

Chapter 5

Mental Health and Hygiene, Behaviour and Society

5.3. Illegal drugs

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5.3. Illegal drugs

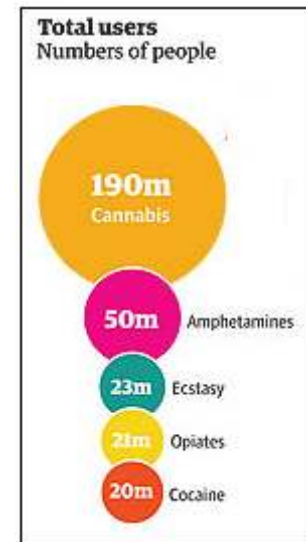
5.3.1. Epidemiology of drug use

While there has been some increase in the estimated total number of users of any illicit substance, estimates show that the number of drug users with dependence or drug use disorders has remained stable. The increase in the annually estimated number of users is, to a large extent, a reflection of an increase in the world population.

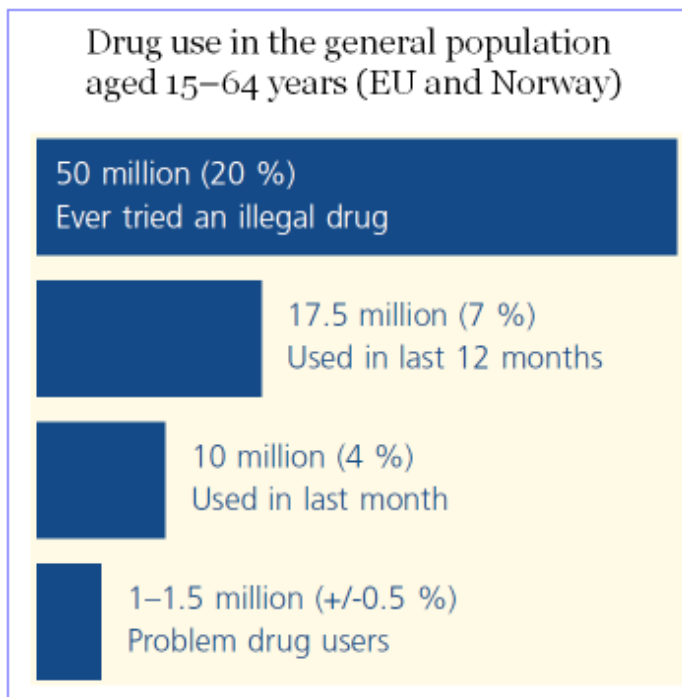
In 2011, 14.0 million persons between the ages of 15 and 64 were estimated to be injecting drugs. In the same year, the number of drug-related deaths was estimated at 211,000.

For more information visit the following website:

<http://www.unodc.org/wdr/index.html>



5.3.2. Indicators for characterizing drug use



Lifetime prevalence is a cumulative indicator of the total number of people who have ever tried drugs. Lifetime prevalence tends to increase because with the aging of the population those reaching the age of 65 fall out of the given population (usually 15-64). These people were young before the surge of drug use and are replaced by a generation with higher rates of use. This is one of the explanations of the drug use prevalence surge experienced in the past years. Therefore life time prevalence cannot be used to monitor the reduction of drug-use prevalence. Prevalence is much more accurate if examined in the last year or month, instead of a lifetime.

When dealing with figures related to drug use, it must be kept in mind that

the highest continuation rates are for cigarettes (over half who ever smoke continue) and especially alcohol where the figure is over three-quarters. Continuation rates for illegal drugs are considerably lower, 20 % or less, so with age many will stop.

5.3.3. The process of dependence

Early abuse often includes such substances as tobacco, alcohol, inhalants, marijuana, and prescription drugs such as sleeping pills and anti-anxiety medicines. If drug abuse persists into later adolescence, abusers typically become more heavily involved with marijuana and then advance to other drugs, while continuing their abuse of tobacco and alcohol. Studies have also shown that abuse of drugs in late childhood and early adolescence is associated with

greater drug involvement. It is important to note that most young people, however, do not progress to abusing other drugs.

