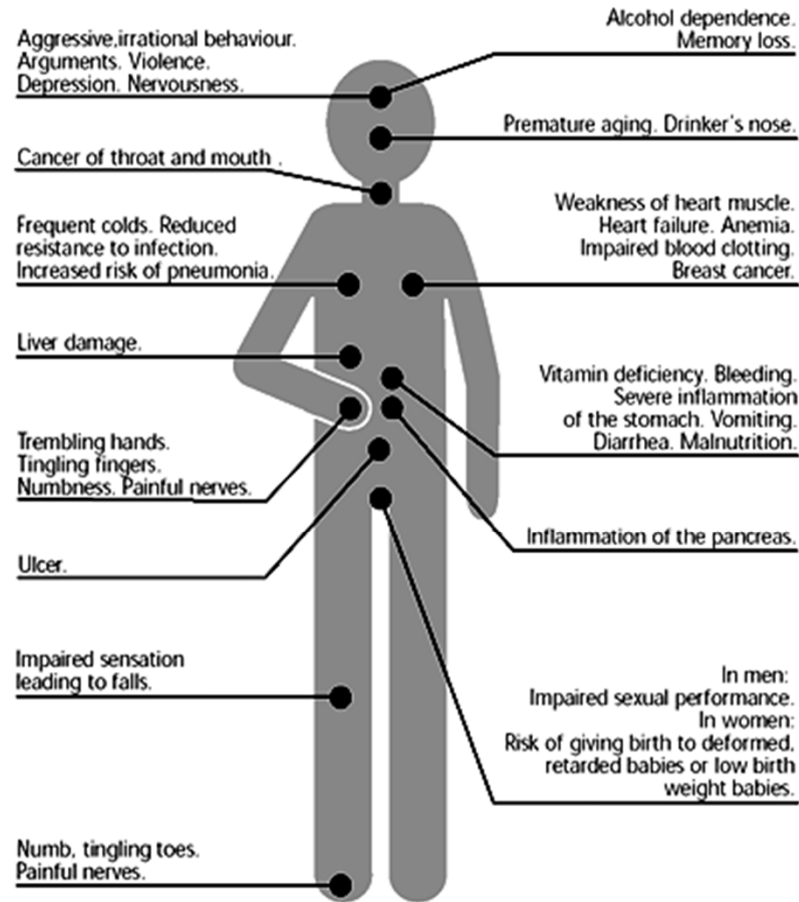


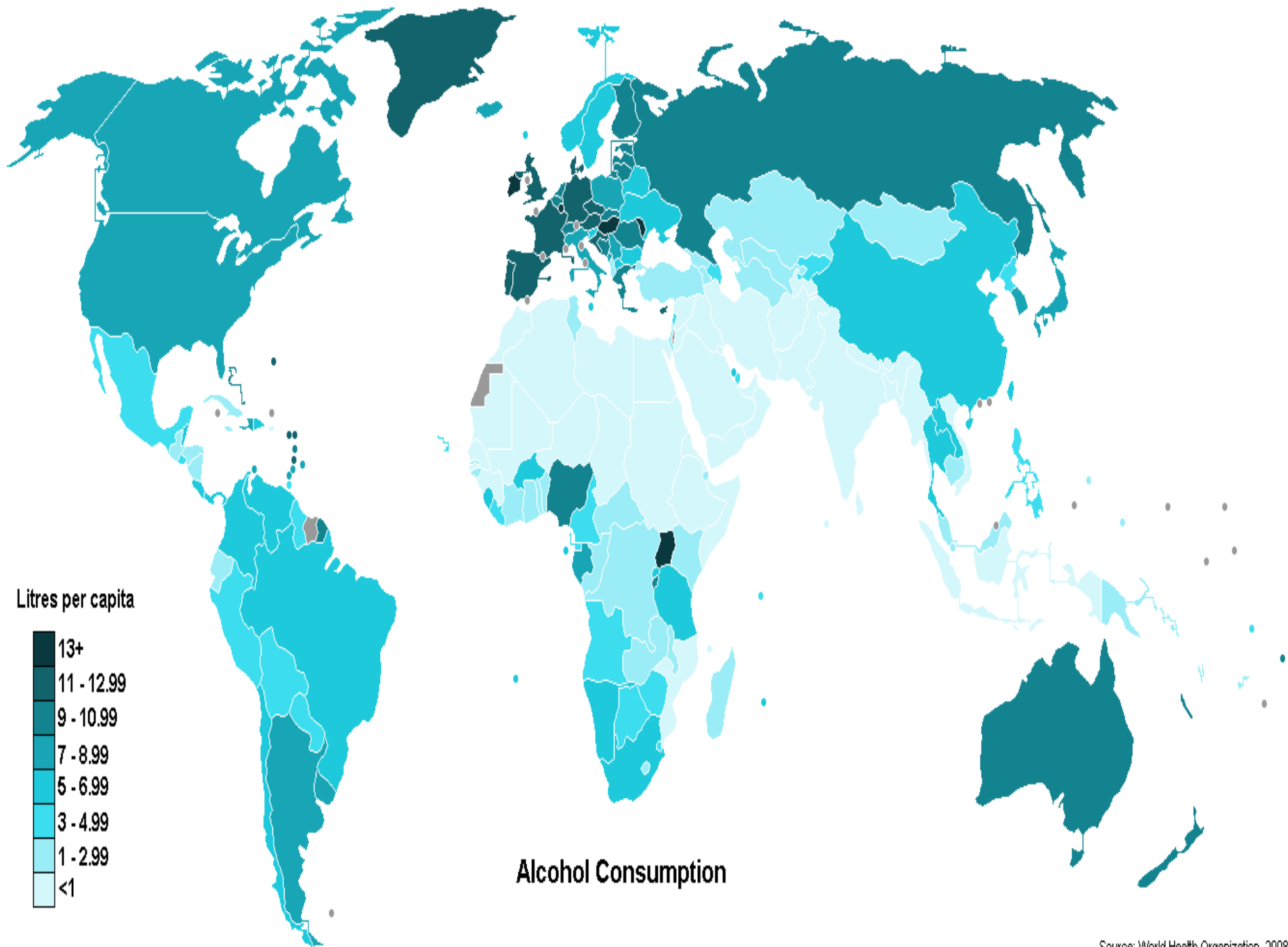
Alcohol abuse

Effects of High-Risk Drinking



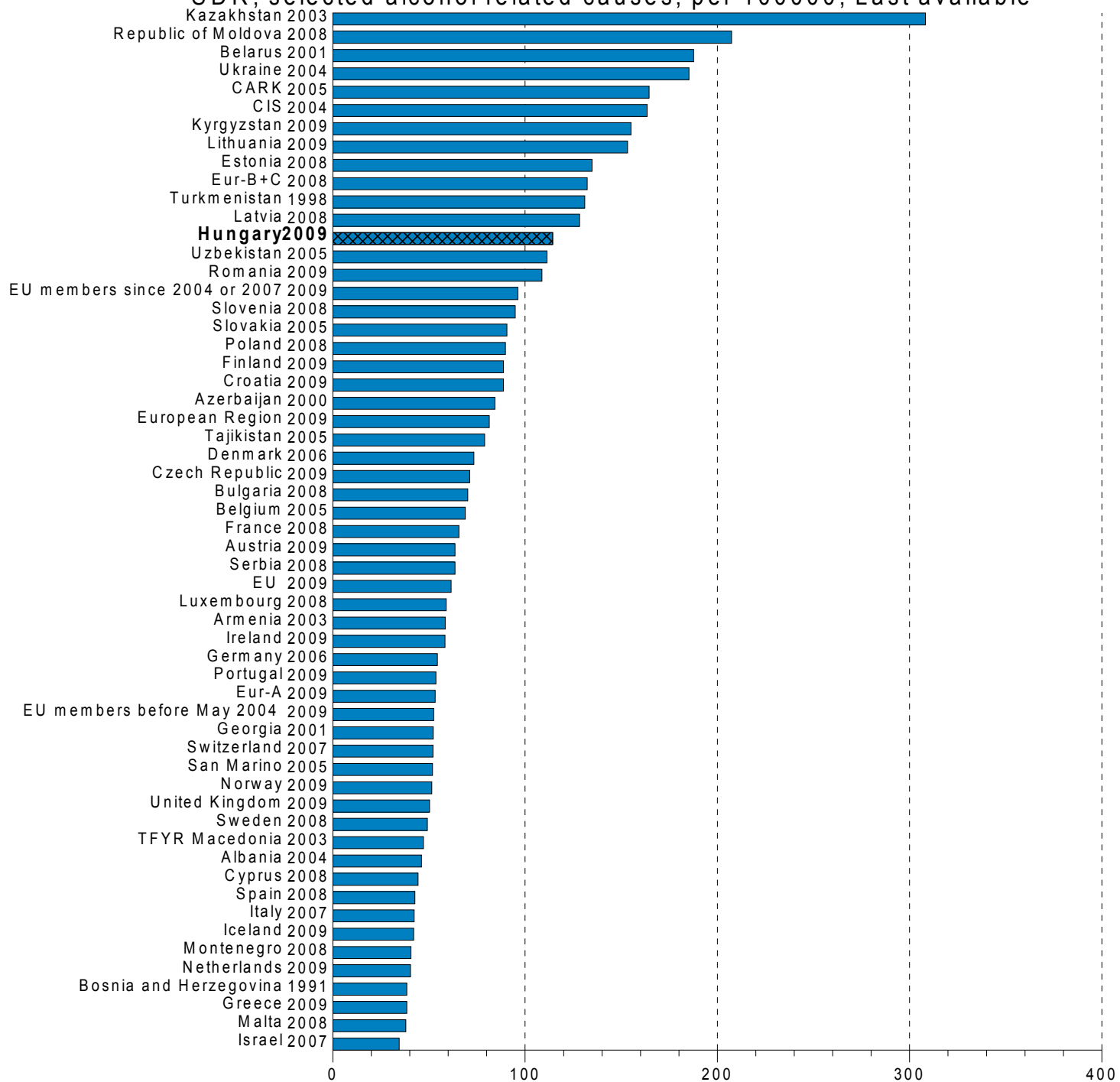
High-risk drinking may lead to social, legal, medical, domestic, job and financial problems. It may also cut your lifespan and lead to accidents and death from drunk-en driving.

