distribution vary. The costs of production and distribution do not necessarily drive prices in this market. Drugs are measured for sale in different ways and doses are dependent upon strength. In general the most expensive drugs are those in Class A, such as cocaine, crack and heroin. However a single tablet of ecstasy (also in Class A) is far cheaper than an eighth of an ounce of skunk cannabis (Class C).<sup>69</sup> This is not due to production costs, as the cost of producing a gram of amphetamine is around £6.86 and the cost of producing a gram of cocaine is £1.20. However the market price of cocaine is twice that of amphetamines.<sup>70</sup>

---

<sup>65</sup> The IDMU is an independent consultancy undertaking research into the pricing of drugs.

<sup>66</sup> Atha, M. (2004) *Taxing the UK drug market*, Independent Drug Monitoring Unit, <http://www.idmu.co.uk/taxukdm.htm>. The IDMU is an independent research consultancy conducting research into illegal drugs. They are funded by consultancy fees and are not associated with government or charity funding.

<sup>67</sup> Roe (2005), p.3.

<sup>68</sup> See the IDMU website section on drug price trends for details up to 2004: [www.idmu.co.uk/drugpricetrend9403.htm](http://www.idmu.co.uk/drugpricetrend9403.htm)

<sup>69</sup> IDMU website section on drug price trends for details up to 2004: [www.idmu.co.uk/drugpricetrend9403.htm](http://www.idmu.co.uk/drugpricetrend9403.htm)

<sup>70</sup> Atha (2004), <http://www.idmu.co.uk/taxukdm.htm>

**(3) Chapter Summary**

(4) Amphetamines straddle classes A and B, with those drugs prepared for injection being in Class A. Ecstasy is Class A. Together, they are the third and fourth most common drugs used in the UK, with a larger number of ecstasy users. On average there are around 40 ecstasy deaths per year, mainly due to dehydration; amphetamine deaths are around 20 per year. Injecting users risk HIV or hepatitis infection. Government policy on amphetamines has been affected by the recent Advisory Council on the Misuse of Drugs (ACMD) review of methamphetamine, with the Home Office stating that it will take on its recommendations. The Home Office has heard evidence and recommendations on ecstasy classification, and has given reasons for not accepting them.

2.1 **Classification, penalties and street names**

2.1.1 **Amphetamines**

34. Class B unless prepared for injection in which case these are Class A. It is legal for doctors to prescribe them, but illegal to possess them without a prescription. The Drugs (Prevention of Misuse) Act 1964 introduced the first controls over amphetamines, including making their unlawful possession an offence.<sup>71</sup> Injected amphetamines (Class A) pose two greater risks: (i) exposure to risk of secondary infections such as HIV and hepatitis (addressed in the next section) through shared needles; (ii) development of higher tolerance for the drug, increasing the general toxicity to the user and the risk of overdose.<sup>72</sup>

---

<sup>71</sup> Warren, D. (2001) 'Memorandum 69', Section 1.3, in Select Committee on Home Affairs (2002) *The Government's drug policy, is it working?*  
<http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/318m88.htm>

<sup>72</sup> The Australian Health Department (2004) *Handbook for Health Professionals*, p.82; available at [www.aodgp.gov.au/pdf/chap6.pdf](http://www.aodgp.gov.au/pdf/chap6.pdf)

35. **Maximum penalties:** 5 years for possession, 14 years for supply (Class B). If prepared for injection (Class A), 7 years for possession and Life for supply.<sup>73</sup>
36. **Nicknames:** *speed, whiz, uppers, amph, billy, sulphate, grudge, dexys, blues, base, ups, wake ups, bennies, black beauties, jollies, crazy medicine, yaba* and *crazy horse*. Methamphetamine is known as *meth* or *ice*.

### 2.1.2 Ecstasy

37. Class A since 1977. It is unclear why ecstasy was classified differently from other amphetamines.<sup>74</sup>
38. **Maximum penalties:** 7 years for possession and Life for supply.<sup>75</sup>
39. **Nicknames:** *E, XTC, disco biscuits, burgers, fantasy, hug drug, echoes, chiefs, mitsubishes, dolphins, Rolexes, adam* and *X*.

## 2.2 Taking amphetamines and ecstasy<sup>76</sup>

40. As street drugs, amphetamines are usually supplied in the form of a white, grey, yellowish or pink powder or as putty-like substance known as base. The powders are snorted up the nose, mixed in a drink or, by some heavy users, prepared for injection (a solution of amphetamine powder in water). Different methods of use provide different levels of high. Drinking delivers the lowest level of drug to the blood stream, snorting gets drug into the capillaries through the nose and injecting provides a direct to blood transfer, making the high fastest and strongest. The purity of street powders is less than 15%, with most deals having only 10% amphetamine. They are *cut* (adulterated) with other powders such as glucose, vitamin C, laxative, dried baby milk, caffeine, or other drugs such as paracetamol or aspirin. Base is usually swallowed; because of its bad taste, it is first wrapped in (cigarette) paper and then *bombed* (swallowed). It can be snorted if first dried out. Amphetamine base is roughly at least 50% pure.
41. Methamphetamine is supplied as powder, crystals (known as *ice*) or in tablet form. The powder is swallowed or snorted. The crystal form can be easily ignited and smoked because the salt base has been removed. Pills are swallowed. A typical dose of methamphetamine is 15 mg. Methamphetamine is the most commonly produced illegal synthetic drug in the world. The ACMD recently reviewed methamphetamine.<sup>77</sup>

---

<sup>73</sup> *Misuse of Drugs Act 1971*

<sup>74</sup> *Misuse of Drugs Act 1971 (Modification) Order 1977* (SI Number 1243)

<sup>75</sup> *Misuse of Drugs Act 1971*

<sup>76</sup> From the DrugScope website, [www.drugscope.org.uk](http://www.drugscope.org.uk), DrugScope is an NGO in Special Consultative Status with the Economic and Social Council of the United Nations.

<sup>77</sup> *op.cit.*; the Home Office response to ACMD's report on methamphetamine said that it would monitor the drug and take the recommendations of the Council on board. See <http://www.gnn.gov.uk/Content/Detail.asp?ReleaseID=178091&NewsAreaID=2>



42. Ecstasy is supplied in pill format and is swallowed. A typical dose is 125 mg. However, the tablets often contain little or no ecstasy at all, instead containing a mixture that might include other amphetamines, ketamine, caffeine and ephedrine, or even no drugs whatsoever. This can pose a greater risk than ecstasy alone, if the drugs present are more harmful in combination.<sup>78</sup>
43. The British Crime Survey 2004 shows the use of ecstasy has remained relatively constant in England and Wales since 1996, while use of amphetamines has decreased.<sup>79</sup> Until the mid 1960s, amphetamines were commonly prescribed and commonly available over the counter as a slimming drug. As the addictive nature and side effects were recognised, prescribing the drug fell.<sup>80</sup> In England and Wales, ecstasy is the third most common illegal drug used (by 1.8% of 16-59 year olds), and amphetamines rank fourth at 1.4%. The majority of ecstasy users are aged 16 to 34, and use drops sharply in the next age band 35-44. Amphetamine users also follow that age-related use pattern. A study published in 2004 found 5% of UK schoolchildren surveyed reported using ecstasy and 2% reported using amphetamines at some point in their lives.<sup>81</sup> In 2000, the number of self-reported amphetamine injecting users in England and Wales was 1,182 (a small proportion of total amphetamine users, less than 1%).<sup>82</sup> EMCDDA figures released in 2005 showed that the UK was the only country reporting a significant drop in the number of amphetamine users in the age range 15-34.<sup>83</sup>
44. ACMD's review of methamphetamine<sup>84</sup> included information on usage from the British Crime Survey and peer reviewed academic research. It found that the drug is currently manufactured or imported into the UK in small quantities. The most likely users of methamphetamine are clubbers and the gay community. The EMCDDA report on trends in drug use in Europe suggests that despite easy access to countries such as the USA and the Czech Republic that have methamphetamine problems, the UK shows no sign of an increase in the number of users.<sup>85</sup>

---

<sup>78</sup> Kilfoyle, M. and Bellis, M. (2000) *Club health: The health of the clubbing nation*, Northwest Public Health Observatory, available at <http://www.nwpho.org.uk/reports/clubhealth.pdf>

<sup>79</sup> Roe (2005), p.14.

<sup>80</sup> <http://www.addaction.org.uk/Druginfoamphet.htm>

<sup>81</sup> European School Survey on Alcohol and Other Drugs, (2003), *Summary of 2003 findings*, Swedish council for Information on Alcohol and Other Drugs, available at <http://www.espad.org/diagrambilder/summary.pdf>

<sup>82</sup> Godfrey, C., et al. (2000) *The economic and social costs of class A drug use in England and Wales, 2000*, Home Office Research Study 249, p.11; available at <http://www.homeOffice.gov.uk/rds/pdfs2/hors249.pdf>

<sup>83</sup> EMCDDA (2005) *Cocaine, amphetamines, ecstasy and cannabis: Latest trends*, news release; available through <http://www.emcdda.eu.int/?nnodeid=875>

<sup>84</sup> ACMD (2005).

<sup>85</sup> EMCDDA (2005).

### 2.3 Scientific issues

45. The term ‘amphetamines’ includes a broad range of drugs that have similar chemical structures. Ecstasy is one form of amphetamine, whose full name is *3,4-methylenedioxy-methamphetamine* (MDMA). Other amphetamines include methamphetamine, which is more potent than other forms; anecdotally it is associated with use by gay clubbers.<sup>86</sup> Amphetamines are lipid soluble and cross the blood brain barrier causing a release of dopamine and noradrenaline, creating a rush of stimulation on the brain. Methamphetamine is often associated with increasing libido.<sup>87</sup>
46. Ecstasy works by causing a release of the neurotransmitter serotonin in the brain and then blocking its re-uptake by neurons, causing a prolonged emotional high.<sup>88</sup> In animal models this leads to damage of neurons and non-predictable re-connectivity of neurons after cessation of ecstasy use, at doses comparable to recreational doses.<sup>89</sup> The implication is that because younger brains exhibit more neuroplasticity they are more at risk from this re-connectivity. Long term studies of ecstasy users would be needed to verify this.
47. People attending nightclubs, parties and raves more commonly use ecstasy than other amphetamines.<sup>90</sup> Clubbers are increasingly taking ecstasy in association with the sedative GHB (also known as liquid ecstasy, despite being chemically and biologically very different from MDMA). This can pose a severe danger to health through the induction of coma. A Swiss study published in 2005 on hospital admissions due to drug abuse found that when ecstasy was taken in association with GHB or opiates, 70% of patients exhibited deep coma (not seen in any patient who took only ecstasy), and when ecstasy was taken in association with cocaine it produced panic reactions in 30% of patients.<sup>91</sup>
48. A review of previous studies by psychopharmacologist Robert Gable<sup>92</sup> provides the safety ratios for different drugs, based on the lethal dose of each substance and the dose in which it is commonly abused; this *dose index* is commonly used in pharmacology to determine the safety of new drugs on the market. Methamphetamine ranks more dangerous than cocaine (safety ratio of 10 compared to 15 for cocaine) and ecstasy has a safety ratio of 16.

---

<sup>86</sup> Advisory Council on the Misuse of Drugs (2005) *Methylamphetamine review: 2005*, Home Office publications, p.13; available at <http://tinyurl.com/a2852>

<sup>87</sup> ACMD (2005), p.37.

<sup>88</sup> Office of Science and Technology (1997) *Ecstasy: recent science*, Post Note 95. Available at [www.parliament.uk/post/pn095.pdf](http://www.parliament.uk/post/pn095.pdf)

<sup>89</sup> Arnone, D. and Schifano, F. (2006) ‘Psychedelics in psychiatry’, *British Journal of Psychiatry*, 188, 88-9, available through <http://bjp.rcpsych.org/current.shtml>

<sup>90</sup> This is based on the prevalence of ecstasy use compared to that of amphetamine and widespread club user anecdotes.

<sup>91</sup> Liechit M.E., *et al.* (2005) ‘Acute medical problems due to ecstasy use’, *Swiss Medical Weekly*, 135, 652-657, available at <http://www.smw.ch/archive200x/2005/43/smw-11231.html>

<sup>92</sup> Gable, R. (2004), ‘Comparison of acute lethal toxicity of commonly abused psychoactive substances’, *Addiction*, 99, 686-696. Gable is Professor of Psychology at the *Center for Organizational and Behavioral Sciences* at Claremont Graduate School.

Gable acknowledges that methamphetamine response is highly divergent at high doses and MDMA (ecstasy) response is highly variable depending upon environmental factors.

49. Amphetamines act as a stimulant, and pose risks from increased blood pressure and associated complications. They also cause serious neurological consequences for long-term users, increasing their risk of psychosis and recurring psychotic episodes.<sup>93</sup> The Runciman report did not advocate any change in the classification status of Class B (non-injected) amphetamines.<sup>94</sup>
50. Methamphetamine is nearly twice as potent as other amphetamines, and has been shown to be involved in brain damage in heavy users.<sup>95</sup> Although the majority of symptoms are the same as for other amphetamines, the level of dependence is higher and reached sooner and there is an increased chance of developing tolerance. Methamphetamine may lead to neurotoxicity, causing disturbances to verbal reasoning, working memory, psychomotor function and attention defects, although academic evidence suggests that these decrease with abstinence.<sup>96</sup>
51. Overdose deaths or deaths directly due to ecstasy in the UK comprise around 2% of all deaths. This figure has been remarkably consistent in recent years, with small increases in 2001 and 2002 but this has dropped back in 2003 and 2004.<sup>97</sup> The ecstasy deaths are mainly due to dehydration because the drug causes blood vessels to constrict to maintain blood pressure so the individual stops losing heat,<sup>98</sup> their body temperature rises and body systems fail one by one. Ecstasy also causes the kidneys to stop processing water correctly, so drinking too much water can swell the brain and also cause death.<sup>99</sup> In a retrospective case study of self-reported ecstasy intoxications (which therefore does not guarantee the presence of MDMA or its action alone), less severe consequences of ecstasy were collapse or loss of consciousness, palpitations, dizziness or weakness and anxiety.<sup>100</sup>
52. The neurological and psychological effects of ecstasy have been researched for some time. Studies have suggested that the drug may have a secondary effect of depression in chronic users.<sup>101</sup> This is due to serotonin levels in the brain falling after the large release and blocked uptake of the neurotransmitter during a trip. Ecstasy users surveyed midweek between sessions of use showed statistically significant numbers had depression symptoms.

---

<sup>93</sup> ACMD (2005), p.33.

<sup>94</sup> Runciman (2000), p.51.

<sup>95</sup> ACMD (2005), pp.29-32.

<sup>96</sup> ACMD (2005), pp.31-32.

<sup>97</sup> Figures compiled by the Office for National Statistics over the period 1999-2003.

<sup>98</sup> Vaso-constriction (constriction of blood vessels) takes blood away from the surface of the skin, slowing heat loss from the blood (which carries heat away from the body core) – this leads to overheating.

<sup>99</sup> Select Committee on Home Affairs (2002), section 127.

<sup>100</sup> Liechit, M.E., *et al.* (2005), 652.

<sup>101</sup> Parliamentary Office of Science and Technology (1997); available at [www.parliament.uk/post/pn095.pdf](http://www.parliament.uk/post/pn095.pdf)

This result was not seen in a group of alcohol users surveyed midweek.<sup>102</sup> Anecdotal evidence published in 2002 suggested young onset of Parkinson's disease could be linked to MDMA.<sup>103</sup> Another study claimed that MDMA could lead to Parkinson's in primates,<sup>104</sup> but the claim was subsequently retracted as methamphetamine had been used, not MDMA.<sup>105</sup> Other research on monkeys found that MDMA may actually relieve the uncontrollable limb movements of Parkinson's.<sup>106</sup> This seems to align with British stuntman Tim Lawrence's claim in 2000 that MDMA helped with his Parkinson's symptoms.<sup>107</sup>

53. The Runciman report<sup>108</sup> suggested that ecstasy may be several thousand times less dangerous than heroin, although both are in Class A, as the percentage of deaths among users is very small and there is little evidence that ecstasy users exhibit withdrawal symptoms, with far more evidence suggesting there are no withdrawal symptoms. Recent figures show there were about 13.5 times more ecstasy users than heroin users in 2004, and deaths caused by ecstasy were around 3% of the number caused by heroin.<sup>109</sup>

## 2.4 Other health issues

54. Dexedrine is the only amphetamine that is commonly used medically, to treat narcolepsy. The other common stimulant with medical use is Ritalin (Methylphenidate), used in attention deficit hyperactivity disorder (ADHD) in children. Despite chemical similarities (they both contain benzyl and amine groups) Ritalin is not an amphetamine.
55. Amphetamines prepared for injection carry the same risks as all injected drugs do from secondary infections due to shared needles. These include increased risk of HIV and hepatitis. Methamphetamine is associated with increased risk-taking sexual behaviour,<sup>110</sup> which can lead to spreading such infections as HIV. Amphetamine use is often linked with an increase in violent and aggressive behaviour.<sup>111</sup>

---

<sup>102</sup> Curran, H.V., *et al.* (1997) 'Mood and cognitive effects of  $\pm$  3,4-methylenedioxymethamphetamine (MDMA, 'ecstasy'): week-end 'high' followed by mid-week low', *Addiction*, 92, 821-831.

<sup>103</sup> Including correspondence published in the *New England Journal of Medicine* 340, 1443 (1999); 349, 96 (2003).

<sup>104</sup> Ricuarte, G., *et al.* (2002) 'Severe Dopaminergic Neurotoxicity in Primates After a Common Recreational Dose Regimen of MDMA ("Ecstasy")', *Science*, 297, 2260-2266.

<sup>105</sup> Ricuarte, G., *et al.* (2003) 'Retraction', *Science*, 301, 1479.

<sup>106</sup> See the 2002 reports in *New Scientist* (176, 14) and the BBC news website (<http://news.bbc.co.uk/1/hi/health/2409755.stm>)

<sup>107</sup> <http://news.bbc.co.uk/1/hi/health/1169980.stm>

<sup>108</sup> Runciman (2000), p.48.

<sup>109</sup> Number of users taken from Roe (2005), p.13, and deaths taken from the ONS *Health Statistics Quarterly*, Spring 2005

<sup>110</sup> ACMD (2005), p.37.