Scientists have proposed various explanations of why some individuals become involved with drugs and then escalate to abuse. One explanation points to family history, such as having a parent with drug or alcohol problem. Another explanation is that abusing drugs can lead to affiliation with drug-abusing peers, which, in turn, exposes the individual to other drugs. Biological causes like gender, race or geographic location can also play a role in how and when children begin abusing drugs. Researchers have found that youth who rapidly increase their substance abuse usually have high levels of risk factors and low levels of protective factors (see later).

5.3.4. Basic classification of legal and illegal drugs

I. Legal drug abuse

A. Substance abuse

1. Prescription drugs
 - Sedatives/hypnotics
2. Alcohol
3. Tobacco
4. Volatile solvents

B. Non-substance abuse

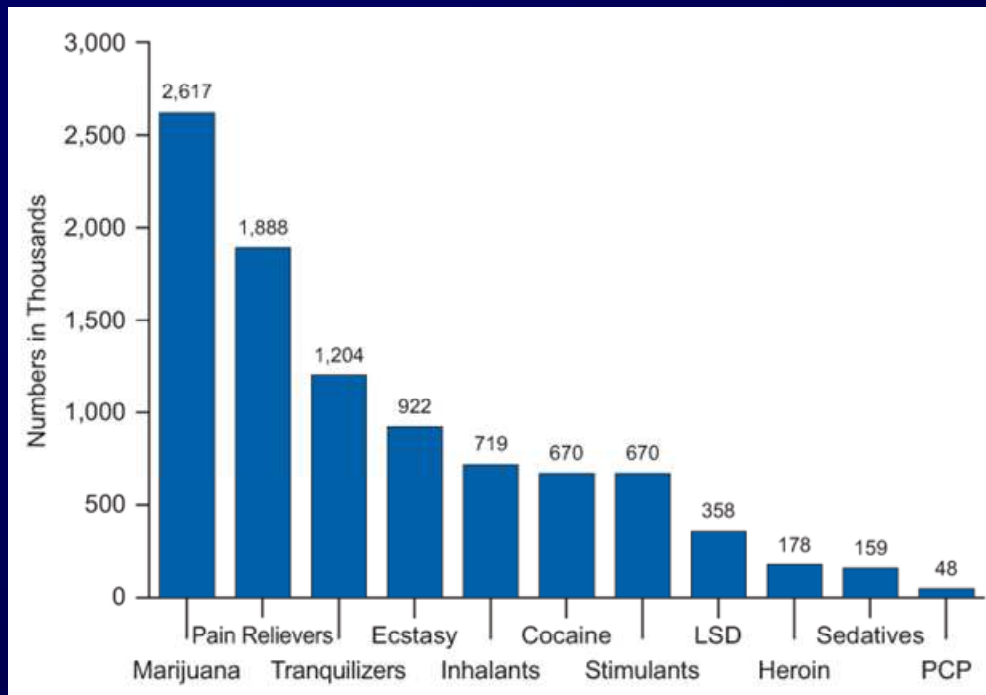
5. Gambling addiction
6. Internet addiction
7. Work addiction
8. Sex addiction
9. Shopping addiction

II. Illegal drugs

A. Substance abuse

1. Stimulants
 - Amphetamine
 - Cocaine
 - Ecstasy
2. Depressants
3. Hallucinogens
 - Cannabinoids
 - LSD
 - PCP
 - Psilocybin Mushrooms
4. Opioids
 - Opium
 - Heroin
5. New Psychoactive Substances (NPS)

Most Frequently Used Substances



Source : <http://www.samhsa.gov/data/nsduh/2k11results/gifs/fig5-2.gif>

5.3.5. The most important illegal substances

1. Methamphetamine



Methamphetamine, popularly shortened to meth or ice, is a psychostimulant and sympathomimetic drug. Methamphetamine enters the brain and triggers a cascading release of norepinephrine, dopamine and serotonin. Since it stimulates the mesolimbic reward pathway, causing euphoria and excitement, it is prone to lead to abuse and addiction. Users may become obsessed or perform repetitive tasks such as cleaning, hand-washing, or assembling and disassembling objects. Withdrawal

is characterized by excessive sleeping, eating and depression-like symptoms, often accompanied by anxiety and drug-craving.