Source: Babor TF, Higgins-Biddle JC. *Brief Intervention for Hazardous and Harmful Drinking*. WHO, 2001. Available: http://www.who.int/substance_abuse/publications/alcohol/en/index.html.

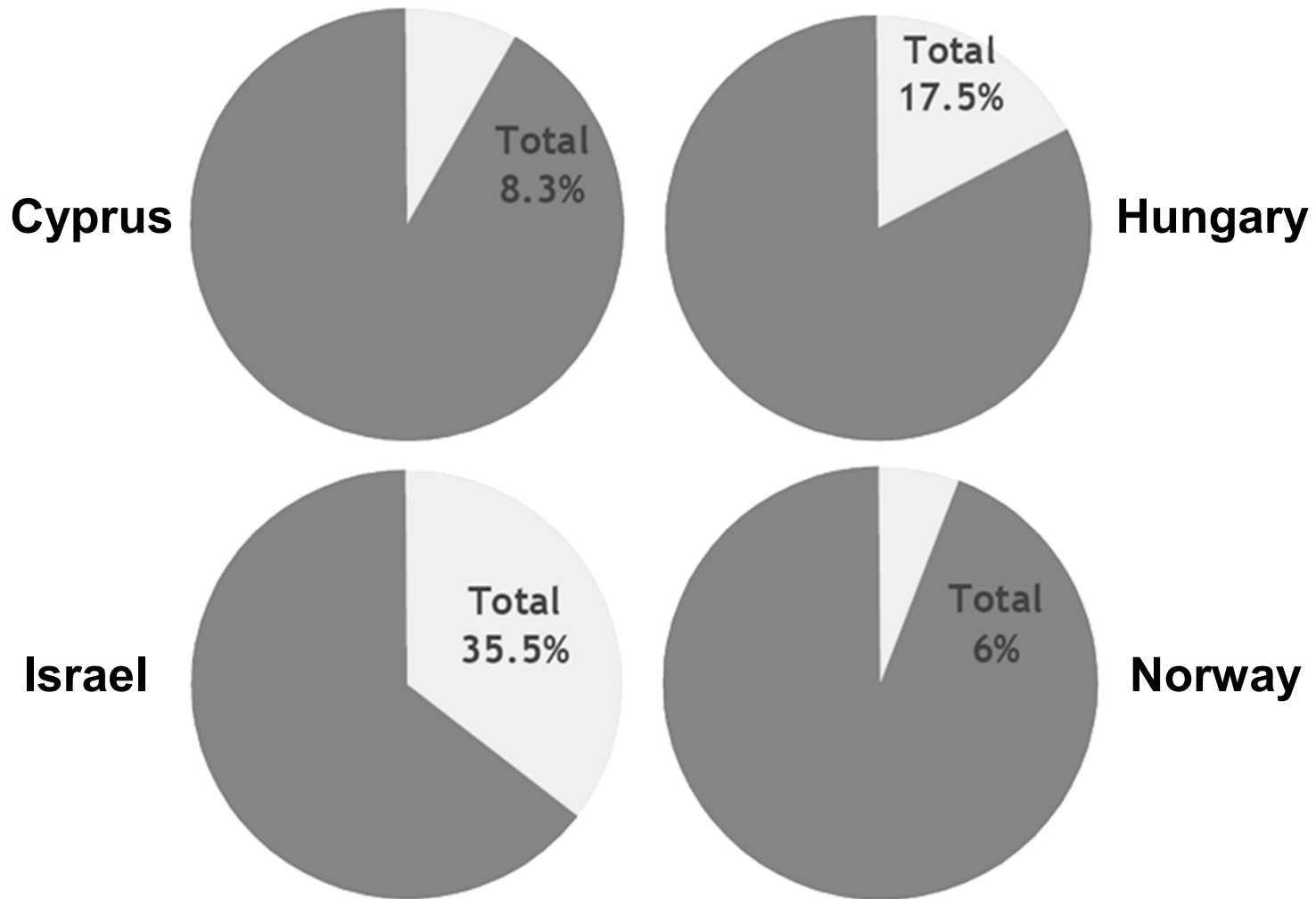


Source: World Health Organization, 2008

SDR, selected alcohol related causes, per 100000, Last available



Percent abstainers (past year) in selected European countries



Source: WHO – Global Status Report on Alcohol 2004.