<sup>111</sup> *Ibid.*

## 2.5 Social issues

56. A report on young offenders' use of drugs<sup>112</sup> showed lifetime usage of ecstasy by 44% and of amphetamines by 41%. This compares with 86% using cannabis and 11% using heroin. Among offenders tested for drugs at the time of arrest, most of those who had taken ecstasy or amphetamines also tested positive for other drugs such as cocaine.<sup>113</sup> This suggests that the use of amphetamines or ecstasy alone correlates less strongly with criminal behaviour. The NEW ADAM survey<sup>114</sup> showed that those arrested who had not taken heroin, crack or cocaine in association with amphetamines in the previous year had below average illegal incomes for arrested drug abusing criminals (25% of the average and less than 10% off the illegal income for those using heroin, crack or cocaine).
57. Almost all (95%) of the homeless young people surveyed in 2003<sup>115</sup> used illegal drugs. Ecstasy and amphetamines were, with cannabis, the most common; many were poly-drug users. Although substance abuse was the second most common explanation for leaving home, there were often other complicating factors such as family conflict or abuse. Substance use was also seen as a common barrier to getting either temporary or permanent accommodation by the young people, a view shared by those providing accommodation.

## 2.6 Economic issues

58. The United Nations Office on Drugs and Crime estimates that the global market for amphetamines, methamphetamine and ecstasy is worth \$44 bn a year: amphetamines \$28 bn and ecstasy \$16bn. Europe's share of these two markets is \$2 bn for amphetamines and under \$3bn for ecstasy.<sup>116</sup> Europe is the second largest market for ecstasy and the fourth for amphetamines. In the UK alone, the ecstasy market is worth £231 million per year, amphetamines £380 million. If these were legalised and taxed, it has been speculated that the Treasury could earn £10 million on ecstasy and £130 million on amphetamines (high-end estimates of potential revenue).<sup>117</sup>
59. Treatment is seen as an economically sensible route to follow for drug abuse, with many studies suggesting that treatment can save large amounts of money compared to

---

<sup>112</sup> Hammersly (2003), p.28.

<sup>113</sup> Roe, S., (2005), p.11.

<sup>114</sup> NEW-ADAM is the Arrestee Drug Abuse Monitoring program, commissioned by the home Office and run at Cambridge University. Holloway, K. *et al.* (2004), *Trends in drug use and offending: the results of the NEW-ADAM programme 1999-2002*, Home Office Research, Development and Statistics directorate, ISSN 1473-8406, available at <http://www.homeOffice.gov.uk/rds/pdfs04/r219.pdf>

<sup>115</sup> Wincup, E., *et al.* (2003), *Youth homelessness and substance use: report to the drugs and alcohol research unit*, Home Office research report 258, ISBN 1 84082 965 6, p.28; available at [www.homeOffice.gov.uk/rds/pdfs2/hors258.pdf](http://www.homeOffice.gov.uk/rds/pdfs2/hors258.pdf)

<sup>116</sup> UN Office on Drugs and Crime (2005), p.17.

<sup>117</sup> Atha, M. (2004).

punishment alone.<sup>118</sup> However, UN figures<sup>119</sup> indicate that the number of users entering treatment programmes who commonly abuse amphetamines or ecstasy is only around 1%, suggesting that treatment for those users is currently not suitable. The Drugs Act 2005 requires Class A amphetamine users to undertake a treatment programme; there is a requirement to attend an assessment that “sets out the nature of the assistance or treatment (or both) which may be most appropriate for the person in connection with any dependency upon, or any propensity to misuse, a specified Class A drug”.<sup>120</sup> An NHS report states that more needs to be done for amphetamine and stimulant users to provide rehabilitation.<sup>121</sup>

## 2.7 Government response to evidence and recommendations

60. In 2002 the then Home Secretary, David Blunkett, declined to accept the recommendations of the Home Affairs Select Committee<sup>122</sup> and the Runciman report on ecstasy to reclassify it from Class A to Class B. He said:
- (5) “We still have much to learn about the long-term harm that it causes, but what we do know is that ecstasy can kill unpredictably and that there is no such thing as a safe dose. I believe all killer drugs such as ecstasy should remain in class A.”
61. He did not give reasons for rejecting the evidence presented by the Committee and the Runciman report (or other evidence that seems to show that ecstasy does not produce the same level of harm as such other Class A drugs as heroin or cocaine). In contrast, when the reclassification of cannabis was being considered in 2001, the Home Secretary specifically asked the ACMD to produce a report on the drug (see Chapter 4 for details). However, when asked whether he would ask the ACMD to produce a similar report on ecstasy to establish the scientific evidence for classification, he would not consider making such a move.<sup>123</sup> In the parliamentary debate on the Home Affairs Select Committee’s report,<sup>124</sup> views were divided.
62. When the ACMD published its report on methamphetamine in 2005,<sup>125</sup> the Home Secretary, Charles Clarke, published an official response in which he said the government

---

<sup>118</sup> For a review of some previous studies in this area see the OST commissioned report; Cave, J., *et al.* (2005) *Economics of addiction and drugs*, Foresight 2025 (available at [www.foresight.gov.uk](http://www.foresight.gov.uk)).

<sup>119</sup> UN Office on Drugs and Crime (2005), p.373.

<sup>120</sup> *Drugs Bill 2005*, section 10.4

<sup>121</sup> Day, E. (2005) *A national survey of inpatient drug services in England*, NTA research briefing 12, available at [http://www.nta.nhs.uk/publications/docs/RB12\\_national\\_survey\\_of\\_inpatient\\_drug\\_services\\_in\\_England.pdf](http://www.nta.nhs.uk/publications/docs/RB12_national_survey_of_inpatient_drug_services_in_England.pdf)

<sup>122</sup> Select Committee on Home Affairs (2002).

<sup>123</sup> See the Guardian report 10.07.02 at <http://www.guardian.co.uk/drugs/Story/0,2763,752855,00.html>

<sup>124</sup> Hansard, 05.12.02, column 1099, available at <http://www.publications.parliament.uk/pa/cm200203/cmhansrd/vo021205/debtext/21205-22.htm>

<sup>125</sup> ACMD (2005).

would look to implement the recommendations of the review (none of which relate to reclassifying the drug).<sup>126</sup>

---

<sup>126</sup> Response available on the Government News Network, at <http://www.gnn.gov.uk/Content/Detail.asp?ReleaseID=178091&NewsAreaID=2>





**(6) Chapter Summary**

(7) Cocaine is a Class A drug, now the second most common drug used in the UK after cannabis. It is a strong stimulant that in chronic users leads to psychological dependence. It can cause multiple health problems including increased risk of heart attacks and, as with amphetamines, injecting users risk HIV or hepatitis infection. Cocaine is responsible for around 100 deaths per year in the UK. It is associated with increased acquisitive crime in addicts, and crack cocaine has links with both violent crime and prostitution. Dealing in crack can often be a way for young people in deprived areas to make money. Government policy reflects the harm associated with cocaine and crack, although lack of new evidence means cocaine has not been recently reviewed. The national crack strategy of 2002 focused on social evidence for reducing harm.

3.1 **Classification, penalties and street names**

3.1.1 **Cocaine**

63. Class A. First regulated by the Poisons and Pharmacy Act 1908;<sup>127</sup> now covered by the Misuse of Drugs Act 1971.<sup>128</sup>
64. **Maximum Penalties:** 7 years for possession, Life for supply.<sup>129</sup>
65. **Nicknames:** *C, charlie, coke, dust, gold dust, snow, white and bugle.*

3.1.2 **Crack**

66. Class A. It is a mixture of powder cocaine, baking soda and water. Its name comes from the cracking sound it makes when it is being smoked.

---

<sup>127</sup> International Narcotics Board, Annual Report 1998, chapter 1, paragraph 9.  
[http://www.incb.org/incb/en/annual\\_report\\_1998\\_chapter1.html](http://www.incb.org/incb/en/annual_report_1998_chapter1.html).

<sup>128</sup> *Misuse of Drugs Act 1971.*

<sup>129</sup> *Ibid.*

67. **Maximum Penalties:** 7 years for possession, Life for supply.<sup>130</sup>
68. **Nicknames:** *rock, wash* and *stone*.

### 3.2 Taking cocaine and crack

69. Cocaine can be taken by snorting the powder through the nose, smoked in the form of cocaine rocks or injected as a solution. Crack cocaine is smoked, either with other drugs such as marijuana, or by inhaling the vapours as they pass through glass “crack pipes”.

### 3.3 Scientific issues

70. Cocaine blocks the re-uptake of dopamine and serotonin (neurotransmitters associated with reward and reinforcement of behaviour) causing a build up of these chemicals in the brain and an extended stimulation of receptor sites. Its use also depletes these chemicals, leading to the depression and mood swings associated with cocaine.<sup>131</sup> It has been rated as the second most dangerous illegal drug (after heroin) in various studies,<sup>132</sup> although a review of previous studies by Robert Gable in 2004<sup>133</sup> found cocaine to be safer than DXM (the active ingredient in some cough syrups, which has a hallucinogenic effect), GBH, methamphetamine and isobutyl nitrate, and heroin. This study was based on a review of the lethal dose of a substance and the dose at which it is commonly abused, providing a safety ratio for the drug (this *dose index* is commonly used in pharmacology to determine the safety of new drugs on the market). The majority of crack users are habitual, whereas the majority of cocaine users are occasional. This suggests that crack is more addictive than cocaine.<sup>134</sup>
71. The UK has one of the highest rates of cocaine use in Europe: over 4% of young British adults (aged 15-34) reported using cocaine in the previous year (the highest value in Europe),<sup>135</sup> while 10% of 15-34 year olds reported ever having used cocaine (lifetime use).<sup>136</sup> Of those reporting using cocaine, the highest rates of both lifetime use (up to 13%) and recent use (up to 7%) were in young men, aged between 15 and 24.<sup>137</sup> However, since

---

<sup>130</sup> *Ibid.*

<sup>131</sup> Taken from the Coca website, the leading UK charity supporting workers and organisations with banned stimulants, <http://www.coca.org.uk/showPage.asp?pageID=14>

<sup>132</sup> These include Roques, B. (1999), *The dangerousness of drugs: report to the state secretariat for health*, Paris - La documentation française; Hiltz, P. (1994), ‘Is nicotine addictive? It depends on whose criteria you use’, *New York Times* 02.08.94; and Runciman (2000).

<sup>133</sup> Gable, R. (2004).

<sup>134</sup> Select Committee on Home Affairs (2002), paragraph 144.

<sup>135</sup> EMCDDA (2004) *Annual Report on European drug trends*, available at <http://ar2004.emcdda.eu.int/en/page051-en.html>

<sup>136</sup> EMCDDA (2005) *Annual Report*, available at <http://ar2005.emcdda.eu.int/en/page050-en.html>

<sup>137</sup> EMCDDA (2004), *Annual report on European drug trends*.

1996 there has been a near threefold increase in 25-34 years olds using Class A drugs, mostly cocaine, and a fourfold increase in 16-24 year olds using cocaine.<sup>138</sup> Among 'dance clubbers' lifetime use may be as high as 60%.<sup>139</sup>

72. NHS evidence suggests that cocaine is responsible for around 3% of all drug deaths.<sup>140</sup> This compares with around 75% for heroin and morphine together.<sup>141</sup> Figures for drug deaths in the UK from the Office for National Statistics show that deaths due to cocaine have been increasing in recent years, although they are still a small proportion compared to heroin related deaths.<sup>142</sup> There are additional cocaine deaths in police custody suites due to swallowing crack or cocaine in order to avoid possession charges.<sup>143</sup>
73. In evidence to the Home Affairs Select Committee in 2001, Professor David Nutt (Professor of Psychopharmacology and Dean of Clinical Medicine and Dentistry at the University of Bristol and a government advisor on drugs policy) described cocaine as having:
- (8) "...short-term risk quite high in relation to cardiovascular side effects and also to acute psychotic episodes. Long-term risk high, particularly in terms of dependence, cardiovascular damage and possibly psychiatric problems. Addictiveness high."<sup>144</sup>
74. Neurological and psychological problems caused by cocaine use include confusion and aggression, leading to convulsions in some people. There is local damage to the septum of the nose from cocaine snorting (where eventually a hole can develop in the septum), and there are also acute medical effects surrounding vaso-constriction that lead to high blood pressure, stroke and heart attack.<sup>145</sup>
75. The most serious health risk associated with cocaine is heart attacks. A USA study of heart attack incidence in young people found that 25% were caused by cocaine abuse and that the risk to users of having an attack was 1.8-53 times greater than the risk to non-users.<sup>146</sup>

---

<sup>138</sup> Roe, S. (2005), p.33.

<sup>139</sup> EMCDDA (2001), 'Cocaine and crack' (special issue). In *Annual report 2001: the state of the drugs problem in the acceding and candidate countries to the European Union*.

<sup>140</sup> Taken from *Health Statistics Quarterly 13*, table 3, p.78, available at [http://www.statistics.gov.uk/downloads/theme\\_health/HSQ13\\_v4.pdf](http://www.statistics.gov.uk/downloads/theme_health/HSQ13_v4.pdf)

<sup>141</sup> Figures compiled by the Office for National Statistics over the period 1999-2003 show consistency of these percentages, although there has been a slight rise in cocaine deaths as a percentage of total drug deaths in recent years.

<sup>142</sup> This graph is taken from the BBC website, with data sourced from the 2004 BCS, available at <http://news.bbc.co.uk/1/hi/uk/4229470.stm> under key trends in UK drug use.

<sup>143</sup> Evidence from the NHS National Treatment Agency for substance misuse, [www.nta.nhs.uk](http://www.nta.nhs.uk), follow links to drug related deaths

<sup>144</sup> Examination of witness by the Home Affairs Select Committee, 27.11.01, question 484, available at <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/1112703.htm>

<sup>145</sup> Evidence given to the Home Affairs Select Committee on drug policy by Prof. John Henry in 2001.

<sup>146</sup> 'Minerva' (2001), review in the *British Medical Journal*, 322, 374, available at <http://bmj.bmjournals.com/cgi/content/full/322/7282/374>

Crack cocaine offers similar complications to cocaine, although as it is generally smoked, there are also dangers to the lungs and airways. There is little evidence on effective treatment for addicts despite more addicts entering treatment programmes in the UK.<sup>147</sup>

### 3.4 Other health issues

76. Injection of cocaine carries the risk of secondary infections due to shared needles, including increased exposure to HIV and hepatitis. Intravenous crack users have higher levels for HIV and Hepatitis C than other drug users; the reason is not clear.<sup>148</sup> Other substances present with the cocaine may themselves pose a further health risk. For example, phenacetine is reported as a common adulterant in seized samples of cocaine powder. It has been linked to liver, kidney and blood disorders, including cancer.<sup>149</sup> Cocaine has also recently been linked to Parkinson's disease; recent studies suggest that its use can damage nerve cells in a part of the brain and make them more susceptible to the toxins that cause Parkinson's.<sup>150</sup> The Home Affairs Select Committee recommended in 2002 that both cocaine and crack remain in Class A, based on the harm done to users and potential harm to non-users.

### 3.5 Social issues

77. The British Crime Survey (2004)<sup>151</sup> showed a 16% rise in cocaine offences from 2003, and 300% rise in cocaine offences since 1997. Crack cocaine offences rose by 8% between 2003 and 2004. Reported use of cocaine among 16-59 year olds remained stable between 2000 and 2004, after a sharp rise between 1998 and 2000. The use of crack cocaine has remained stable between 1996 and 2004 and is much lower than that of cocaine (see figure 2). Cocaine was the second most common drug used in England and Wales after cannabis, with 2% of 16-59 year olds claiming to have used it in the last year. Crack was used in the previous year by 0.1% of the population. A small number of studies claim that snorting coke leads some users on to crack cocaine, although the great majority of cocaine users do not go on to use crack cocaine.<sup>152</sup>

---

<sup>147</sup> Select Committee on Home Affairs (2002).

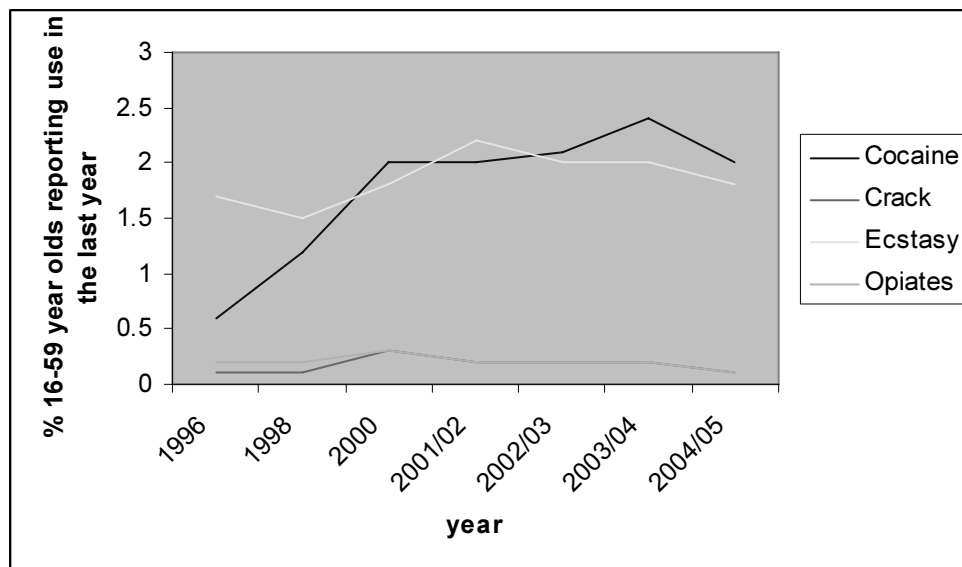
<sup>148</sup> *Ibid.*

<sup>149</sup> EMCDDA, (2004) *Annual report 2004: the state of the drugs problem in the EU and Norway*

<sup>150</sup> See the Guardian report, 14.12.05, ([http://www.guardian.co.uk/uk\\_news/story/0,3604,1666765,00.html](http://www.guardian.co.uk/uk_news/story/0,3604,1666765,00.html))

<sup>151</sup> Roe, S., (2005).