2. Cocaine

Cocaine is a crystalline tropane alkaloid that is obtained from the leaves of the coca plant. It is both a stimulant of the central nervous system and an appetite suppressant, giving rise to what has been described as a euphoric sense of happiness and increased energy. It is most often used recreationally for this effect. Cocaine is a potent central nervous system stimulant. Its effects can last from 20 minutes



to several hours, depending upon the dosage of cocaine taken, purity, and method of administration. The initial signs of stimulation are hyperactivity, restlessness, increased blood pressure, increased heart rate and euphoria. The euphoria is sometimes followed by feelings of discomfort and depression and a craving to experience the drug again. Sexual interest and pleasure can be amplified. Side effects can include twitching, paranoia, and impotence, which usually increases with frequent usage.

3. Ecstasy



Ecstasy (MDMA) is a semisynthetic psychedelic substance of the phenethylamine family that is much less visual with more stimulant-like effects than most all other common “trip” producing psychedelics. It is considered mainly a recreational drug that is often used with sex and associated with club drugs, and a tool in use to supplement various types of practices for transcendence including in meditation, psychonautics, and illicit psychedelic psychotherapy whether self administered or not. The primary effects of MDMA include an

increased awareness of the senses, feelings of openness, euphoria, empathy, love, happiness, heightened self-awareness, feeling of mental clarity and an increased appreciation of music and movement. Tactile sensations are enhanced for some users, making physical contact with others more pleasurable. Other side effects, such as jaw clenching and elevated pulse, are common.

4. Cannabis

Cannabis, known as marijuana in its herbal form, is a psychoactive product of the plant *Cannabis sativa*. Humans have been consuming cannabis since prehistory, although in the 20th century there was a rise in its use for recreational, religious or spiritual, and medicinal purposes. It is estimated that about 4% of the world’s adult population use cannabis annually. It has psychoactive and physiological effects when consumed, usually by smoking or ingestion. The minimum amount of THC required to have a perceptible psychoactive effect is about 10 micrograms per kilogram of body weight. The state of intoxication due to cannabis consumption is colloquially known as a “high”; it is the state where mental and physical faculties are noticeably altered due to the consumption of cannabis. Each user experiences a different high, and the nature of it may vary upon factors such as potency, dose, chemical composition, method of consumption and set and setting.



5. LSD



Lysergic acid diethylamide, LSD, LSD-25, or acid, is a semisynthetic psychedelic drug of the tryptamine family. It is considered mainly as a recreational drug, and a tool in use to supplement various types of exercises for transcendence including in meditation, psychonautics, and illegal psychedelic psychotherapy whether self administered or not. LSD’s psychological effects (colloquially called a “trip”)

vary greatly from person to person, depending on factors such as previous experiences, state of mind and environment, as well as dose strength. They also vary from one trip to another, and even during a single trip. An LSD trip can have long term psycho-emotional effects; some users cite the LSD experience as causing significant changes in their personality and life perspective.

6. PCP

PCP (Phencyclidine) is a dissociative drug formerly used as an anesthetic agent, exhibiting hallucinogenic and neurotoxic effects. It is commonly known as Angel Dust. Although the primary psychoactive effects of the drug only last hours, total elimination from the body is prolonged, typically extending over weeks. PCP is consumed in a recreational manner by drug users, mainly in the United States, where the demand is met by illegal production. It comes in both powder and liquid forms



(PCP base dissolved most often in ether), but typically it is sprayed onto leafy material such as marijuana, mint, oregano, parsley or Ginger Leaves, and smoked. PCP has potent effects on the nervous system altering perceptual functions (hallucinations, delusional ideas, delirium or confused thinking), motor functions (unsteady gait, loss of coordination, and disrupted eye movement or nystagmus), and autonomic nervous system regulation (rapid heart rate, altered temperature regulation). The drug has been known to alter mood states in an unpredictable fashion causing some individuals to become detached and others to become animated.

7. Psilocybin Mushrooms



Psilocybin mushrooms are fungi that contain the psychedelic substances psilocybin and psilocin, and occasionally other psychoactive tryptamines. There are multiple colloquial terms for psilocybin mushrooms, the most common being magic mushrooms or 'shrooms. When psilocybin is ingested, it is broken down to produce psilocin, which is responsible for the hallucinogenic effects. The intoxicating effects of psilocybin-containing mushrooms last typically anywhere from 3 to 7 hours depending on dosage, preparation method and personal metabolism. The experience is typically inwardly oriented, with strong visual and auditory components. Visions and revelations may be experienced, and the effect can range from exhilarating to distressing. There can be also a total absence of effects, even with large doses.