<sup>152</sup> Hatsukami, D.K. and Fischman, M.W. (1996) 'Crack cocaine and cocaine hydrochloride. Are the differences myth or reality?', *Journal of the American Medical Association*, 276:19, 1580-8, abstract available at <http://tinyurl.com/deag6>.



**Figure 2 Percentage of 16-59 year olds reporting having used Class A drugs in the last year since 1996.**<sup>153</sup>

78. The Drugs Bill 2005 requires any person testing positive for cocaine (or any Class A drug) to be assessed by a drug worker, and also requires people who have drug related Anti-Social Behaviour Orders to attend counselling. It is not clear that treatment is a more cost effective measure than punishment alone. Recent evidence from the European Institute for Social Services suggests that the evidence for enforced treatment for offenders is flawed and requires more research.<sup>154</sup> The National Treatment Outcome Research Study (NTORS) found that crack treatment proved successful in helping over half those receiving help to stay off the drug for up to five years (the length of the study). However, the net decrease in crack use in the past 90 days in participants in the treatment programme was minimal, since over 20% of them took up crack use whilst on the programme, usually for the first time.<sup>155</sup>
79. The NTA (National Treatment Agency for Substance Misuse, a special health authority, created by the Government in 2001 to improve the availability, capacity and effectiveness of treatment for drug misuse in England) report on UK treatment for offenders<sup>156</sup> suggests that treatment does reduce acquisitive and drug selling crime in the UK, with offences by those in treatment dropping by 75% over a five year period, although all those in the treatment programme had entered voluntarily. Other Home Office research also supports this finding: a review of drug treatment in prisons suggested that re-offending decreases with treatment.<sup>157</sup>

<sup>153</sup> Source: Roe (2005).

<sup>154</sup> Stevens A., *et al.* (2005).

<sup>155</sup> Witton and Ashton (2002).

<sup>156</sup> Gossop (2005).

<sup>157</sup> Ramsay (2003).

80. One view reported in the media is that cocaine is the drug of choice for the middle classes, celebrities and executives. British Crime Survey data show cocaine is mainly used by 16-24 year olds, over 6% of 20-24 year olds having used cocaine in the last year. The overall fall in use is not as great as for other substances. More 25-34 year olds are using the drug. London has the highest rates: 3.2% of 16-59 year olds reported using within the last year (compared to the national average of 2%). The price of cocaine has dropped considerably since 1993, making it more widely available to potential users.
81. When the first crack death was reported in the UK in 1996, it was seen as a gangland drug. There is no evidence that use is confined to one particular socio-economic group or sector.<sup>158</sup> In those communities with strong crack markets, dealing in the drug is a significant economic opportunity for young people where legal job opportunities are at a low level.<sup>159</sup> In the sex trade crack is reportedly used as a stimulant to lower inhibitions and increase stamina.<sup>160</sup> Other research into links between crack and prostitution found that that one reinforces the other.<sup>161</sup>
82. About 18% of young offenders use cocaine,<sup>162</sup> more than the national average, although far lower than the prevalence rates of alcohol (91%), cannabis (86%) or tobacco (85%) for young offenders.

### 3.6 Economic issues

83. The price of cocaine has fallen in the UK<sup>163</sup> and Europe over the last 5 years.<sup>164</sup> This may have contributed to the increase in use.<sup>165</sup> The total world market in cocaine is estimated by the UN to be worth over \$70 billion per year, with the retail market in Central and Western Europe worth \$17 bn,<sup>166</sup> making Europe the second largest cocaine market globally, after the USA. In the UK, the cocaine market is estimated to be worth up to £1.2 bn,<sup>167</sup> approximately 50% cocaine and 50% crack, according to the Independent Drug

<sup>158</sup> Ahmed, K., Bright, M. (2002) 'Britain back on the brink of a crack epidemic', *The Observer* 9 June 2002.

<sup>159</sup> Lupton, et al., (2002), *A rock and a hard place: drug markets in deprived neighbourhoods*, Home Office Research Study 240, Development and Statistics Directorate, available at <http://www.homeOffice.gov.uk/rds/pdfs2/hors240.pdf>

<sup>160</sup> Thompson, T. (2003), 'Crack turns vice girls into slaves to sex', *The Observer* 12.10.03, available at <http://observer.guardian.co.uk/drugs/story/0,11908,1061333,00.html>

<sup>161</sup> May, T., et al. (2003), *Street business – the link between sex and drugs markets*, Police Research Series paper 118, available at <http://www.crimereduction.gov.uk/prostitution1.htm>

<sup>162</sup> Hammersly R, Marsland L, Reid M (2003), Substance use by young offenders, Home Office Research Study 261, Development and Statistics Directorate, available at <http://www.homeOffice.gov.uk/rds/pdfs2/hors261.pdf>

<sup>163</sup> In the UK, from about £60 in 1993 to £45 in 2003 per gram; <http://www.idmu.co.uk/drugpricetrend9403.htm>

<sup>164</sup> UN Office on Drugs and Crime, (2005)

<sup>165</sup> Roe, S. (2005).

<sup>166</sup> UN Office on Drugs and Crime, (2005).

Monitoring Unit. They speculated that taxation of legalised trade in cocaine and crack could earn the Treasury up to £1bn; but legalisation would increase crack users by up to 21%, and bring associated costs to the health service and policing.

84. The economics of drug treatment have been reviewed for the Home Office,<sup>168</sup> and seem to suggest net savings. The Home Office claims that for every £1 spent on treatment of drug abusers, £9 is saved in drug related costs such as policing and health care<sup>169</sup> although there is a certain amount of interpretation in arriving at this figure.

### 3.7 Government response to evidence and recommendations

85. The Government position on the classification status of cocaine and crack has not changed since both were included in Class A. There has been no move or desire to reclassify either drug. The evidence presented to government about harm done to individuals and society by cocaine has always been read to say that the drug should remain in Class A. The Runciman report<sup>170</sup> asked members of the Royal College of Psychiatrists' Faculty of Substance Misuse about harm caused by drugs and found that there was no dispute over cocaine and heroin topping the list of most harmful substances.
86. Government policy on cocaine users has changed recently, because the Drugs Act 2005 makes treatment mandatory for all Class A drugs users. There has been research into rehabilitation for cocaine users<sup>171</sup> and laws to allow greater powers for police to close down crack houses.<sup>172</sup> The national plan for crack<sup>173</sup> aimed to reduce the harms to communities posed by crack by increasing the treatment availability for users, closing crack houses and educating young people on the dangers of crack. Government plans to control the sex trade will include provisions for treatment for prostitutes.<sup>174</sup>

---

<sup>167</sup> Atha, M. (2004)

<sup>168</sup> For a review of some previous studies in this area see the OST commissioned report; Cave J, *et al.* (2005). In the USA, a report by the RAND Corporation in 1994 looked at the savings possible by increasing treatment budgets at the expense of supply control programmes; Rydell, C. and Evringham, S. (1994), *Controlling cocaine: supply versus demand programs*, RAND Drug policy research centre, ISBN 0-8330-1552-4.

<sup>169</sup> This claim is taken from the DH funded research study the National Treatment Outcome Research Study (NTORS), reported in the academic paper – Godfrey *et al* (2004).

<sup>170</sup> Runciman (2000).

<sup>171</sup> National Treatment Agency for substance misuse, (2002), 'Commissioning cocaine/crack treatment', *Research into Practice 1b: Commissioners' briefing*, NHS, available at [http://www.nta.nhs.uk/frameset.asp?u=http://www.nta.nhs.uk/publications/research\\_briefing1b.htm](http://www.nta.nhs.uk/frameset.asp?u=http://www.nta.nhs.uk/publications/research_briefing1b.htm)

<sup>172</sup> *Anti-social Behaviour Act 2003*, HMSO, ISBN 0 10 543803 0

<sup>173</sup> Home Office (2002) *Tackling crack cocaine: A national plan*, available at [www.drugs.gov.uk/drug-strategy/overview/](http://www.drugs.gov.uk/drug-strategy/overview/)

<sup>174</sup> Home Office: 'Government says no to managed prostitute zones', Pres statement 006/2006, 17 January 2006.





**(9) Chapter Summary**

(10) Cannabis was downgraded from Class B to Class C in 2002, after recommendations from the ACMD, Police Foundation and Home Affairs Committee. The evidence surrounding this decision was quite conclusive at the time. It showed that cannabis harm was not comparable to that of other Class B drugs. Harm occurs mainly in the form of psychological dependence, diseases associated with smoking and increased risk of schizophrenia in those predisposed to the trait. New evidence since 2002 has led the government to reassess the position of cannabis in the classification system. The gateway theory that cannabis leads to hard drugs has been extensively studied but not proven. It is the most commonly used illegal drug in the UK.

4.1 **Classification, penalties and street names**

87. Class C. Cannabis is the most widely used illegal drug in Britain: about 3 million people aged 16-59 took cannabis in 2004-5.<sup>175</sup> The Criminal Law Act of 1977 redefined cannabis in relation to the 1971 Act. It outlawed possession of all parts of the cannabis plant from which active agents could be derived; prior to that, only the flowering top of the cannabis plant was prohibited.<sup>176</sup>
88. **Maximum penalties:** 2 years for possession, 14 years for supply. Possession is a non-arrestable offence in most cases.<sup>177</sup>
89. **Nicknames:** *hashish, hash, skunk, grass, draw, ganga* and (in the US) *marijuana. Joint, reefer* or *spliff* when smoked, usually mixed with tobacco.

---

<sup>175</sup> Roe (2005), p.13.

<sup>176</sup> Young, R. E., *et al.* (1982) 'The Rising Price of Mushrooms', *The Lancet* January 23<sup>rd</sup>, 1982, 213-4, 214.

<sup>177</sup> *Misuse of Drugs Act 1971.*

## 4.2 Taking cannabis

90. Cannabis comes from the plant *Cannabis sativa*, which is found wild in many parts of the world and is easily cultivated in Britain. It is mainly found in three forms: **Cannabis resin** is scraped from the dried plant and pressed into blocks; the most common type found in Britain is known as *hashish* or *hash*. **Herbal cannabis** is the chopped, dried leaves of the plant. It is not as potent as cannabis resin, but recently some particularly strong forms (such as *skunk*) have been grown in Holland and imported to the UK. Herbal cannabis is generally mixed with tobacco and smoked in a cigarette. Typical quantity in a joint is 200-250 mg.<sup>178</sup> **Cannabis oil** is a dark, sticky liquid made by percolating a solvent through the resin. It is relatively rare in the UK. The price of herbal cannabis fell by 24% in the period 1995-2004, and the cost of cannabis resin declined by 39% over the same period.<sup>179</sup>
91. Generally, cannabis has a mild sedative effect that makes people feel happy and relaxed. It can also aid introspection. Cannabis is mildly hallucinogenic, so colours and sounds may appear brighter and sharper. The effects can last for up to a few hours, depending on the dose and the user's mood and expectations.

## 4.3 Scientific issues

92. The main psychoactive element in cannabis is delta 9-tetrahydrocannabinol (THC). THC concentration is the usual measure of cannabis potency; one recent study put this at 30 mg THC in a joint, another at up to 300 mg.<sup>180</sup> A study for the EMCDDA found typical levels to have been "quite stable for many years at around 6-8%", although potency varies between samples, which could account for recent claims of increased potency.<sup>181</sup>
93. Cannabis has temporary adverse effects on co-ordination and short-term memory. Users may also feel anxious, unhappy and paranoid; heavy users may become psychologically dependent. The question of whether cannabis creates physical dependency is complex. Some information sources deny the possibility altogether.<sup>182</sup> Others claim that users experience "a real physical withdrawal syndrome".<sup>183</sup> A 2002 review of the issue found that

---

<sup>178</sup> King, L. (2005) letter to *The Guardian*, 19 December 2005; <http://www.guardian.co.uk/drugs/Story/0,,1670343,00.html>. Dr King is the former head of the Drugs Intelligence Unit at the Forensic Science Service.

<sup>179</sup> Herbal cannabis cost £95 per ounce in 1995, and £72 per ounce in 2004; cannabis resin cost £100 per ounce in 1995 and £61 per ounce in 2004. Figures provided by the Government on 12/9/05. <http://www.parliament.the-stationery-Office.co.uk/pa/cm200506/cmhansrd/cm050912/text/50912w84.htm>

<sup>180</sup> King (2005); Ashton, C. H. (2001) 'Pharmacology and the effects of cannabis: a brief review', *British Journal of Psychiatry* 178, 101-06.

<sup>181</sup> King, L., et al. (2004) *An overview of cannabis potency in Europe* (European Monitoring Centre for Drugs and Drug Addiction), p.14.

<sup>182</sup> The organisation DrugScope, for example, claims that 'there is no physical dependence associated with cannabis use'. Nevertheless, such a statement does not deny the possibility that evidence of an association may emerge. [http://www.drugscope.org.uk/druginfo/drugsearch/ds\\_results.asp?file=\wip\11\1\1\cannabis.html](http://www.drugscope.org.uk/druginfo/drugsearch/ds_results.asp?file=\wip\11\1\1\cannabis.html)

<sup>183</sup> The Advisory Council on the Misuse of Drugs (2002) *The classification of cannabis under the Misuse of Drugs Act 1971* (The Home Office), p.8.

while there was insufficient evidence to identify a ‘syndrome’, it is undoubtedly true that “individuals suffer unpleasant effects when abstaining from cannabis”.<sup>184</sup> Certainly, Department of Health figures show that 8% of all those attending drug treatment clinics in 2001/2 reported cannabis dependency as the main reason they were attending. This makes cannabis misuse the second-most common reason for treatment (behind heroin), equal to the number seeking help for cocaine/crack cocaine addiction.<sup>185</sup>

94. Cannabis is safe in overdose but often produces minor side effects.<sup>186</sup> Evidence on cannabis toxicity and harm is extensive, although much of it is regarded as lacking scientific objectivity.<sup>187</sup> An important comparative study, by Gable,<sup>188</sup> calculated safety ratios for psychoactive substances by comparing their reported lethal dose with the dose most commonly used for non-medicinal purposes. Cannabis had an approximate safety ratio of over 1000, the lowest acute physiological toxicity of the 20 drugs examined; in comparison, heroin had a safety ratio of 6. Many of the adverse effects of cannabis are established and uncontroversial, partly because cannabis smoke contains most of the toxic chemicals present in tobacco smoke.<sup>189</sup>
95. It is generally accepted that cannabis can produce a temporary psychotic episode,<sup>190</sup> and that it can exacerbate the symptoms of those already suffering from mental illness (or those with a tendency to such problems).<sup>191</sup> The controversy has concerned whether cannabis can trigger a chronic state of psychosis or schizophrenia in those with no history of, or vulnerability to, mental illness.<sup>192</sup> This has proved difficult to resolve, partly because longitudinal studies show that regular cannabis users are at greater risk of using other illicit drugs.<sup>193</sup> A study of Swedish army conscripts published in 1987 found that the risk of being diagnosed with schizophrenia was 2.3 times higher among those who had used cannabis more than 10 times at age 18 compared to those who with no history of usage.<sup>194</sup>

---

<sup>184</sup> Smith, N. (2002) ‘A review of the published literature into cannabis withdrawal symptoms in human users’ *Addiction* 97, 621-37, 629.

<sup>185</sup> <http://www.dh.gov.uk/assetRoot/04/07/93/72/04079372.pdf>

<sup>186</sup> Robson, P. (2001) ‘Therapeutic aspects of cannabis’, *British Journal of Psychiatry*, p.107.

<sup>187</sup> Leslie Iversen (2001) *Drugs: A Very Short Introduction* (Oxford University Press), p.88.

<sup>188</sup> Gable (2004).

<sup>189</sup> House of Lords Select Committee on Science and Technology (1998) *Cannabis: The Scientific and Medical Evidence* (House of Lords Report HL 151), paragraph 4.17. <http://www.parliament.the-stationery-Office.co.uk/pa/ld199798/ldselect/ldsctech/151/15105.htm#a2>

<sup>190</sup> Arsenaault, L., *et al.* (2004) ‘Causal association between cannabis and psychosis: examination of the evidence’, *British Journal of Psychiatry* 184, 110-17, 110.

<sup>191</sup> House of Lords Select Committee on Science and Technology (1998), paragraph 4.11.

<sup>192</sup> Hall, W. *et al.* (2000) ‘Cannabis use and psychosis: a review of the clinical and epidemiological evidence’, *Australia and New Zealand Journal of Psychiatry* 34, 26-34.

<sup>193</sup> *Ibid.*, p. 30.

<sup>194</sup> Andreasson S., *et al.* (1987) ‘Cannabis and schizophrenia: A longitudinal study of Swedish conscripts’, *The Lancet* 2, 1483-6.

A later review found that “cannabis use is unlikely to have caused cases of schizophrenia that would not otherwise have occurred”.<sup>195</sup>

96. The House of Lords Select Committee on Science and Technology produced a comprehensive study in 1998, which examined the history, pharmacology, toxicology, legality and medicinal and recreational use of cannabis. It provided an overview of medical research into cannabis at the time of publication, and noted that “new research tends to suggest that [cannabis] may be more hazardous to health than might have been thought only a few years ago,”<sup>196</sup> although “... there is little evidence that cannabis use can precipitate schizophrenia or other mental illness in those not already predisposed to it.”<sup>197</sup>
97. Two studies published in 2001 strengthened the association between cannabis and mental illness and one study questioned it. The first found that cannabis dependence and tobacco use were “associated significantly with screening positively for psychosis”.<sup>198</sup> The second found that adult cannabis users with no depressive symptoms were four times more likely than non-users to have depressive symptoms at the follow-up assessment, although the authors admitted that other factors than cannabis could account for the finding.<sup>199</sup> The third article, a literature review, warned that the research sources were predominantly “case reports and uncontrolled studies.”<sup>200</sup>
98. The Advisory Council on the Misuse of Drugs had recommended in 1979 that cannabis should be reclassified from Class B to Class C, on the grounds that cannabis was less harmful than other drugs, so the police should be enabled to deploy their resources more effectively.<sup>201</sup> The Runciman report (2000) agreed,<sup>202</sup> and stated that “the current concentration on cannabis weakens respect for the law”, to the extent that “the current law and its operation creates more harm than the drug itself.”<sup>203</sup>
99. Cannabis is listed in Schedule 1 of the Misuse of Drugs Regulations, which means that legal possession is only allowed with a special Home Office licence.<sup>204</sup> Both the 1998 House of Lords report<sup>205</sup> and the Runciman report<sup>206</sup> recommended that cannabis be

---

<sup>195</sup> Hall, W. *et al.* (1998) ‘Adverse effects of cannabis’ *The Lancet* 352, 1161-16, 1614.