8. Opium and Heroin



Opium is a resinous narcotic formed from the latex released by lacerating the immature seed pods of opium poppies (*Papaver somniferum*). It contains up to 16% morphine, an opiate alkaloid, which is most frequently processed chemically to produce heroin for the illegal drug trade. Opium has gradually been superseded by a variety of purified, semi-synthetic, and synthetic opioids with progressively stronger effect, and by other general anesthesia. Heroin was originally created to help cure people of addiction to morphine. Upon crossing the blood-brain barrier, which occurs soon after introduction of the drug into the bloodstream, heroin is converted into morphine, which mimics the action of endorphins, creating a sense of

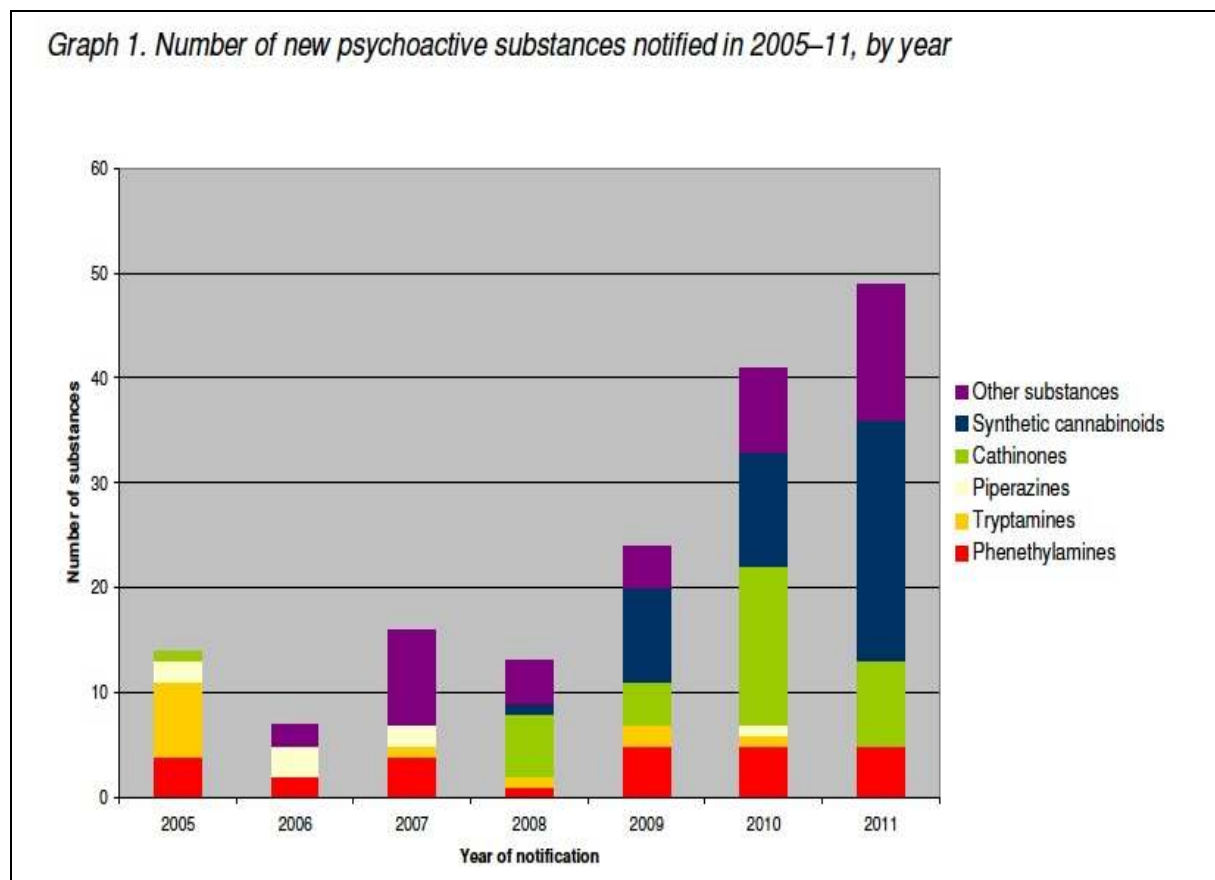
well-being; the characteristic euphoria has been described as an “orgasm” centered in the gut. One of the most common methods of heroin use is via intravenous injection.

Source: <http://listverse.com/2007/09/27/top-10-drugs-and-their-effects/>

9. New Psychoactive Substances (NPS)

NPS are substances of abuse, either in a pure form or a preparation, that are not controlled by international drug conventions, but which may pose a public health threat. In general, NPS is an umbrella term for unregulated (new) psychoactive substances or products intended to mimic the effects of controlled drugs.

Countries in nearly all regions have reported the emergence of NPS. The number of identified NPS in the European Union rose from 14 in 2005 to 236 by the end of 2012.

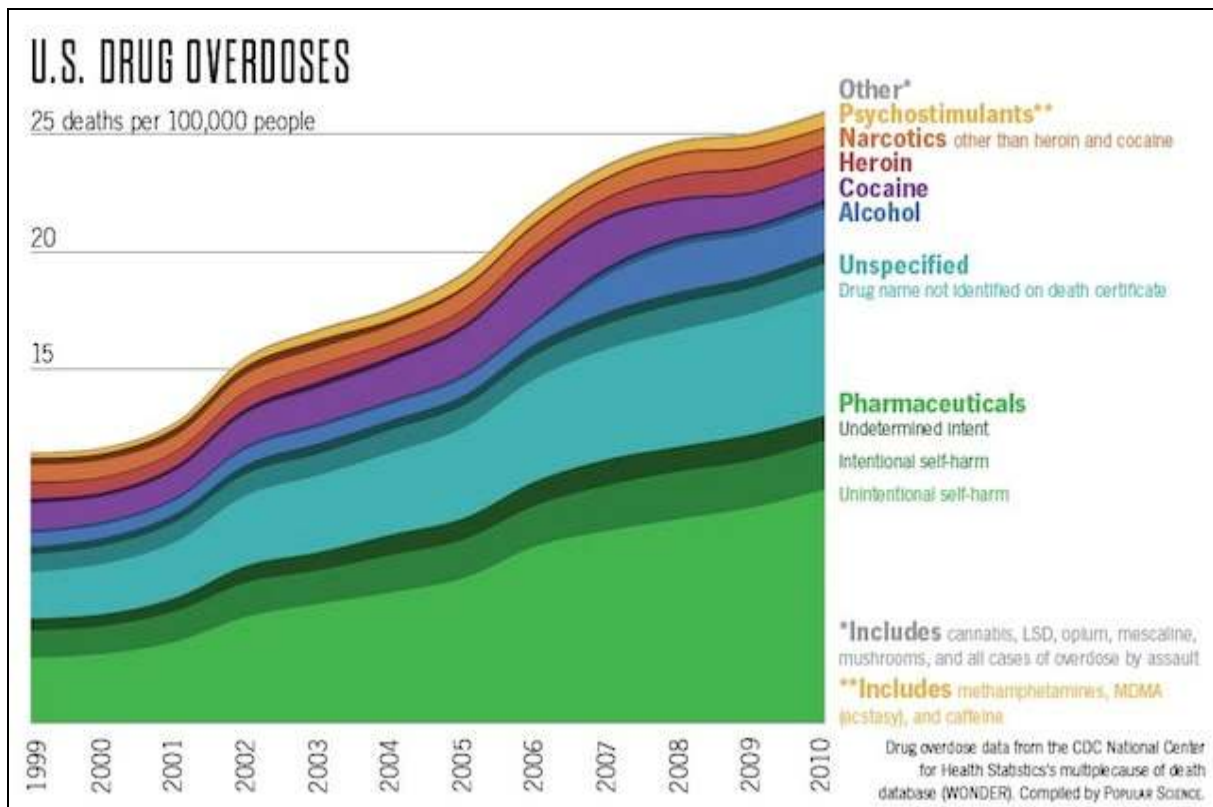


It has generally been observed that, when a NPS is controlled or scheduled, its use declines shortly thereafter, which has a positive impact on health-related consequences and deaths related to the substance.

While most widespread in Europe and North America, NPS seem to originate nowadays primarily in Asia (East and South Asia), notably in countries known for their advanced chemical and pharmaceutical industries.