<sup>196</sup> House of Lords Select Committee on Science and Technology (1998), paragraph 4.1.

<sup>197</sup> *Ibid.*, paragraph 4.11.

<sup>198</sup> Degenhardt, L., *et al.* (2001) ‘Alcohol, cannabis and tobacco use among Australians: a comparison of their associations with other drug use and use disorders, affective and anxiety disorders, and psychosis’, *Addiction* 96, 1603-14, 1612.

<sup>199</sup> Bovasso (2001), ‘Cannabis Abuse as a Risk Factor for Depressive Symptoms’, *American Journal of Psychiatry* 158:12, 2033-2037.

<sup>200</sup> Johns, A. (2001) ‘Psychiatric effects of cannabis’, *British Journal of Psychiatry* 178, 116-122, 119.

<sup>201</sup> Further details available at

<http://www.publications.parliament.uk/pa/cm200001/cmselect/cmhaff/226/22602.htm>. Para. 15.

<sup>202</sup> Runciman (2000), p. 4.

<sup>203</sup> *Ibid.*, pp.114-15.

<sup>204</sup> For further details, see Runciman (2000), pp.51-3.

<sup>205</sup> House of Lords Select Committee on Science and Technology (1998), paragraph 8.6.

transferred from Schedule 1 to Schedule 2 (allowing it to be prescribed by a doctor or dentist) while scientific studies were ongoing. The government rejected reclassification because:

(11) “...we are still learning about the health risks associated with smoking cannabis, including the risks of cancer. Existing scientific evidence, which fuels doubts about the health risks associated with cannabis use, persuade the Government that it would not be right to reclassify cannabis at this moment in time. However, the Government will keep the evidence under review.”<sup>207</sup>

100. Later in 2001, the then Home Secretary, David Blunkett, announced in evidence to the Home Affairs Select Committee that he was seeking to downgrade cannabis from Class B to Class C:

(12) “to have a credible policy on education, on treatment, on harm minimisation, and above all consistently on law enforcement and policing, we believe it is right to look at the re-categorisation of cannabis. I shall therefore be putting to the Advisory Council on Drug Misuse a proposal that we should re-categorise cannabis to C rather than B, thereby allowing the police to concentrate their resources on Class A drugs [...] If the Advisory Council see fit to do so, I think that will make sense to many people.”<sup>208</sup>

101. The cost of policing cannabis possession and use was estimated using two different methods: one produced a figure of £350m for 1999 (5% of the annual policing budget), the other arrived at £38m (0.5% of the annual policing budget).<sup>209</sup> David Blunkett referred to the experimental approach to policing cannabis possession and use in Lambeth, which was “concentrating and prioritising resources”.<sup>210</sup>

102. The Advisory Council on the Misuse of Drugs’ 2002 report on cannabis reclassification, “based on a detailed scrutiny of the relevant scientific literature,”<sup>211</sup> recommended reclassification of cannabis to Class C on the grounds of being less harmful than other Class B drugs such as amphetamines. The report acknowledged concerns about the link between chronic use of cannabis and mental illness and judged that “no clear causal link

---

<sup>206</sup> Runciman (2000), p. 113.

<sup>207</sup> <http://www.publications.parliament.uk/pa/cm200001/cmselect/cmhaff/226/22602.htm>. Para. 16.

<sup>208</sup> Blunkett, D (2001), Minutes of Evidence taken before the Home Affairs Committee, Session 2001-02, on The Work of the Home Office, HC 302, 23 October 2001, Q. 5.  
<http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/302/1102302.htm>

<sup>209</sup> England and Wales; May, T., *et al.* (2002) *Times they are a-changing: Policing of Cannabis* (Joseph Rowntree Foundation), p.37.

<sup>210</sup> *Op. cit.*, Q.5. The Lambeth experiment was a pilot scheme whereby those found in possession of a small amount of cannabis were merely given an on-the-spot warning by police. It ran from July 2001 to August 2002 in the London borough of Lambeth.

<sup>211</sup> The Advisory Council on the Misuse of Drugs (2002) *The classification of cannabis under the Misuse of Drugs Act 1971*, Home Office), p.3.

has been demonstrated,” although “cannabis use can unquestionably worsen schizophrenia (and other mental illnesses) and lead to relapse in some patients.”<sup>212</sup> It did not refer to possible increases in cannabis potency.<sup>213</sup> The Home Office announced the reclassification of cannabis to Class C in July 2002, which took effect in January 2004.

103. In late 2002 three new studies examining the links between cannabis and mental illness were published, suggesting to one of the authors that “while at an individual level cannabis use appears to lead to only a two-to-three-fold increase in the relative risk for later schizophrenia, at a population level, total elimination of cannabis use could lead to a 7-13% reduction in the incidence of schizophrenia.”<sup>214</sup> The first study revisited the Swedish army cohort group.<sup>215</sup> It found that subjects who had used cannabis (and no other drug), at whatever dosage, were 1.3 times more likely to develop schizophrenia than those with no history of usage. This figure rose to 6.7 for those who had used cannabis more than 50 times. The data produced similar results even when analysis was restricted to those developing schizophrenia five years after conscription. The conclusion was that “cannabis usage is associated with an increased risk of developing schizophrenia, consistent with a causal relation [...] even after adjusting for use of alcohol, cigarettes, and other drugs, all of which are likely to be indicative of risk-taking behaviour.”<sup>216</sup>
104. The second study investigated students aged 14-15 and found that “daily use of cannabis in young women was associated with an over fivefold increase in the odds of reporting a state of depression and anxiety;”<sup>217</sup> the increase doubled for weekly users. The third study (the ‘Dunedin study’) examined subjects aged 11 to 26 and found adolescent use of cannabis increased the likelihood of adulthood symptoms of schizophrenia.<sup>218</sup> Also, that early cannabis use confers greater risk of schizophrenia than later cannabis use, although “only a vulnerable minority [of young users] experience harmful outcomes.”<sup>219</sup>
105. However, the methodological and interpretative quality of these and earlier studies were criticised in a review that found the “available evidence does not strongly support an important causal relation between cannabis use by young people and psychosocial harm,

---

<sup>212</sup> *Ibid.*, p. 8

<sup>213</sup> Dr Thomas Stuttaford has commented that the ACMD lacks an expert in schizophrenia, a neurologist and a biologist with an interest in the pharmacology of cannabis and that five of the 34 members are or were actively involved with charities that support the liberalisation of drugs. *The Times*, 19 December 2005; <http://www.timesonline.co.uk/article/0,,8123-1937214,00.html>

<sup>214</sup> Witton, J. and Murray, R. (2004) ‘Reefer madness revisited: cannabis and psychosis’, editorial, *Revista Brasileira de Psiquiatria* 26:1.

<sup>215</sup> Zammit, S., *et al.* (2002) ‘Self-reported cannabis use as a risk factor for schizophrenia in Swedish conscripts of 1969: historical cohort study’, *British Medical Journal* 325, 1199-1202.

<sup>216</sup> *Ibid.* p. 1201.

<sup>217</sup> Patton, G., *et al.* (2002) ‘Cannabis use and mental health in young people: cohort study’, *BMJ* 325, 1195-8, 1195.

<sup>218</sup> Arseneault, L., *et al.* (2002) ‘Cannabis use in adolescence and risk for adult psychosis: longitudinal prospective study’, *BMJ* 325, 1212-1213, 1212.

<sup>219</sup> *Ibid.*

but cannot exclude the possibility that such a relation exists.”<sup>220</sup> A further study, by Fergusson (2005),<sup>221</sup> found daily use of cannabis was associated with rates of psychotic symptoms 1.6-1.8 higher than for non-user. It identified four strands in the literature to date: (i) a relationship between the extent of cannabis use and subsequent psychosis/psychotic symptoms even following control for sources of confounding and possible reverse causality; (ii) an association between cannabis use and increased relapse rate in individuals with schizophrenia; (iii) growing neuropsychological evidence on the multiple effects of cannabis on the brain and brain biochemistry; (iv) laboratory findings that acute cannabis intoxication may create psychotic-like symptoms.

106. Another review<sup>222</sup> found that cannabis is “an independent risk factor, both for psychosis and the development of psychotic symptoms, [...although...] the question of whether cannabis is a precipitating or a causative factor in the development of schizophrenia remains.” Growing rates of cannabis use<sup>223</sup> have not yet been accompanied by increasing levels of schizophrenia, but some studies suggest this will rise up to 2015<sup>224</sup> because cannabis use in early adolescence produces the strongest schizophrenic effects, and such usage is a relatively new phenomenon. Another study (Van Os)<sup>225</sup> corroborated the link with psychotic symptoms, especially among those with a predisposition to psychosis, although like earlier studies it found “predisposition for psychosis at baseline did not significantly predict cannabis use four years later,” implying that those suffering from schizophrenia or psychosis do not turn to cannabis for relief.<sup>226</sup>
107. In March 2005 the Home Secretary, Charles Clarke, requested new advice from the ACMD on the harms presented by cannabis use in the light of recent evidence, citing the Fergusson and Van Os studies.<sup>227</sup> He also asked for advice on claims of increased potency of cannabis. ACMD reported in late 2005, recommending a number of actions although no change to cannabis’ Class C status. On 19 January 2006 Charles Clarke announced that he would “accept and implement [the ACMD’s recommendations] and implement them energetically”.<sup>228</sup> He accepted “... the growing body of research which suggests that cannabis may exacerbate or even trigger a range of serious mental health problems

<sup>220</sup> Macleod, J., *et al.* (2004) ‘Psychological and social sequelae of cannabis and other illicit drug use by young people: a systematic review of longitudinal, general population studies’, *The Lancet* 363, 1579-88, 1579.

<sup>221</sup> Fergusson, D.M., *et al.* (2005), ‘Tests of causal linkages between cannabis use and psychotic symptoms’, *Addiction* 100, 354-366, 356.

<sup>222</sup> Semple, D., *et al.* (2005) ‘Cannabis as a risk factor for psychosis: a systematic review’ *Journal of Psychopharmacology* 19:2, 187-194, 187.

<sup>223</sup> Figures from the British Crime Survey show that in England and Wales, lifetime use between 1981 and 2000 amongst those aged 20 to 24 years rose from 12 per cent to 52 per cent. (ACMD (2002), p.3).

<sup>224</sup> Arsenaault, L., *et al.* (2004), p.115. This study identifies cannabis as a ‘component cause’ of adult schizophrenia, forming part of a ‘causal constellation’ (p.114).

<sup>225</sup> Van Os, J., *et al.* (2005) ‘Prospective cohort study of cannabis use, predisposition for psychosis, and psychotic symptoms in young people’, *British Medical Journal* 330, 11-14, 11.

<sup>226</sup> Van Os (2005), p.11; see also Bovasso (2001), p.2003, and Arsenaault (2002), p.1212.

<sup>227</sup> [http://press.homeoffice.gov.uk/press-releases/Classification\\_Of\\_Cannabis?version=1](http://press.homeoffice.gov.uk/press-releases/Classification_Of_Cannabis?version=1). Letter dated 18/3/05.

<sup>228</sup> <http://www.drugs.gov.uk/news-events/latest-news/901-cannabis-classification>

including schizophrenia. In the words of the ACMD report, ‘the mental health effects are real and significant’.” Also that “priority needs to be given to proper enforcement of the law, to education and to campaigning against the use of cannabis”, so cannabis will remain a Class C drug, but the Government will undertake a “substantial Government education campaign” and “a consolidated campaign of action to attack the production and trafficking of cannabis.”

108. Clarke also signalled that the Government would undertake a wide-ranging assessment of the classification system. He admitted he was “influenced by data on levels of use of the drug and evidence that cannabis use has fallen among 16-24 year olds from 28% in 1998 to 24% last year [2005]. The preliminary assessment is that, contrary to my personal expectation, reclassification has not led to an increase in use.” He continued:

(13) “the more that I have considered these matters the more concerned I have become about the limitations of our current system. Decisions on classification often address different or conflicting purposes and too often send strong but confused signals to users and others about the harms and consequences of using a particular drug and there is often disagreement over the meaning of different classifications. [...] For these reasons I will in the next few weeks publish a consultation paper with suggestions for a review of the drug classification system, on the basis of which I will in due course make proposals.”

## 4.4 Other health issues

### 4.4.1 Multiple sclerosis and chronic pain relief

109. Although pain-relieving properties of cannabis have been reported for some time, the available scientific evidence did not constitute proof of medical value, in the view of the House of Lords Science and Technology Committee.<sup>229</sup> A review commissioned by the Department of Health<sup>230</sup> confirmed that cannabis and cannabinoids were associated with symptom relief and improved well-being in selected neurological conditions, and could reduce anxiety and improve sleep.
110. Research on the effects of cannabis as a treatment for multiple sclerosis symptoms found some beneficial effects on mobility and pain reduction; however, reduction in spasticity was also reported by the control group.<sup>231</sup> A follow up study produced inconclusive

---

<sup>229</sup> House of Lords Select Committee on Science and Technology (1998), paragraphs 5.30 and 8.1. A licence for medical use can only be granted once the efficacy of a medicine has been established by controlled scientific trials, rather than anecdotal evidence.

<sup>230</sup> Robson, P. (2001) ‘Therapeutic aspects of cannabis’, *British Journal of Psychiatry*, pp.107-115. Between the writing of the paper and its acceptance for publication, Robson was appointed Medical Director of GW Pharmaceuticals, who subsequently developed a cannabis-based medicine (see below).

<sup>231</sup> Zajicek, J., *et al.* (2003) ‘Cannabinoids for treatment of spasticity and other symptoms related to multiple sclerosis (CAMS study): Multicentre randomised placebo-controlled trial’, *The Lancet* 362, 1517-26, 1517.



results.<sup>232</sup> A recent review of research by the Royal College of Physicians found that the evidence is still inconclusive and further studies are warranted.<sup>233</sup>

111. The House of Lords Science and Technology Committee updated its 1998 report on cannabis in 2001, and noted that:

(14) “The Minister [of State at the Home Office, Charles Clarke] was quick to deny suggestions that the Government were hiding behind scientific opinion. Should the quality, safety and efficacy of an appropriate preparation of cannabis be established, we were assured that the Government would reschedule cannabis from Schedule 1 to Schedule 2 of the Misuse of Drugs Regulations 1985.”<sup>234</sup>

112. However, the Committee criticised the regulatory stance:

(15) “In choosing to ignore the long history of safe therapeutic cannabis use, and in classifying cannabis extract (and CBD) as a ‘new medicine’, the Government and the MCA are treating a long-established herbal extract as if it were just another new synthetic chemical, and are thus not making an informed scientific judgement.”<sup>235</sup>

#### 4.4.2 **Sativex**

113. GW Pharmaceuticals began clinical trials<sup>236</sup> of a cannabis-based medicine CBME (branded *Sativex* in 2003) in 1999, to examine the efficacy of the medicine in relieving neuropathic pain in multiple sclerosis; pain and sleep disturbance in multiple sclerosis and other neurological conditions; and multi-symptoms in multiple sclerosis. Company-funded work has reported some positive results.<sup>237,238,239</sup> The cause of death of Rene Anderson, who had

---

<sup>232</sup> ‘Information on Cannabis, November 2005’ factsheet produced by the Multiple Sclerosis Trust, p.3; based on an unpublished lecture given by the project leader, Dr Zajicek, at the British Festival of Science 2004. These claims have not been peer-reviewed. The Multiple Sclerosis Trust is a charity that aims to provide evidence-based information about the condition.

<sup>233</sup> *Cannabis and cannabis-based medicines: Potential benefits and risks to health* (Royal College of Physicians), p.26.

<sup>234</sup> House of Lords Select Committee on Science and Technology (2001) *Therapeutic Uses of Cannabis* (House of Lords Report HL 50), paragraph 11.  
<http://www.publications.parliament.uk/pa/ld200001/ldselect/ldsctech/50/5001.htm>

<sup>235</sup> *Ibid.*, paragraph 25.

<sup>236</sup> Phase I trials test a new product on healthy adults to ensure that there are no intolerable side-effects; Phase II trials test on a small number of people in the target group. Phase III trials test therapy on large numbers of people in the target group and are needed before a new substance can be licensed for medicinal use.  
<http://www.mstrust.org.uk/downloads/cannabis.pdf>

<sup>237</sup> Wade, D., *et al.* (2003) ‘A preliminary controlled study to determine whether whole-plant cannabis extracts can improve intractable neurogenic symptoms’ *Clinical Rehabilitation* 17, 18-26. This study was funded by GW Pharmaceuticals, where one of the authors was Medical Director.

<sup>238</sup> Smith, P.F., (2004) ‘GW-1000 GW Pharmaceuticals’, *Current Opinion in Investigational Drugs* 5:7, 748-754.

<sup>239</sup> Wade, D., *et al.* (2004) ‘Do cannabis-based medicinal extracts have general or specific effects on symptoms in multiple sclerosis? A double-blind, randomized, placebo controlled study on 160 patients’, *Multiple Sclerosis*

participated in a GW Pharmaceuticals trial of the effects of Sativex on diabetic neuropathy sufferers, could not be established conclusively by the coroner.<sup>240</sup>

114. The Department of Health requested NICE (the National Institute for Clinical Excellence) to appraise cannabis derivatives for treatment of the symptoms of multiple sclerosis.<sup>241</sup> NICE recommends whether the National Health Service should make particular drugs available on prescription. At the time (2003), ministers “promised to recommend that the Medicines Control Agency licenses the [cannabis] treatments if the success of earlier experiments is repeated.”<sup>242</sup> GW Pharmaceuticals submitted an application for Sativex to be approved by the UK Medicines and Healthcare products Regulatory Agency (MHRA); (the normal process by which any medicine gains a licence; the judgment must be based on an assessment of the quality, safety and efficacy of a treatment.)<sup>243</sup> But later in 2003 NICE suspended the appraisal because GW Pharmaceuticals was still negotiating with Committee on Safety of Medicines (an advisory body to the MHRA) about the scope of the application.<sup>244</sup> In 2004, the Committee on Safety of Medicines recommended to the MHRA that Sativex should not be granted a licence in the UK. Although the Committee raised no quality or safety issues, it did find lack of proof of efficacy in relation to spasticity, and recommended further clinical trials.<sup>245</sup> In 2005 the MHRA confirmed that an appeal against that decision was turned down by the Medicines Commission, on the grounds of insufficient evidence of benefit.<sup>246</sup>
115. Sativex was granted a ‘conditional licence’ in Canada in 2005,<sup>247</sup> and the Home Office has granted GW Pharmaceuticals a licence to import it into the UK. A doctor can apply to the Home Office for a licence to import the drug from Canada for a specific person, if they judge it necessary (‘named patient basis’), it is for the primary care trust to fund the treatment. The MHRA has not objected to GW’s importation of Sativex, because it can only do so if there are “overriding concerns about the product’s safety or quality.”<sup>248</sup>

#### 4.4.3 Legal aspects

116. In 2001, the House of Lords Science and Technology Committee found the legal treatment of therapeutic cannabis users to be unsatisfactory because sometimes users were

10, 431-441. The study was funded by GW Pharmaceuticals, who were also involved in the study design and the collection of the data (p.436); Wade’s four co-authors either received a grant or a salary from GW.