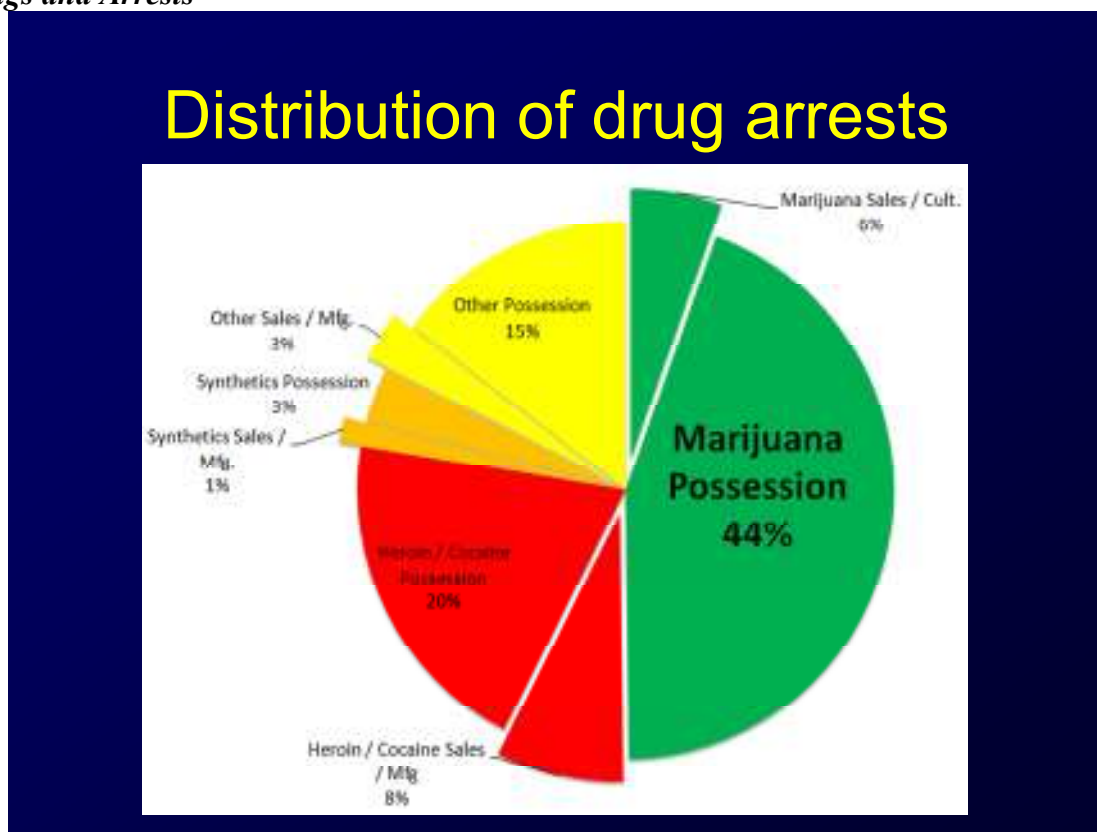
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5.3.6. Overdose



5.3.7. Other implications of drug use

Drugs and Arrests



Source: <http://stash.norml.org/wp-content/uploads/FBI-UCR-2008-Drug-Arrests.png>

Drugs and HIV

In 2011, 1.6 million people who injected drugs were living with HIV. In comparison with the previous years, this represents a 46% decline. This puts the global prevalence of HIV at 11.5% among people who inject drugs.

The total number of people who inject drugs and are living with HIV in a particular region is influenced by three variables:

- the prevalence of HIV among people who inject drugs;
- the prevalence of people who inject drugs; and
- the total population in the region aged 15-64.

Overall, the Russian Federation, the United States and China account for 46% of the global number of people who inject drugs that are living with HIV (21%, 15% and 10%, respectively). The region with the highest prevalence of HIV among people who inject drugs is the Near and Middle East/ South-West Asia (24%). This is driven primarily by high rates of HIV among people who inject drugs in Pakistan (37%) and Iran (15.1%). Almost 30% of the global population injecting drugs and are living with HIV are in Eastern and South-Eastern Europe. Similar to Pakistan, Ukraine has a large share of population who injects drugs, with a very high prevalence of HIV (22%).

Drugs and Hepatitis

Another major global public health concern is hepatitis C, which can lead to liver diseases such as cirrhosis and cancer. Infection with the hepatitis C virus (HCV) is highly prevalent among people who inject drugs. UNODC estimates that the global prevalence of HCV among people who inject drugs is 51%, meaning that 7.2 million people who inject drugs were living with HCV in 2011.

The global prevalence of the hepatitis B virus (HBV) in 2011 among people who inject drugs is estimated at 8.4%, or 1.2 million people, based on reporting from 63 countries. The highest prevalence of HBV among people who inject drugs is found in the Near and Middle East/South West Asia (22.5%) and Western and Central Europe (19.2%).

5.3.8. Prevention

The most important goal in prevention is to decrease the risk factors and increase the protective factors. The main scenarios for this are family, education and community. The needle exchange program does not lead to the decline of number of users however it decreases the transmission of infectious diseases.

Factors influencing drug use

1. Risk factors associated with drug use are:

- Age: increasing use until mid-20s, then decreasing
- Gender: usually higher in males, though not always much difference
- Outgoing lifestyles: bars, discos, parties
- Precocity: younger-than-average initiation into “adult” behavior in general: sex, smoking, drinking and drugs
- Higher disposable income (in some studies, unemployment is also a risk factor)
- Urban settings: higher for illegal drugs but not for alcohol, tobacco, medicines, solvents; less so for cannabis in countries with longer histories of use
- High-prevalence areas and drug availability
- Positive images of drug use among peers

- Alcohol or tobacco use
 - Parental substance use
2. Protecting factors are:
- Self-control
 - Parental monitoring
 - Academic competence
 - Anti-drug use policies
 - Strong neighborhood attachment

The three areas of drug prevention

1. Family

Family-based prevention programs should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information.

2. School

Prevention programs can be designed to intervene as early as preschool to address risk factors for drug abuse, such as aggressive behavior, poor social skills, and academic difficulties.

Prevention programs for elementary school children should target improving academic and social-emotional learning to address risk factors for drug abuse, such as early aggression, academic failure, and school dropout.

Prevention programs for middle or junior high and high school students should increase academic and social competence.

Prevention programs aimed at general populations at key transition points, such as the transition to middle school, can produce beneficial effects even among high-risk families and children. Such interventions do not single out risk populations and, therefore, reduce labeling and promote bonding to school and community.

3. Community

Community prevention programs that combine two or more effective programs, such as family-based and school-based programs, can be more effective than a single program alone.

Community prevention programs reaching populations in multiple settings (for example, schools, clubs, faith-based organizations, and the media) are most effective when they present consistent, community-wide messages in each setting.

For more information visit the following link:

http://www.drugabuse.gov/sites/default/files/preventingdruguse_2.pdf

Needle exchange program

A needle and syringe program (NSP) is a social policy based on the philosophy of harm reduction where injecting drug users can obtain hypodermic needles and associated injection equipment at little or no cost.

Government and non-government organizations provide people who inject drugs with access to needles and syringes to prevent the transmission of HIV and hepatitis C infections. Australian Governments invested \$130 million in Needle and Syringe Programs between 1991 and 2000. This resulted in the prevention of an estimated 25,000 cases of HIV and 21,000 cases of hepatitis C. The savings to the health system in avoided treatment costs over a lifetime are estimated to be between \$2.4 and \$7.7 billion.

The possession of a syringe without prescription is/was illegal for a long time in many places around the world. Legislation was usually amended to allow needle and syringe programs to operate when governments realized the need to provide sterile injecting equipment to reduce the spread of HIV and hepatitis C. Generally, each state and territory allows authorized NSP and pharmacies to provide needles and syringes. Police can enter NSP facilities at any time and are able to approach or apprehend clients. However, discretion is used to ensure that the NSP can operate effectively.

For more information visit the following website:

[http://www.health.gov.au/internet/main/publishing.nsf/Content/65ADCBE7E2BBC18BCA25764F007B2375/\\$File/ques.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/65ADCBE7E2BBC18BCA25764F007B2375/$File/ques.pdf)

Topics suggested for students' oral presentations:

- 1) Describe the drug situation in your country?
- 2) Are drug-related infections a problem in your country? Do you have a needle and syringe program?
- 3) What types of educational preventive measures are taken in your country to decrease drug use?