<sup>240</sup> Quoted in <http://www.timesonline.co.uk/article/0,,2-1936405,00.html>

<sup>241</sup> <http://www.nice.org.uk/page.aspx?o=32156>.

<sup>242</sup> <http://news.bbc.co.uk/1/hi/health/1826446.stm>

<sup>243</sup> Details available at <http://www.mhra.gov.uk/>

<sup>244</sup> <http://production.investis.com/gwp/pressreleases/currentpress/2004-12-03/>

<sup>245</sup> Summary of the Commission on Human Medicines Meeting, 24/11/05.

<http://www.mhra.gov.uk/home/groups/clin/documents/committeedocument/con2022945.pdf>

<sup>246</sup> <http://www.mhra.gov.uk/home/groups/comms-po/documents/news/con002097.pdf>

<sup>247</sup> [http://www.gwpharm.com/news\\_press\\_releases.asp?id=/gwp/pressreleases/currentpress/2005-04-19/](http://www.gwpharm.com/news_press_releases.asp?id=/gwp/pressreleases/currentpress/2005-04-19/);  
<http://www.mhra.gov.uk/home/groups/comms-po/documents/news/con002097.pdf>

<sup>248</sup> Press release dated 15<sup>th</sup> November 2005. <http://tinyurl.com/dsf9z>

acquitted and sometimes they were found guilty and sentenced. The Committee concluded that therapeutic cannabis preparations should be legalised.<sup>249</sup> Charles Clarke's view was that the decision whether or not to prosecute for cannabis-related offences should continue to be made locally by the police and the Crown Prosecution Service.<sup>250</sup> When cannabis was reclassified to Class C the new guidance to the police recommended a presumption against arrest.<sup>251</sup> A defence of 'medical necessity' has not yet succeeded for those who supply cannabis for symptom relief to people with chronic medical conditions.<sup>252</sup>

## 4.5 Social issues

### 4.5.1 The 'gateway' theory

117. Cannabis use is often assumed to be the first step in moving from legal to illegal drug use, and on to other illegal drugs that may be more harmful. This is known as the gateway theory, which the Runciman report said:

(16) "... has to show that there is a high probability that a cannabis user will become a heroin user, not just that there is a high probability that a heroin user has been a cannabis user. In fact, the vast majority of cannabis users do not progress to the most dangerous drugs such as heroin. Any significant causal relationship in that direction would have resulted in a far higher population of hard drug users than we have."<sup>253</sup>

118. Hall suggested there was "selective recruitment into cannabis use of non-conforming adolescents who have a propensity to use other illicit drugs."<sup>254</sup> A report from the Royal Colleges of Psychiatrists and Physicians argued that cannabis use might just as plausibly serve as a barrier to use of riskier drugs, or as a substitute.<sup>255</sup> Fergusson and Horwood (2000)<sup>256</sup> found cannabis had preceded usage of more harmful drugs in 99% of cases, although 63% of the cannabis users did not progress to other illicit drugs. They concluded that the association could reflect the presence of uncontrolled, attitudinal, genetic or other factors (which they had not studied). Reviewing other studies, they noted that the progression was not always found, and could be owing to a common underlying

<sup>249</sup> *op. cit.* paragraph 18.

<sup>250</sup> *Ibid.* paragraph 16.

<sup>251</sup> <http://www.acpo.police.uk/news/2004/q1/cannabis.html>

<sup>252</sup> <http://www.mstrust.org.uk/downloads/cannabis.pdf>; The Court of Appeal rejected the defence "...pending the outcome of and decisions on the basis of tests which are, we are told, still on-going." *Regina v Quayle, Regina v Wales, Regina v Taylor and another, Regina v Kenny* (2005), paragraph 69. Quoted from <http://www.idmu.co.uk/mednecessity.htm>.

<sup>253</sup> Runciman (2000), p.101.

<sup>254</sup> Hall (1998), p. 1614.

<sup>255</sup> Opinion as represented in May *et al.* (2002), p.40.

<sup>256</sup> Fergusson, D. and Horwood, L. (2000) 'Does cannabis use encourage other forms of illicit drug use?' *Addiction* 95:4, 505-520.

disposition to substance use or risk-taking behaviours. The ACMD observed that use of cannabis (and alcohol and tobacco) has an effect on later Class A drug use; the majority of cannabis users never move on to Class A drugs, but a small proportion do, as a result of cannabis use.<sup>257</sup> A Home Office Research Study concluded that:

(17) “true gateway effects are probably very small and that the association between soft and hard drugs found in survey data is largely the result of our inability to observe all the personal characteristics underlying individual drug use. From this viewpoint, the decision to reclassify cannabis seems unlikely to have damaging future consequences.”<sup>258</sup>

119. David Blunkett, then Home Secretary, told the Home Affairs Select Committee:

(18) “I believe that the issues around whether cannabis is a gateway drug have been widely debated, but without conclusion. I have seen some of the evidence that has been adduced from other parts of the world on both sides. The Advisory Council undoubtedly will want to say something about this, but the evidence that we have at the moment, particularly with the increased use of crack and cocaine amongst young people, whilst there has been an overall general drop in terms of drug use, would indicate that there is a movement direct to the Class A drugs.”<sup>259</sup>

120. By January 2005, one year after reclassification, the Home Office said that arrests for cannabis possession had fallen by one third, saving an estimated 199,000 hours of police time. It also noted that cannabis use by young people had stabilised following reclassification.<sup>260</sup> The British Crime Survey<sup>261</sup> and Schools Survey by the Department of Health<sup>262</sup> also found that cannabis use had not increased.

#### 4.5.2 Cannabis use and driving

121. It is difficult to assess the effects of cannabis on driving.<sup>263</sup> A simulator study from the Transport Research Laboratory (TRL) suggested that drivers dosed with cannabis reduce their speed, as though they are aware of their impairment, and attempt to compensate for their impairment by driving more cautiously;<sup>264</sup> but these results were not statistically

---

<sup>257</sup> ACMD (2002), pp. p-10

<sup>258</sup> Pudney (2002), p. *vi*.

<sup>259</sup> Minutes of Evidence taken before the Home Affairs Committee, Session 2001-02, on The Work of the Home Office, HC 302, Q. 11.

<http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/302/1102302.htm>

<sup>260</sup> [http://press.homeOffice.gov.uk/press-releases/Cannabis\\_Reclassification?version=1](http://press.homeOffice.gov.uk/press-releases/Cannabis_Reclassification?version=1). Press release dated 28/01/05.

<sup>261</sup> Roe (2005), p.2.

<sup>262</sup> [http://press.homeOffice.gov.uk/press-releases/Classification\\_Of\\_Cannabis?version=1](http://press.homeOffice.gov.uk/press-releases/Classification_Of_Cannabis?version=1)

<sup>263</sup> Levy, S. & Jones, A. (2000) ‘Improving the debate on cannabis: the effects of cannabis on driving are difficult to evaluate’, *British Medical Journal* 320, 1671-2.

<sup>264</sup> Sexton, B.F., *et al.* (2000) *The influence of cannabis on driving*, Transport Research Laboratory, TRL477, p.2.

significant; reaction times were found to increase with dose level but that data was too variable to draw firm conclusions.

122. TRL also tested drug and alcohol levels in those involved in fatal motor vehicle collisions between 1996 and 2000, and compared these with results from 1985 to 1987. The later data revealed at least one medicinal or illegal drug in 24% of the casualties, compared with about 7% in the earlier data.<sup>265</sup> The drug most frequently found among casualties in the later investigation was cannabis; its incidence in fatal road casualties increased from 2.6% to 11.9% between the two studies. However “cannabis remains traceable in the blood stream for up to 4 weeks after it is taken by regular users, whereas its effect on driving is probably limited to a few hours at most.”<sup>266</sup> Therefore, a simple causal relationship between cannot be presumed.
123. A French study of fatal crashes between 2001 and 2003 found that 7% of the drivers tested positive for cannabis, and that a causal relationship with responsibility for crashes was suggested by the dose effect.<sup>267</sup> Another TRL study checked how police training in new testing methods was affecting recognition of the signs of drug impairment at the roadside and found a good correlation between the drug suspected by the officer and the drug identified by forensic analysis.<sup>268</sup> These tests were incorporated into a new police Code of Practice in 2004.<sup>269</sup>
124. In 2002 the British Medical Association launched a campaign about drug-driving danger and urged the government to take further action.<sup>270</sup> There was an Early Day Motion on the issue.<sup>271</sup> The Home Affairs Select Committee recommended that techniques to test drivers for drug-related impairments should be improved, and that all police officers responsible for testing receive the necessary training.<sup>272</sup> A Prevention of Driving Under the Influence of Drugs (Road Traffic Amendment) Bill in was introduced in 2003 by Nick Hawkins MP, shadow home affairs minister, to create an offence distinct from drink-driving and give police greater powers to conduct drug testing; it did not achieve a second reading. Later that year the Railways and Transport Safety Act, Section 107<sup>273</sup> amended the Road Traffic Act to give police new powers to administer a preliminary drugs test, and

---

<sup>265</sup> Tunbridge, R., *et al.* (2001) *The incidence of drugs and alcohol in road accident fatalities*, Transport Research Laboratory TRL495, p.1.

<sup>266</sup> *Ibid.*

<sup>267</sup> Laumon B., *et al.* (2005) ‘Cannabis intoxication and fatal road crashes in France: population-based case-control study’, *British Medical Journal* 331, 1371-4, 1371.

<sup>268</sup> Tunbridge, R., *et al.* (2000) *Recognising drug use and drug related impairment in drivers at the roadside* (Transport Research Laboratory TRL464), p.1.

<sup>269</sup> <http://news.bbc.co.uk/1/hi/uk/4116779.stm>

<sup>270</sup> <http://www.bma.org.uk/ap.nsf/Content/Hubinternetresourcedrugsdriving>.

<sup>271</sup> Early Day Motion number 981, March 12<sup>th</sup>, 2002, tabled by David Kidney (Labour). <http://www.publications.parliament.uk/pa/cm200102/cmwib/wb020316/edms.htm>

<sup>272</sup> <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/31807.htm#a23>

<sup>273</sup> <http://www.opsi.gov.uk/acts/acts2003/30020--s.htm>

modified the provision of samples to address the presence of drugs other than alcohol. In 2005 the Home Secretary stated ‘we are looking into impairment tests’.<sup>274</sup>

---

<sup>274</sup> <http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050118/debtext/50118-08.htm>

**(19) Chapter Summary**

(20) Since the clarification of the position of fresh mushrooms in 2005, all forms of magic mushrooms are now Class A drugs. This decision was not based on scientific evidence because it was said to be a clarification of the law, rather than a reclassification. The evidence base for mushrooms is small; there has been little research into their effects. The positioning of them in Class A does not seem to reflect any scientific evidence that they are of equivalent harm to other Class A drugs.

**5.1 Classification, penalties and street names**

125. Class A, under the Drugs Act 2005. Before then, mushrooms prepared for use (as a 'product'), were Class A under the Misuse of Drugs Act 1971. Fresh, untreated mushrooms in their natural state were not a controlled material; the 2005 Act brought fresh mushrooms into Class A too. The Misuse of Drugs (Designation) (Amendment) Order 2005 specifies that a "Fungus (of any kind) which contains psilocin or an ester of psilocin" is added to Schedule One of the Misuse of Drugs Regulations 2001.<sup>275</sup> This means that, for the purposes of medicine, fresh mushrooms now have the same status as cannabis – they may be possessed for research only subject to dispensation from the Home Secretary. This "confirms legally that magic mushrooms, like psilocin, are designated as having no recognised medicinal use".<sup>276</sup> The Home Office estimates that the 2005 change in the law will result in 10 convictions a year.<sup>277</sup>
126. **Maximum penalties:** up to 7 years' imprisonment for possession; up to life for supply.
127. **Nicknames:** *shrooms, liberties, magics, mushies*

---

<sup>275</sup> <http://www.opsi.gov.uk/si/si2005/20051652.htm>

<sup>276</sup> <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm050623/wmstext/50623m04.htm>

<sup>277</sup> <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm050912/text/50912w84.htm>

## 5.2 Taking magic mushrooms

128. Two main groups of magic mushroom are used in the UK, and have similar effects. Firstly, the cubensis mushroom, which has four varieties: Mexican, Colombian, Thai and Philosopher's Stone (technically a truffle). These are cultivated specifically to produce a marketable drug, mainly because they are easy to grow in terrariums and possess a low water content that allows them to stay fresh for 7-10 days;<sup>278</sup> imported mainly from Holland.<sup>279</sup> Also the liberty cap (*Psilocybe semilanceata*); indigenous to the UK, but not thought to be widely used.<sup>280</sup> Mushrooms can be eaten raw, dried, or stewed into a tea. The average dose is between 1-5 grams.
129. The effects magic mushroom have vary depending on the user's mood and location. The experience may be wholly positive, enlightening and valuable. Or it may be unremittingly horrific, and produce a state of profound anxiety and fear. The possible effects may occur in many different combinations, and include somatic effects: dizziness and lack of coordination; tremors; raised blood pressure; blurred vision; sensory/perceptual effects: sensory distortions; altered colour; illusions, sometimes hallucinations; sharpened acoustic sensation; synaesthesia (rarely); and psychic effects: mood changes, alternating euphoria and depression; extreme lucidity and clarity of thought; sense of enlightenment; altered sense of time; tension leading to panic with frightening hallucinations, feelings of insanity; depersonalisation and derealisation.
130. Almost 340,000 people aged 16-59 used magic mushrooms in 2004/5.<sup>281</sup> This is about 50% of the number of cocaine users and 10% the number of cannabis users. Imports are officially estimated at between 8,000 and 16,000 kilos per annum.<sup>282</sup> Until the law changed, over 400 shops were selling fresh magic mushrooms in the UK.<sup>283</sup> Official concern was prompted by the significant increase in use in recent years<sup>284</sup> (Figure 3 below).

---

<sup>278</sup> [http://www.guardian.co.uk/uk\\_news/story/0,3604,1095822,00.html](http://www.guardian.co.uk/uk_news/story/0,3604,1095822,00.html)

<sup>279</sup> <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s05.htm>

<sup>280</sup> Evidence given by Caroline Flint of the Home Office, during the Standing Committee debate on the Drugs Bill 2005. <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s05.htm>

<sup>281</sup> Roe (2005), p.13.

<sup>282</sup> Statement on 23<sup>rd</sup> June 2005. <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm050623/wmstext/50623m04.htm>

<sup>283</sup> [http://press.homeoffice.gov.uk/press-releases/Loophole\\_Closed\\_On\\_Magic\\_Mushroom?version=1](http://press.homeoffice.gov.uk/press-releases/Loophole_Closed_On_Magic_Mushroom?version=1). Press release dated 18/7/05.

<sup>284</sup> <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s03.htm>



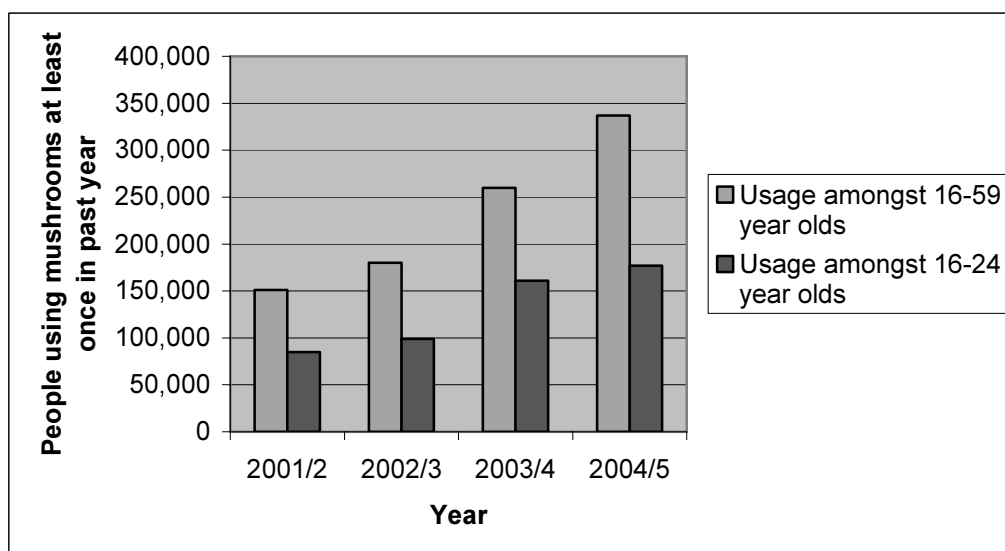


Figure 3 Magic mushroom usage in the UK, 2001-5<sup>285</sup>

### 5.3 Scientific issues

131. The psychoactive agents in magic mushrooms are psilocybin and psilocin. The former is highly stable, the latter is unstable. Magic mushrooms contain more psilocybin than psilocin; when psilocybin is ingested it breaks down into psilocin.<sup>286</sup> This study will refer to these two closely linked substances as “psilocybin”, since it is the agent present in the greatest quantity. Psilocybin is often called a hallucinogen, although its effects may not include what we understand as hallucinations (that is, a false perception occurring without true sensory stimulus).<sup>287</sup> Psilocybin may alter the user’s whole matrix of perception, thought and mood, rather than simply inserting imaginary objects into their field of vision. The term ‘psychedelic’ (meaning ‘mind-manifesting’) was introduced in 1957<sup>288</sup> but was largely eschewed by the scientific community when it became associated with the art and culture surrounding use of these drugs. A great deal of medical research into psychedelics took place in the late 1950s and early 1960s, but once they became part of popular “acid” (LSD) culture from the mid-1960s, and then became restricted substances under the Drugs (Prevention of Misuse) Act Modification Order 1966 and the 1971 Act, access was difficult and the science establishment has frowned upon them as a suitable subject for

<sup>285</sup> Source: *ibid.*

<sup>286</sup> For further discussion of this process, see Vollenwieder, F. (1998) ‘Psilocybin induces schizophrenia-like psychosis in humans via a serotonis-2 agonist action’, *NeuroReport* 9, 3897-3902.

<sup>287</sup> In the opinion of Professor David Nichols (as related by Dr Brian Iddon), ‘occasionally, a person will have an hallucination while on psilocin or psilocybin, but that it is very rare indeed.’ Standing Committee debate on the 2005 Drugs Bill, 3/2/05. Nichols is Professor of Medicinal Chemistry and Molecular Pharmacology at Purdue University.  
<http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s05.htm>

<sup>288</sup> Nichols, D. (2004) ‘Hallucinogens’ *Pharmacology & Therapeutics* 101, 131-181, 132.

serious research for the last 40 years.<sup>289</sup> The current generation of scientific and medical researchers therefore knows little about hallucinogens, although a revival of interests may be happening.<sup>290</sup> In 2004 one study referred to psilocybin as “useful in studying the neurobiological basis of cognition and consciousness,”<sup>291</sup> and in 2005 an article said that “Researchers believe these drugs are important tools for further academic study. Their recognised psychological effects fit well into an approach looking for the neurobiological links between mental and physical states.”<sup>292</sup>

132. Before the Drugs Act 2005 brought fresh mushrooms within legal controls, a minister admitted they were not sure why they had a different legal status, and whether that had been the intention;<sup>293</sup> the point at which a fresh magic mushroom becomes ‘prepared’ or a ‘product’ was ambiguous. In 2004, a case of magic mushroom possession against two men was abandoned because of this confusion in the legislation.<sup>294</sup> The 2005 Act (Schedule 2) now covers “fungus (of any kind) which contains Psilocin or an ester of Psilocin.”<sup>295</sup> The government presented this shift as a clarification rather than a reclassification,<sup>296</sup> since psilocybin has remained a Class A drug since 1971, and Section 21 of the Drugs Act 2005 allows the law to view fresh mushroom as a vehicle for ingesting this drug. The Home Office Minister said Section 21 was not a new control on a new substance and consequently it was not necessary to carry out or commission new research.<sup>297</sup>
133. In 2005 the then Minister, Caroline Flint, said, without citing her evidence base:

(21) “The Home Office has not conducted research into psilocin use. Hallucinogenic mushrooms are known to be harmful to those with a mental illness or with an underlying mental health problem and can precipitate psychosis. Users are also vulnerable to self harm while under the influence of these mushrooms and those using them may experience negative flashbacks.”<sup>298</sup>

---

<sup>289</sup> Nichols (2004), p.131; Sessa, B., (2005) ‘Can psychedelics have a role in psychiatry once again?’ *British Journal of Psychiatry* 186, 457-458, 457; <http://www.guardian.co.uk/drugs/Story/0,2763,1683780,00.html>

<sup>290</sup> Gouzoulis-Mayfrank, E. (1998) ‘History, Rationale and Potential of Human Experimental Hallucinogenic Drug Research in Psychiatry’, *Pharmacopsychiatry* 31 (supp.) 63-68, 63.

<sup>291</sup> Hasler, F., *et al.* (2004) ‘Acute psychological and physiological effects of psilocybin in healthy humans: a double-blind, placebo-controlled, dose-effect study’ *Psychopharmacology* 172, 145-156, 145.

<sup>292</sup> Sessa, B. (2005), p.458.

<sup>293</sup> Minutes of the Standing Committee on the Drugs Bill, 3/2/05. <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s03.htm>

<sup>294</sup> <http://news.bbc.co.uk/1/hi/england/gloucestershire/4098495.stm>

<sup>295</sup> Bill 17 53/4, 2005. <http://www.publications.parliament.uk/pa/cm200405/cmbills/017/2005017.pdf>

<sup>296</sup> Caroline Flint, Minutes of Standing Committee on the Drugs Bill, 2005. <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s02.htm>

<sup>297</sup> Hansard 4 July 2005, Column 136W. [http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm050704/text/50704w34.htm#50704w34.html\\_sbhd5](http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm050704/text/50704w34.htm#50704w34.html_sbhd5)

<sup>298</sup> Hansard 24 Jan 2005, Column 130W. <http://www.parliament.the-stationery-office.co.uk/pa/cm200405/cmhansrd/cm050124/text/50124w37.htm>

134. The Home Office believed there was no clear evidence of a link between psilocin use and acquisitive or other crime;<sup>299</sup> but argued that depending on where someone takes drugs that cause hallucinations, the dangers can be very serious.<sup>300</sup> The Government's 'Talk to Frank' website states that "Magic Mushrooms are not addictive in any way."<sup>301</sup> Given that the change in fresh magic mushroom status was achieved through new primary legislation, there was no statutory requirement to consult with the ACMD; nevertheless, the Home Office did request its comments.<sup>302</sup> ACMD replied: "...that there should not be easy access to hallucinogenic mushrooms and this was a sensible move to clarify the law."<sup>303</sup> The Home Office received no submissions in favour of this clarification of the law and four against it.<sup>304</sup> In Standing Committee debate on the Drugs Bill 2005, the Minister (Paul Goggins) referred to three sources of evidence:<sup>305</sup> a risk assessment report relating to *paddos* (psilocin and psilocybin) from the Co-ordination Centre for the Assessment and Monitoring of New Drugs (CCAM, 2000), an EMCDDA report (2004) and a randomised controlled trial by Hasler (2004).
135. The first report found no health risk, in the absence of evidence of a link between psilocybin and physical or psychological dependency; acute toxicity was largely limited to possible panic and anxiety attacks; flashback were the worst consequence of chronic toxicity. Little or no research was being carried out into hallucinogenic effects and the risk to public order was low.<sup>306</sup> The EMCDDA report does not appear to be in the public domain.<sup>307</sup> The article by Hasler investigated psychological and physiological effects and found that the risk to physical health was low. Altered psychological states were tolerated well by the subjects in this clinical trial.<sup>308</sup>
136. National Statistics show that for deaths in which drug poisoning (listed on the death certificate) was the underlying cause of death, between 1993 and 2000 there was one death

---

<sup>299</sup> <http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050124/text/50124w37.htm>

<sup>300</sup> <http://www.publications.parliament.uk/pa/cm200405/cmstand/f/st050203/pm/50203s05.htm>

<sup>301</sup> <http://www.talktofrank.com/azofdrugs/M/MagicMushrooms.aspx>

<sup>302</sup> [http://www.publications.parliament.uk/pa/cm200506/cmhansrd/cm050620/text/50620w31.htm#50620w31.html\\_wqn2](http://www.publications.parliament.uk/pa/cm200506/cmhansrd/cm050620/text/50620w31.htm#50620w31.html_wqn2)

<sup>303</sup> Rawlins (2005).

<sup>304</sup> Hansard 20 Oct 2005, Column 1144W. <http://www.parliament.the-stationery-Office.co.uk/pa/cm200506/cmhansrd/cm051020/text/51020w06.htm>

<sup>305</sup> Response to Parliamentary question by Paul Flynn MP, Hansard 21 Jul 2005 col. 2189W. <http://www.parliament.the-stationery-Office.co.uk/pa/cm200506/cmhansrd/cm050721/text/50721w68.htm>

<sup>306</sup> Co-ordination Centre for the Assessment and Monitoring of new drugs (CCAM) *Risk assessment report relating to paddos (psilocin and psilocybin)* (2000), p.5. <http://www.tdpf.org.uk/dutchmushroomstudy.pdf>

<sup>307</sup> RAND has contacted the EMCDDA regarding this report, but has received no response. RAND also contacted the Parliamentary Archives (<http://www.portcullis.parliament.uk>), who do not hold the document.

<sup>308</sup> Hasler, F., *et al.* (2004) 'Acute psychological and physiological effects of psilocybin in healthy humans: a double-blind, placebo-controlled dose-effect study', *Psychopharmacology* 172, 145-156.

from magic mushrooms and 5,737 from heroin.<sup>309</sup> This does not include deaths in which the misuse of drugs was a contributory factor rather than the cause of the death. Dr Robert Gable established a ‘safety ratio’ for psychoactive substances by comparing their reported lethal dose with the dose most commonly used for non-medicinal purposes.<sup>310</sup> The lethal dose for humans is about one’s own body weight in mushrooms. Psilocybin was given an approximate safety ratio of 1000, the second lowest acute physiological toxicity of the 20 drugs examined, after cannabis; heroin, by comparison, had a ratio of 6. Gable also found that psychedelics were the psychoactive substances least likely to cause physical or psychological dependence and had minimal withdrawal symptoms.

137. Nichols confirmed that there was no evidence that any hallucinogens (even the very powerful semisynthetic LSD), causes damage to any human body organ.<sup>311</sup> Studies do note that LSD and psilocybin produce similar effects.<sup>312</sup> However, LSD is approximately 200 times more potent than psilocybin,<sup>313</sup> which also produces milder effects: shorter duration of action, more agreeable response, and production of introspection without marked impairment of faculties.<sup>314</sup> The CCAM report cited by the Minister (see above) does confirm this.<sup>315</sup> Nevertheless in the Drugs Bill debates the government insisted the dangers of mushrooms were equivalent to those of LSD (a Class A drug),<sup>316</sup> and rejected the suggestion that they were harmless.<sup>317</sup>
138. However, The UN’s Convention on Psychotropic Substances 1971 states that if a substance has the capacity to produce “central nervous system stimulation or depression, resulting in hallucinations”, and “there is sufficient evidence that the substance is being or is likely to be abused so as to constitute a public health and social problem”, it must be assessed by the World Health Organization.<sup>318</sup> On the basis of this evidence, the UN Commission on Narcotic Drugs can decide what legal steps to take. Decisions must be based on evidence, in particular, the likelihood that a substance will be abused. Psilocybin is listed under Schedule I, the highest level of prohibition.

---

<sup>309</sup> Len Cook, National Statistician, in a letter to Paul Flynn MP, 31 January 2005; [http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050131/text/50131w09.htm#column\\_593](http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050131/text/50131w09.htm#column_593)

<sup>310</sup> Gable (2004).

<sup>311</sup> Nichols (2004), p.134.

<sup>312</sup> See, for example, Hollister, L., *et al.* (1960) ‘Comparison of three psychotropic drugs (Psilocybin, JB-329, and IT-290) in volunteer subjects’ *Journal of Mental and Nervous Disease*.

<sup>313</sup> Julien R. M., (1998) *A Primer of Drug Action*. 8th ed. (New York: WH Freedman).

<sup>314</sup> Pardhan, S., and Hollister, L. (1977) ‘Abuse Of LSD and other Hallucinogenic Drugs’, in *Drug Abuse: Clinical and other aspects*, ed. S. Pradhan (Hosby, St. Louis), pp.274-289, p.279.

<sup>315</sup> CCAM (2000), pp.23-4.

<sup>316</sup> <http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050118/debtext/50118-08.htm>

<sup>317</sup> <http://www.parliament.the-stationery-Office.co.uk/pa/cm200405/cmhansrd/cm050118/debtext/50118-31.htm>

<sup>318</sup> *Convention on Psychotropic Substances 1971* (United Nations), p.3 (emphasis added). [http://www.incb.org/pdf/e/conv/convention\\_1971\\_en.pdf](http://www.incb.org/pdf/e/conv/convention_1971_en.pdf)

## 5.4 Other health issues

### 5.4.1 Physiological and psychological effects

139. During debate on the Drugs Bill the Minister said that magic mushrooms appear to be particularly harmful to those with a mental illness or an underlying mental health problem and can precipitate psychosis.<sup>319</sup> Evidence that psilocybin use can produce a syndrome resembling mental illness has been reported in several studies.<sup>320, 321, 322</sup> On the other hand, a much earlier study (1962) had differentiated between symptoms of schizophrenia and hallucinogenic states,<sup>323</sup> and two more recent ones<sup>324,325</sup> argued that, unlike LSD, psilocybin does not activate the brain's dopamine pathways, which are associated with psychosis.
140. Ministers argued that magic mushrooms cause negative flashbacks.<sup>326,327</sup> Most evidence of psilocybin-linked flashbacks is anecdotal, although there is one detailed scientific case study involving a single subject.<sup>328</sup> Most clinical research into flashbacks has investigated LSD rather than psilocybin.<sup>329</sup> A link between psilocybin and cardiac problems was also mentioned by the minister.<sup>330</sup> The evidence suggests it may cause accelerated heartbeat or slowed heartbeat,<sup>331</sup> or a temporary increase in blood pressure.<sup>332</sup> Where there is an underlying heart condition, the risks may be greater, although the association is not

---

<sup>319</sup> Baroness Scotland, Hansard, 6<sup>th</sup> April, 2005, col. 818.

<http://www.publications.parliament.uk/pa/ld199900/ldhansrd/pdvn/lds05/text/50406-29.htm>

<sup>320</sup> Vollenweider, F., *et al.* (1998) 'Psilocybin induces schizophrenia-like psychosis in humans via a serotonin-2 agonist action', *Neuroreport* 9:17, 3897-3902, 3897.

<sup>321</sup> Gouzoulis-Mayfrank (1998), p.66.

<sup>322</sup> See also Vollenweider, *et al.* (1997) 'Positron Emission Tomography and Fluorodeoxyglucose Studies of Metabolic Hyperfrontality and Psychopathology in the Psilocybin Model of Psychosis', *Neuropsychopharmacology* 16:5, 357-372; Spitzer, M., *et al.* (1996) 'Increased activation of indirect semantic associations under psilocybin', *Biological Psychiatry* 39, 1055-7.

<sup>323</sup> Hollister, L. (1962) 'Drug-induced psychoses and schizophrenic reactions, a critical comparison', *Annals of the New York Academy of Science* 96, 80-88.

<sup>324</sup> Statement made by Professor David Nichols in response to the comments of Caroline Flint, Home Office minister: a transcription made by Simon Powell, made after the Bill had passed through the standing committee stage; available at [www.drugs-forum.co.uk/nichols-magic-mushrooms.doc](http://www.drugs-forum.co.uk/nichols-magic-mushrooms.doc)

<sup>325</sup> Hasler (2004), p.145.

<sup>326</sup> <http://www.publications.parliament.uk/pa/ld199900/ldhansrd/pdvn/lds05/text/50406-29.htm>

<sup>327</sup> <http://www.publications.parliament.uk/pa/cm200405/cmstand/fl/st050203/pm/50203s03.htm>

<sup>328</sup> Espiard, M-L., *et al* (2005) 'Hallucinogen persisting perception disorder after psilocybin consumption: a case study' *European Psychiatry* 20, 458-460, 458-9.

<sup>329</sup> Haplern, J. and Harrison, G. (2003), 'Hallucinogen persisting perception disorder: what do we know after 50 years?' *Drug and Alcohol Dependence* 69, 109-119.

<sup>330</sup> <http://www.publications.parliament.uk/pa/cm200405/cmstand/fl/st050203/pm/50203s05.htm>

<sup>331</sup> CAM, p.18.

<sup>332</sup> Hasler, p.150.

thought to be due to direct interaction with the receptors that control blood pressure or heart rate.<sup>333</sup>

#### 5.4.2 Therapeutic uses

141. Until the mid-1960s, uses for hallucinogenics had been found in the treatment of anxiety disorders, obsessive-compulsive disorders, depression, bereavement reactions and sexual dysfunction, amongst others.<sup>334</sup> Most of the published material referred to anecdotal case studies that do not meet modern scientific standards. Others have pointed to the dangerous and often unscientific nature of such experiments.<sup>335</sup> Currently several scientists are giving research into therapeutic uses serious consideration.<sup>336,337,338</sup> A case study in which the daily consumption of psilocybin had cured a patient suffering from obsessive-compulsive disorder (OCD)<sup>339</sup> led the Heffter Research Institute and the University of Arizona to support the first clinical research study using a hallucinogen in the United States in 30 years. The project is analysing the effect of psilocybin in treating (OCD). It appears that OCD may be caused by serotonin dysfunction; psilocybin stimulates the production of serotonin. Further, the existing treatment for OCD is ineffective for a significant proportion of sufferers. Therefore, this is an area in which psilocybin may prove to have medical utility. The project has not yet published its results.<sup>340</sup> It has approval from the US Food and Drug Agency (FDA) and its Drug Enforcement Agency, as does another US study, investigating whether psilocybin is efficacious in easing the physical and emotional pain experienced by terminal cancer patients. Still only in its early stages, this has reported positive initial results.<sup>341</sup> Researchers at Harvard Medical School are carrying out a pilot study to investigate the therapeutic effects of psilocybin on cluster headaches.<sup>342</sup> There is already anecdotal evidence that psilocybin can relieve the pain of this condition; often, conventional treatments are ineffective.<sup>343</sup>

---

<sup>333</sup> [www.drugs-forum.co.uk/nichols-magic-mushrooms.doc](http://www.drugs-forum.co.uk/nichols-magic-mushrooms.doc)

<sup>334</sup> Sessa, B. (2005) 'Can psychedelics have a role in psychiatry once again?' *British Journal of Psychiatry* 186, 457-458, 457.

<sup>335</sup> Letter from Griffith Edwards (2005) *British Journal of Psychiatry* 187, 483. See also Edwards, G. (2005) *Matters of Substance* (London: Penguin).

<sup>336</sup> Letter from Dr Ronnie Sandison (2005) *British Journal of Psychiatry* 187, 483.

<sup>337</sup> Nichols (2004), p.131.

<sup>338</sup> Carter, O., *et al.* (2004) 'Psilocybin impairs high-level but not low-level motion perception', *NeuroReport* 15:12, 1947-51, 1950.

<sup>339</sup> Moreno, F. (1997) 'Hallucinogen-Induced Relief of Obsessions and Compulsions', *American Journal of Psychiatry* 154:7, 1037-8. See also Leonard, H. L., and Rapoport J. L. (1987) 'Relief of obsessive-compulsive symptoms by LSD and psilocybin' (letter) *American Journal of Psychiatry* 144, 1239-1240.

<sup>340</sup> <http://www.heffter.org/>

<sup>341</sup> *The Independent* (30 November, 2004), p.13.

<sup>342</sup> [www.maps.org/research/cluster/psilo-ld/](http://www.maps.org/research/cluster/psilo-ld/)

<sup>343</sup> See 'Headache sufferers flout new drug law', *The Guardian* (2<sup>nd</sup> August, 2005), p.10.

## 5.5 Economic issues

142. Prior to July 2005, the Treasury collected VAT at 17.5% on the sale of magic mushrooms, estimated to be worth up to £175,000 a year<sup>344</sup> on a turnover of around £1 million per annum.<sup>345</sup>

---

<sup>344</sup> *Drugs Bill: Final Regulatory Impact Assessment* (Home Office), p.28.  
<http://www.homeOffice.gov.uk/documents/ria-drugs-bill-1204>

<sup>345</sup> *ibid.*

6.1 **Why look at international experience?**

143. Analysis of other countries' approaches to controlling drug use can inform a consideration of the scientific evidence base for the UK's classification system, and effectiveness of the controls. We were asked to investigate the legislation in place in the USA, the Netherlands and Sweden, to provide some comparators for the UK. The Runciman report recommended that the Government studied the systems of the USA and the Netherlands; Sweden provides information about a relatively more conservative European system of drugs legislation. The following sections present the information for each country. Table 5 below provides a concise summary of the key features. For sources see the references in each country section.
144. The experience of other countries and the effectiveness of their drug laws cannot provide a 'correct' answer for dealing with drug problems in the UK. The social, political and cultural variables involved in drug use and legislation, and the ways in which these interact, differ in each country and do not necessarily apply in any other context. The Home Affairs Select Committee was told by the Chair of the EMCDDA in 2002:

(22) "We could find no link across 15 Member States between the robustness of their policies and the level of prevalence. There are some countries with high prevalence, harsh policies, some countries with low prevalence, harsh policies, other countries with liberal policies and low prevalence. There is no conceivable link."<sup>346</sup>

---

<sup>346</sup> Testimony of Mike Trace, Chair of the EMCDDA in 2002, (2002), available at <http://www.publications.parliament.uk/pa/cm200102/cmselect/cmhaff/318/31803.htm#a2>



Table 5 Overview of International approaches to controlling drug use

	USA	Netherlands	Sweden
<b>Aim of drug legislation</b>	To cut off supply of drugs to users	To reduce harm to individuals and society	To create a drug free state
<b>Drug class equivalent</b>	Five schedules (I to V): based on abuse, dependence and medical use	Two schedules: I for drugs with unacceptable health risk; II for negligible risk drugs	Five lists; list I is narcotics with no medical use; list V is drugs that lie outside international conventions
<b>Punishment regimes</b>	Maximum penalties dependent upon the amount of drug possessed. Different penalties in different States. Penalties increase with the number of offences	Maximum penalties dependent upon amount of drug possessed. Penalties increase with the number of offences	Maximum penalties dependent upon the amount of drug possessed
<b>Differential penalties for classes?</b>	Yes	Yes	No
<b>Maximum imprisonment for possession</b>	Up to life imprisonment for large quantities	Up to 2 years' imprisonment for possession	Up to 10 years for large quantities
<b>Treatment regime</b>	Drug courts recommend treatment regimes over prison sentences	Can be enforced for addicts with drug crime history	Mandatory for offenders who are a danger to themselves or society
<b>Use of scientific evidence in policy making</b>	Large budget for research. Specific scientific criteria for scheduling	Government commissions research into drug harm and facilitates meetings between scientists and policy makers	Scientific evidence on treatment is used, not on drug harm
<b>Any drug use in the last 12 months (% population)</b>	14.5	5 (for cannabis alone) <sup>347</sup>	2

<sup>347</sup> Figures for any drug use in the last 12 months are not available for the Netherlands.

## 6.2 USA

### 6.2.1 Overview

181. The USA is often regarded as having many similarities in politics and values with the UK, and is perhaps assumed to be closer to the UK than some other European countries, which do not share as much history with the UK. Several important similarities and differences need to be taken into account in evaluating the usefulness of any comparison of drug legislation and effective policy. The different socio-economic conditions of each provide one example, as the USA has no welfare state and there are larger inequities between rich and poor.<sup>348</sup>

### 6.2.2 Legislation and drug classes

182. Drugs legislation in the USA is aimed at reducing the number of drug users in the country. The principal legislation addressing drug abuse is the Controlled Substances Act, title II of the Comprehensive Drug Abuse Prevention and Control Act (1970).<sup>349</sup> This federal law divides narcotics into five schedules based on a drug's potential for abuse, likelihood for dependence and accepted medical use. Schedule I contains those drugs with the highest potential for abuse and lowest medical use, and Schedule V contains those with high medical use and low potential for abuse.<sup>350</sup> However, different States have their own legislation for scheduling drugs and for punishment, which allows each State to interpret the federal law as applied in state sentencing. This enables States to decide upon harshness of sentencing for those individuals that appear in State courts (the majority of drug cases). Some States (e.g. Alabama) have yet to schedule some drugs, such as ketamine and ecstasy.<sup>351</sup> Drugs placed in the federal scheduling are shown in Table 6.

---

<sup>348</sup> See the 2005 OECD document "Inequality trends in some OECD countries", p.5, available at [http://www.un.org/esa/desa/papers/2005/wp6\\_2005.pdf](http://www.un.org/esa/desa/papers/2005/wp6_2005.pdf)

<sup>349</sup> US Drug Enforcement Agency (DEA), <http://www.dea.gov/pubs/csa.html>

<sup>350</sup> ImpacTeen illicit drug team, (2002), Illicit drug policies: Selected policies from the 50 states, Berrien Springs MI, Andrews University, p7, available at [http://www.impacteen.org/generalarea\\_PDFs/IDTchartbook032103.pdf](http://www.impacteen.org/generalarea_PDFs/IDTchartbook032103.pdf)

<sup>351</sup> *ibid*, p.30.

### 6.2.3 Punishment scales

211. Punishments vary according to the amount of a drug a person is caught with for serious (Schedule I and II) drugs. People caught with smaller amounts (for personal use or close friend supply) are punished less harshly than those who have larger amounts for dealing (see Table 6). Maximum fines are available for courts to use for individuals where that is more appropriate than imprisonment.

Schedule	Narcotics	Recommended punishments for trafficking
I	Heroin, LSD, psilocybin, marijuana, ecstasy, GHB	<p><i>Heroin and LSD:</i> For small amounts of the drug (varying for each drug): min 5 yrs - max 40 yrs for a first offence, or min 10 yrs - max life for a second offence. For larger amounts: min 10 yrs - max life for a first offence, or min 20 yrs - max life for a second offence; for a third offence life is mandatory.</p> <p><i>GHB, ecstasy, marijuana and psilocybin:</i> For a first offence max 20 yrs; max 30 yrs for a second offence. If death due to the drug occurs, min 20 yrs - max life for a first offence, or min life for a second offence.</p>
II	Cocaine	<p>For small amounts of the drug (varying for each drug): min 5 yrs - max 40 yrs for a first offence; min 10 yrs - max life for a second offence. For larger amounts: min 10 yrs - max life yrs for a first offence, or min 20 yrs - max life for a second offence; for a third offence life is mandatory.</p>
III	Methamphetamine, amphetamines, anabolic steroids	<p><i>Methamphetamine:</i> For small amounts of the drug (varies for each drug): min 5 yrs - max 40 yrs for a first offence; min 10 yrs - max life for a second offence. For larger amounts: min 10 yrs - max life for a first offence; min 20 yrs - max life for a second offence; for a third offence life is mandatory.</p> <p><i>Other Schedule III:</i> Max 5 yrs for a first offence; max 10 yrs for a second offence.</p>
IV	Barbiturates	Max 3 yrs for a first offence; max 6 yrs for a second offence.
V	Low doses of medicinal drugs, e.g. not more than 200mg codeine per 100g	Max 1 yr for a first offence; max 2 yrs for a second offence.

**Table 6 Schedule of narcotics in the US Controlled Substances Act, selected substances and federal recommended punishments<sup>352</sup>**

212. States retain the right to have their own punishment schedules for different drugs. For example, California has not scheduled ecstasy, and as such does not have specified penalties for sale and possession of the drug,<sup>353</sup> whereas Florida puts ecstasy in Schedule I and sets the maximum penalties for selling at 30 years in prison, for possession at 5 years for less than 10g, and at 30 years for more than 10g.<sup>354</sup>

<sup>352</sup> Source: US Drug Enforcement Agency, <http://www.usdoj.gov/dea/agency/penalties.htm>

<sup>353</sup> ImpacTeen (2002), pp.38-39.

<sup>354</sup> *Ibid.*, pp.48-49.

#### 6.2.4 Treatment regime

213. Treatment can be ordered by the drug courts (see 6.2.5 below) or obtained through voluntary treatment programs. Voluntary programs can take the form of short term schemes lasting less than 6 months (residential therapy, medication therapy, and drug-free outpatient therapy) or longer term approaches (methadone maintenance outpatient treatment for opiate addicts and residential therapeutic community treatment). These methods show varying levels of success with different drugs. For example, for those addicted to opiates, methadone maintenance programs are usually more successful at retaining clients than therapeutic communities, which in turn are more successful than outpatient programs that provide psychotherapy and counselling. However for other drugs there may be different patterns.<sup>355</sup>
214. The numbers of addicts in treatment programs in 2002 was just under 2 million, of which the largest subgroup was alcohol addicts (29%). Of those who were being treated for individual drug addictions, the most common were heroin (15%), marijuana (15%) and cocaine (13%). Most of those seeking treatment were men, with nearly half of those in treatment aged 30-45.<sup>356</sup>

#### 6.2.5 Drug courts

215. Drug courts have been working in the USA since the 1970s, but have taken on their modern role incorporating treatment powers since the Miami court in 1989. In 2004 there were 1,621 drug courts in the US.<sup>357</sup> They work in a variety of ways; they are generally presided over by one judge and may focus on pre-plea, pre-trial or post-trial interventions. Drug court participants undergo an intensive regime of substance abuse and mental health treatment, case management, drug testing, and probation supervision while reporting to regularly scheduled status hearings before a judge with specialized expertise in the drug court model. In addition, drug courts may provide job skills training, family or group counselling, and many other life-skill enhancement services.<sup>358</sup>
216. Drug courts achieve better retention within treatment than most voluntary programmes.<sup>359</sup> They have also brought about decreased re-offending (16.4% in 2003 study), and savings in outlay on drug users (health care, court costs, cost to victims)<sup>360</sup> when compared to

---

<sup>355</sup> National Institute on Drug Abuse (NIDA) InfoFacts: Drug Addiction Treatment Methods, available at <http://www.nida.nih.gov/infofacts/treatmeth.html>

<sup>356</sup> Taken from the Treatment Episode Data Set, from the Substance Abuse and Mental Health Services Administration. "Substance abuse treatment admissions", available at <http://www.dasis.samhsa.gov/webt/quicklink/US02.htm>

<sup>357</sup> West Huddleston III *C et al.*, (2005), *Painting the current picture: A national report card on drug courts and other problem solving court programs in the United States*, National Drug Court Institute, p1, available at [http://www.ndci.org/publications/10697\\_PaintPict\\_fnl4.pdf](http://www.ndci.org/publications/10697_PaintPict_fnl4.pdf)

<sup>358</sup> West Huddleston III *C et al.*, (2005), p.2.

<sup>359</sup> Makkai, T. (1999), *Separating Drug addiction from criminal behaviour*, produced for the Australian Federal Police, available at <http://www.afp.gov.au/afp/raw/Publications/Platypus/Mar99/study.htm>

<sup>360</sup> *Drug Court Benefits*, available at the National Drug Court Institute (NDCI) website, part of the National Association of Drug Court Professionals, funded by the White House Office of National Drug Control Policy, [http://www.ndci.org/courtfacts\\_benefits.html](http://www.ndci.org/courtfacts_benefits.html)

conventional courts. However, drug courts' success in helping addicts to stay off drugs was mixed and inconclusive, according to a recent study by the Government Accountability Office.<sup>361</sup>

#### 6.2.6 Scientific evidence for policy

217. The US government funds large amounts of research to provide scientific evidence about drug abuse and to collate statistics on the efficacy of treatment and punishment regimes, through the National Institute for Health (NIH), the National Institute on Drug Abuse (NIDA) and the White House Office for National Drug Control Policy (ONDCP). The budget for the most recent National Drug Control Strategy (2005) was just over \$12 bn.<sup>362</sup>
218. The Controlled Substances Act makes specific reference to the types of evidence required to schedule a drug appropriately:<sup>363</sup>
- (23) “Factors determinative of control or removal from schedules ... the Attorney General shall consider the following factors with respect to each drug or other substance proposed to be controlled or removed from the schedules:
  - (24) Its actual or relative potential for abuse.
  - (25) Scientific evidence of its pharmacological effect, if known.
  - (26) The state of current scientific knowledge regarding the drug or other substance.
  - (27) Its history and current pattern of abuse.
  - (28) The scope, duration, and significance of abuse.
  - (29) What, if any, risk there is to the public health.
  - (30) Its psychic or physiological dependence liability.
  - (31) Whether the substance is an immediate precursor of a substance already controlled under this subchapter.”
219. For example, the recent (2000) classification of GHB into Schedule I by Congress<sup>364</sup> purports to the factors set out above, although the source of that evidence is not specified (although this information may be available elsewhere). NIDA and ONDCP research feeds into the White House and they have an advisory role on policy.

---

<sup>361</sup> Government Accountability Office, (2005), Adult drug courts: Evidence indicates recidivism reductions and mixed results for other outcomes, Report to congressional committees. Washington DC: U.S. Government Accountability Office, p6, available at <http://www.gao.gov/new.items/d05219.pdf>

<sup>362</sup> <http://www.whitehousedrugpolicy.gov/publications/policy/ndcs05/appa.html>

<sup>363</sup> US Drug Enforcement Agency (DEA), <http://www.dea.gov/pubs/csa.html>

<sup>364</sup> In the form of the Hillory J. Farias and Samantha Reid Date-Rape Prevention Act of 2000 (Public Law 106-72); see <http://www.whitehousedrugpolicy.gov/publications/factsht/gamma/> for details.

### 6.2.7 Drug usage statistics

220. Between 1979 and 1992 the numbers of people using drugs in the previous month fell by 50% (from 25 million young abusers to 12 million, a drop from 14% to 6% of the population).<sup>365</sup> That figure rose by 33% between 1992 to 2003.<sup>366</sup> In 2004, the percentage of Americans who used any drug in the last 12 months stood at 14.5%.<sup>367</sup> In 2003, cocaine was the most widely used drug in the USA, with use in the last year by 6.6% of 18-25 year olds. Methamphetamine abuse is on the increase in much of the USA, with only the Eastern coastal states reporting low levels of abuse. In general the use of ecstasy was decreasing across the USA, although some cities showed an increase in the numbers of ethnic minorities using the drug, where traditionally the white majority has used it.<sup>368</sup> Marijuana use continued to be high across the country, particularly in the younger age groups (in 2003, 21% of 12<sup>th</sup> grade students had used marijuana in the previous month).<sup>369</sup>
221. One of the USA's main problem drugs is crack cocaine. It has often been associated with the violent gang troubles seen in urban America. Among 18-25 year olds, 0.9% were crack users in the latest statistics (the comparable rate in the UK is 0.1% of 16-24 year olds). The reason for high crack use in the USA is said to be that heroin use is comparably lower, although 0.6% (aged 12 or more) used heroin in 2000, compared to 0.7% in the UK (aged 15-64).<sup>370</sup>

---

<sup>365</sup> National Survey on Drug Use & Health 2001, chapter 9.2, available at <http://www.drugabusestatistics.samhsa.gov/nhsda/2k1nhsda/vol1/chapter9.htm#9.2>

<sup>366</sup> RAND (2005) *Assessing US drug problems and policy*, research brief available at [http://www.rand.org/pubs/research\\_briefs/RB9110/index1.html](http://www.rand.org/pubs/research_briefs/RB9110/index1.html)

<sup>367</sup> National Survey on Drug Use & Health 2004, available at <http://oas.samhsa.gov/NSDUH/2k4nsduh/2k4tabs/Sect1peTabs1to66.htm#tab1.1b>

<sup>368</sup> National Institute for Drug Abuse (2004), *Epidemiologic trends in drug abuse*, US Dept. Health and Human Services, available at [http://www.drugabuse.gov/PDF/CEWG/AdvReport\\_Vol1\\_105.pdf](http://www.drugabuse.gov/PDF/CEWG/AdvReport_Vol1_105.pdf)

<sup>369</sup> RAND (2005).

<sup>370</sup> UN Office on Drugs and Crime (2004), pp.380-381.

## 6.3 Netherlands

### 6.3.1 Overview

222. The main aim of Netherlands drug policy is to reduce the harm drugs cause to individuals and society. Harm reduction policy focuses on reducing the deaths, disease and crime drugs cause, rather than trying to eliminate drug use entirely. This policy is principally based on three concepts:
223. education, prevention and treatment for addiction are more effective than criminalising and punishing users;
224. certain drugs create greater medical harm than others, and intervention should focus on the most harmful drugs;<sup>371</sup>
225. ‘normalization’, which attempts to integrate drug users into society rather than isolating them and declaring them deviant. Drug addiction is framed as a ‘normal social problem’.

### 6.3.2 Legislation and drug classes

226. The 1976 revision of the Dutch Opium Act separated illegal drugs into two schedules. Schedule I: drugs that present an unacceptable health risk (e.g. heroin, cocaine, amphetamines); Schedule II: drugs that present a negligible or acceptable health risk (e.g. cannabis). This distinction led to different policies being applied to the two categories of drugs, with the aim of creating a ‘separation of the markets’ between ‘hard’ (Schedule I) and ‘soft’ (Schedule II) drugs. The intention of this separation is to prevent users moving from cannabis to the misuse of ‘hard’ drugs.

### Cannabis

227. The law does not cover *use* of cannabis, whether in public or in private. Sale, production and possession of up to 30g of cannabis are punishable offences (imprisonment for one month and/or a fine of €2,300). However, in practice the Dutch often employ the ‘expediency principle’, which means that in certain cases the letter of the law is not enforced. For example, the possession of small amounts of cannabis (up to around 5g) is generally not prosecuted; neither is the small-scale home cultivation of cannabis for personal use.
228. This approach has enabled the establishment of the famous Dutch ‘coffee shops’. These are “... not legalised and it’s not a legalised sale of cannabis, but they are tolerated in legal terms.”<sup>372</sup> To ensure this can continue, coffee shops must conform to official national guidelines for the toleration of coffee shops: no overt advertising, no hard drugs, no

---

<sup>371</sup> See <http://www.drugpolicy.org/reducingharm/> and the International Harm Reduction Association <http://www.ihra.net/>.

<sup>372</sup> Keizer, R. (2002) ‘Dutch Drug Policy: experiences and future’, in *Shaping A New Agenda* (Centre for Public Health, Liverpool John Moores University), pp.24-32, p.26. [www.cph.org.uk/cph\\_pubs/reports/SM/cannabis.pdf](http://www.cph.org.uk/cph_pubs/reports/SM/cannabis.pdf). Keizer was the Head of the Addiction Policy Division of the Ministry of Health, Welfare and Sport in the Netherlands, 1992-2000.

nuisance, no under-age clientele, a maximum stock of 500g cannabis and a maximum purchase of 5g per customer.<sup>373</sup>

229. Although national policy permits sale of cannabis to consumers in coffee shops not to be prosecuted, since 1996 local authorities have been able to decide whether to allow coffee shops in their area, if so, how many, and how to regulate them.<sup>374</sup> There is thus great variation in cannabis policies operating locally. By 2003, 400 of the 500 municipalities had decided to ban coffee shops altogether (more often these were the smaller municipalities).<sup>375</sup> Between 1997-2002 the number of Dutch coffee shops fell 33%, from 1,179 to 782.<sup>376</sup>
230. One inconsistency of the coffee shop system is that the establishment must buy its product at an illegal market. There have been a number of calls to allow coffee houses to grow their own cannabis, most recently from the mayor of Maastricht.<sup>377</sup> The Dutch government has so far refused to allow this.

### Schedule I drugs

231. In the Netherlands, the official attitude is that use of hard drugs such as heroin and cocaine should not be punished in itself. The possession of less than 0.5g of heroin or cocaine is regarded as a petty offence that may come under the expediency principle. The drugs will, however, be confiscated and a care agency consulted. Drug addicts rarely attract police attention unless they cause a danger to public health and safety. Since they are rarely moved on to 'problem areas' of cities, addicts tend to be more visible. This has helped to spread the perception that heroin is not an attractive or glamorous drug.

#### 6.3.3 Punishment scales

232. Part of the Netherlands 'harm reduction' strategy is to be 'hard' on drug traffickers and suppliers and 'soft' on users. Therefore, while small-scale cannabis cultivation for personal use (5 plants or under) is tolerated, the same practice on an extensive scale is punished. Similarly, if drugs are possessed for a commercial purpose, then they will attract prosecution. Possession of less than 30g of cannabis has a maximum penalty of 1 month's imprisonment and/or a €2,300 fine; more than 30g attracts maximum penalties of four years' imprisonment for import or export (and/or a €45,000 fine), and two years for manufacture, transportation, sale, possession/storage.
233. For possession of Schedule I drugs, the law provides a maximum penalty of 1 year's imprisonment and/or a fine of €4,500. Production of these substances attracts a maximum of 8 years in prison and/or a fine of €45,000. These maximum penalties can be increased by a third if the same crime has been committed more than once.<sup>378</sup> Additional laws target

---

<sup>373</sup> RAND Europe (2003) *Cannabis policy, implementation and outcomes* (Santa Monica, CA: RAND Corporation), p.20. [www.rand.org/pubs/monograph\\_reports/2005/MR1805.pdf](http://www.rand.org/pubs/monograph_reports/2005/MR1805.pdf)

<sup>374</sup> RAND (2003), p.20.

<sup>375</sup> RAND (2003), pp.20-21.

<sup>376</sup> UN Office on Drugs and Crime (2004), p.149.

<sup>377</sup> <http://news.bbc.co.uk/1/hi/world/europe/4595018.stm>

<sup>378</sup> Source: European Monitoring Centre for Drugs and Drug Addiction. <http://tinyurl.com/d8qdf>



drug traffickers. The Opium Act provides a maximum of 12 years' imprisonment for import/export of drugs. In the case of organised crime, multiple charges will be brought, allowing the maximum prison sentence to be increased to 16 years.

#### 6.3.4 Treatment regime

234. In accordance with the harm reduction policy, most official interventions concerning drug addicts are based on treatment rather than punishment. Methadone is 'freely accessible', as are syringe-exchange programmes.<sup>379</sup> An estimated 13,505 people received medically-assisted drug treatment in 2003, 96% of which was methadone-based.<sup>380</sup>
235. Drug addicts guilty of a small offence have been increasingly pressured into accepting treatment. The Penal Care Facility for Addicts Act of 2001 enables the courts to commit addicts with a history of drug-related crime to a special drug treatment institution for a maximum of 2 years.<sup>381</sup> The Dutch prison system has Addiction Counselling Departments, which aim to stimulate drug addicts' motivation for further treatment.

#### 6.3.5 Scientific evidence for policy

236. There is close collaboration between scientists, health services, justice and public order bodies, politicians and others to improve research and monitoring.<sup>382</sup> The Dutch Health Care Inspectorate has established the Coordination Centre for the Assessment and Monitoring of New Drugs. Its brief is to provide risk analyses for substances accurately but at short notice.<sup>383</sup> The Government has also commissioned a research programme into the health consequences of the increasing potency of Dutch cannabis.<sup>384</sup> In May 2004, scientists, policy-makers and care workers participated in the National Cannabis Conference, which examined the pros and cons of the Dutch policy, the treatment of cannabis problems and the effects of cannabis use on physical and mental health.<sup>385</sup>

#### 6.3.6 Drug usage statistics

237. In 2001, 6.1% of 15-64 year olds had used cannabis in the last year; in Amsterdam, the figure was 13.1% of those aged 12 or more.<sup>386</sup> In the same year EMCDDA estimated the number of 'problem drug users' (those who inject, or regularly use, opiates, cocaine or amphetamines) to be 3.1 per 1000 inhabitants aged 15-64.<sup>387</sup> According to EMCDDA the Netherlands has one of the highest percentage of clients seeking treatment for cocaine as their main drug. Among clients who sought treatment for the first time in 2003, 41%

---

<sup>379</sup> Keizer, R. (2002) p.25.

<sup>380</sup> Source: EMCDDA. <http://tinyurl.com/9jl6k>

<sup>381</sup> Source: EMCDDA. <http://tinyurl.com/d8qdf>

<sup>382</sup> Keizer (2002), p.25.

<sup>383</sup> <http://www.igz.nl/standaard.php?pagid=139>

<sup>384</sup> Reitox National Focus Point (2004) *Report to the EMCDDA: The Netherlands Drug Situation 2004*, p.10. <http://tinyurl.com/asl79>

<sup>385</sup> Reitox (2004), p.21.

<sup>386</sup> UN Office on Drugs and Crime (2004), pp.148-9.

<sup>387</sup> Source: EMCDDA. <http://tinyurl.com/bpo69>. Definition of problem drug users: <http://tinyurl.com/8jxbl>

used cocaine, 16% opiates, 7% stimulants, 2% hypnotic and sedatives and 32% cannabis. Injected drug use appears to be low in the Netherlands and has decreased from 12% in 1994 to 5% in 2003 for all regularly injected drugs combined.<sup>388</sup>

---

<sup>388</sup> *ibid.*

## 6.4 Sweden

### 6.4.1 Overview

238. The aim of Swedish drug legislation is to produce a drug free state by reducing the availability of drugs to potential users.<sup>389</sup> Sweden is often cited as an example of how a conservative approach to drug legislation, using harsh penalties for drug use and dealing, can be effective. Sweden's policy on drugs makes rehabilitation into society of drug users a central feature.

### 6.4.2 Legislation and drug classes

239. In 1968 the Swedish government brought in the Narcotic Drugs Act.<sup>390</sup> It classified drugs into five lists. List I deals with illegal drugs without medical use (e.g. cannabis, heroin, MDMA, LSD); Lists II, III and IV deal with narcotic substances with medical usage (e.g. amphetamines, cocaine, methadone, codeine, barbiturates); List V deals with narcotic substances outside international controls.<sup>391</sup> Drugs are classified according to their effects, not the punishments they attract.
240. In 2002 Sweden created a Commission on Narcotic Drugs, which presented a new action plan on drug abuse, aimed at reversing the trend of increasing drug abuse in the country.<sup>392</sup> The plan is based on prevention and healthcare, and a third of the budget goes to the prison service for treatment regimes.<sup>393</sup>

### 6.4.3 Punishment scales

241. There are three levels of seriousness: minor, ordinary and serious, for specified quantities of drugs, shown in Table 7:

---

<sup>389</sup> Boekhout van Solinge, T. (1997), *The Swedish Drug Control System: An in depth review and analysis*, Centre for Drug research Amsterdam, ISBN 905330 211 5, p.10, available at <http://www.cedro-uva.org/lib/boekhout.swedish.pdf>

<sup>390</sup> See the report prepared for the Canadian government on the Swedish drug legislation, Lafrenière, G. (2002), *National Drug Policy: Sweden*, Library of Parliament, Available at [http://www.parl.gc.ca/37/1/parlbus/commbus/senate/com-e/ille-e/library-e/gerald-e.htm#\\_ftn1](http://www.parl.gc.ca/37/1/parlbus/commbus/senate/com-e/ille-e/library-e/gerald-e.htm#_ftn1)

<sup>391</sup> Taken from the European Legal database on drugs, classification of controlled drugs, available at <http://eldd.emcdda.eu.int/index.cfm?fuseaction=public.Content&nNodeID=5622&sLanguageISO=EN>, part of the EMCDDA

<sup>392</sup> This is the trend since the early 90's of rising lifetime drug use, Taken from Tham, H. (2003), *Review of Swedish Drug Policy*, Institute of Criminology, Stockholm University p.10, available at [http://www.drug-policy.org/documents/Final\\_Swedish\\_Drug\\_Policy\\_Report](http://www.drug-policy.org/documents/Final_Swedish_Drug_Policy_Report). Data sourced from - Drug trends in Sweden, Report 2002, Stockholm: Council for information on alcohol and other drugs.

<sup>393</sup> Taken from the Swedish Government website on narcotic drugs, <http://www.sweden.gov.se/sb/d/2943/a/17061;jsessionid=asRfNfhJDI-->

Drug	Minor offence level (g)		Ordinary offence level (g)		Serious offence level (g)	
Amphetamines	248.	6	249.	6.1-250	250.	250+
Cannabis	252.	50	253.	51-2000	254.	2000+
Cocaine	256.	0.5	257.	0.6-50	258.	50+
Heroin	260.	0.39	261.	0.4-25	262.	25+

**Table 7 Drug quantities (grams) for different offence levels under Swedish law<sup>394</sup>**

263. Minor offences carry a maximum sentence of up to 6 months imprisonment (although fines based on the income of the arrestee are more common); ordinary offences carry maximum sentences of up to 3 years' imprisonment; serious offences carry up to 10 years' imprisonment.
264. Reported drug crimes totalled over 45,000 in 2004 (3.6% of all reported crimes).<sup>395</sup> Of these reported drug crimes, 82% were for possession.<sup>396</sup> Around 5,000 drug crimes are prosecuted each year, with around 33% of defendants facing an unconditional prison sentence.<sup>397</sup> Drug offences in 2001 were split between cannabis (34%), amphetamines (37%), opiates (7%) and cocaine (2%).<sup>398</sup> Drug related prosecutions are increasing.<sup>399</sup>

#### 6.4.4 Treatment regime

265. Treatment is a central element in the Swedish system of drug control, and prisons are funded to run treatment programs for offenders. Both withdrawal and substitution treatments exist, and demand exceeds supply. There are compulsory and voluntary schemes. Private companies run 65% of the voluntary in-patient drug treatment programmes. Counties that fund local treatment programs are unhappy with their access to outreach programs and detoxification. Drug-free regimes were last evaluated in 1991 and estimates put success at 50% for staying clean of drugs for at least 6 months after treatment. Drug substitution therapies have resulted in more than 40% of users staying in treatment for up to 7 years and 65% committing new crimes while in treatment.<sup>400</sup> In recent years, reductions in funding to various welfare systems has caused fewer residential treatment programs to be offered, so more drug rehabilitation is now on an out-patient basis.

<sup>394</sup> Lafrenière, G. (2002).

<sup>395</sup> Brå, National Council for crime prevention, Sweden, Statistical tables, Reported offences 195-2004, available at <http://tinyurl.com/calvh>

<sup>396</sup> EMCDDA, *Statistical bulletin 2004*, EMCDDA, table DRCrime1, available at <http://stats04.emcdda.eu.int/index.cfm?fuseaction=public.Content&nNodeID=5305&LanguageISO=EN>

<sup>397</sup> Boekhout van Solinge T. (1997), p.120.

<sup>398</sup> EMCDDA (2004), chapter 8, table 4, available at <http://ar2004.emcdda.eu.int/en/page093-en.html>

<sup>399</sup> EMCDDA (2004) *National report to the EMCDDA: Sweden – New development, trends and in-depth information on selected issues*, REITOX, available at <http://www.emcdda.eu.int/index.cfm?fuseaction=public.Content&nNodeID=435&LanguageISO=EN>

<sup>400</sup> EMCDDA (2002), *Report to the EMCDDA: Sweden – Drug Situation 2002*, REITOX, available at <http://www.emcdda.eu.int/index.cfm?fuseaction=public.Content&nNodeID=435&LanguageISO=EN>

266. The Care of Substance Abusers Act<sup>401</sup> allows the Swedish penal system to force addicts who may be a danger to themselves or society into a treatment regime. Forced treatment is different for adults and teenagers, with relatively rare use of forced assignment to drug homes for adults, but the threat of forced assignment to persuade users to seek voluntary treatment. There seems to be little or no evidence on the effectiveness of this approach. About 13% of the prison population have not taken drugs<sup>402</sup> compared with only 12% of the general population having ever taken drugs.<sup>403</sup>

#### 6.4.5 Scientific evidence for policy

267. The focus of research for drugs policy in Sweden is the evaluation of different treatments and punishment regimes in Sweden rather than evidence surrounding the medical or social harm that drugs can do. It has been said that as Swedish drug legislation is committed to achieving a drug free society, it is difficult to have debate about the evidence.<sup>404</sup> Nevertheless, there was an international symposium in Sweden in 2003 on the harm caused by cannabis. The evidence presented suggested no firm conclusions on the potential harm caused to users and society by cannabis, so the government saw no need to re-assess its position on the subject.<sup>405</sup>

#### 6.4.6 Drug usage statistics

268. Sweden has one of the lowest prevalence rates for drug use in Europe (2% of population having used any drug in the last 12 months<sup>406</sup> (compared with 11% in the UK).<sup>407</sup> Approximately 67% of the Swedish population (9 million people) live in rural areas, and the country has strict laws on a variety of anti-social activities such as smoking in public places. The Swedish welfare system is well-established and successful. Social and cultural factors that may be associated with drug abuse in Sweden could therefore be rather different than for other countries with different histories of social welfare. The legislative approach itself may be just one of those factors.
269. The most commonly used drug in Sweden is cannabis, which has been used by 14% of people at some point in their life.<sup>408</sup> In the most recent surveys (1998 and 2000) only 1% of respondents claimed to have used a drug in the last 12 months. Cocaine is not a big

---

<sup>401</sup> See the Swedish Police Act with commentary, p.55, available at [http://72.14.203.104/search?q=cache:DXRZOW2\\_HrsJ:www.polisen.se/inter/mediacache/4347/4734/2671/policeact\\_pdf.pdf+Act+on+the+Forced+Treatment+of+Abusers+swedish&chl=en](http://72.14.203.104/search?q=cache:DXRZOW2_HrsJ:www.polisen.se/inter/mediacache/4347/4734/2671/policeact_pdf.pdf+Act+on+the+Forced+Treatment+of+Abusers+swedish&chl=en)

<sup>402</sup> EMCDDA (2002).

<sup>403</sup> *ibid.*

<sup>404</sup> Dorn, N., et al. (2000), *Room for manoeuvre: Overview of comparative legal research into national drug laws of France, Germany, Italy, Spain, the Netherlands and Sweden and their relation to three international drug conventions*, Drugscope report for the Independent Inquiry on the Misuse of Drugs Act 1971, London, p11. Available at [http://www.ahrn.net/library\\_upload/uploadfile/manoeuvre.pdf](http://www.ahrn.net/library_upload/uploadfile/manoeuvre.pdf)

<sup>405</sup> EMCDDA, (2002).

<sup>406</sup> EMCDDA (2004).

<sup>407</sup> Roe (2005), p.27.

<sup>408</sup> *Ibid.*

problem in Sweden with incidences of crack abuse almost non-existent.<sup>409</sup> Amphetamine is the drug most often abused by those entering treatment, although heroin users are a growing proportion.<sup>410</sup> These two drugs are predominantly injected intravenously in Sweden, leading to secondary health problems such as HIV infection.

270. Numbers of young drug users were rising since the early 1990s, but have levelled off since 2000.<sup>411</sup> Users of serious drugs tend to be older now, with 25-44 year olds the most prominent, whereas it was 15-24 year olds between 1979 and 1992.<sup>412</sup> Sweden is one of few European countries where deaths due to overdose among younger drug users has increased.
271. Between 1987 and 2001 the number of drug related hospitalisations doubled in Sweden and the number of drug related deaths also increased (although in the last 3 years that has been relatively constant at around 180 deaths due to narcotics). Serious drug users are predominantly male (75%), and in 1998 about 67% of serious drug users were based in the three main cities.

---

<sup>409</sup> EMCDDA (2002).

<sup>410</sup> EMCDDA (2002).

<sup>411</sup> Tham, H. (2003), p.10.

<sup>412</sup> Boekhout van Solinge, T. (1997), p.120.