So what is your country profile?

<http://www.who.int/gho/alcohol/en/index.html>

Prevention of alcohol abuse

- **Primary prevention:**
 - Decrease availability
 - Health education on the adverse consequences of alcohol abuse
- **Secondary prevention:**
 - Early detection of individuals with alcohol-related problems (high levels or dangerous patterns – binge drinking - of alcohol consumption)
 - Early initiation of treatment measures
- **Tertiary prevention:**
 - Pharmacotherapy (i.e.: carbamazepines, SSRIs)
 - Psychotherapy
 - Socio-therapy, work therapy
 - Alcoholics anonymous (AA) group participation
 - Gradual reintegration into society

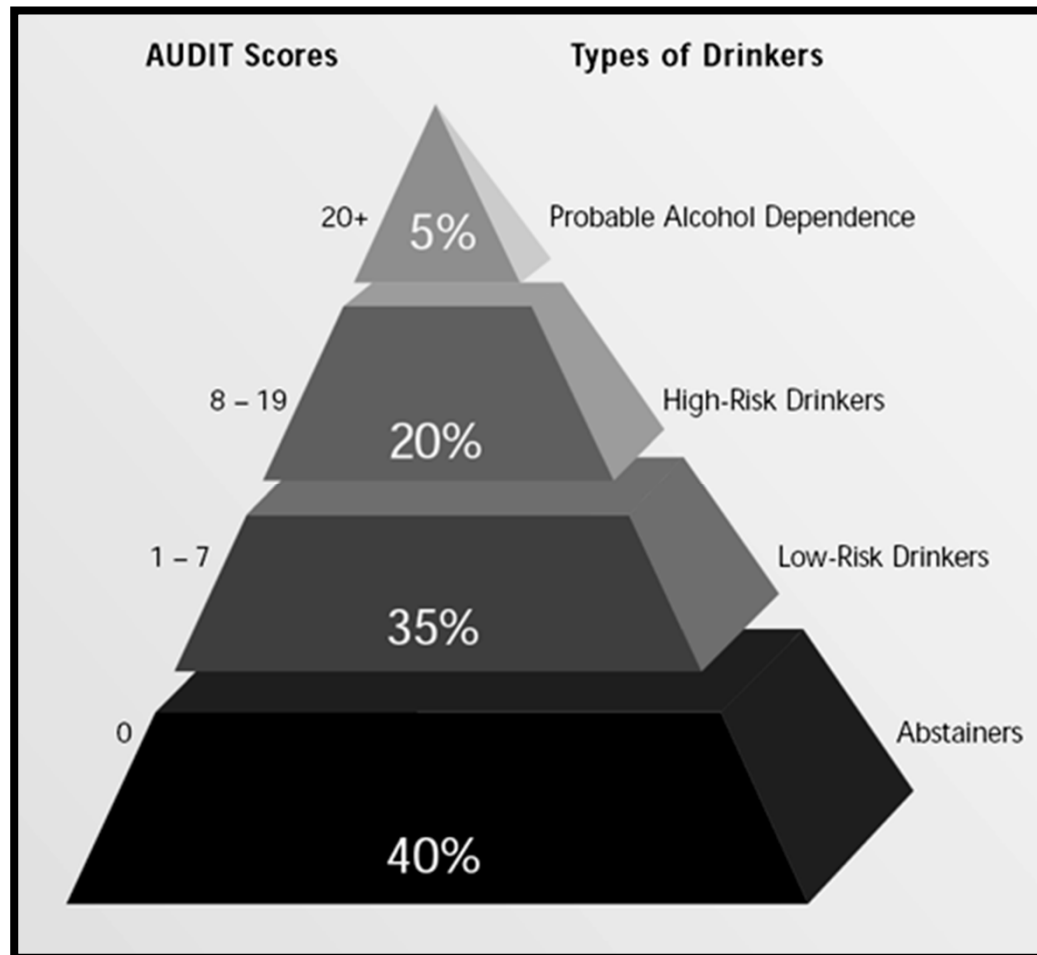
Alcohol Use Disorder Identification Test (AUDIT)

<p>1. How often do you have a drink containing alcohol?</p> <p>(0) Never [Skip to Qs 9-10] (1) Monthly or less (2) 2 to 4 times a month (3) 2 to 3 times a week (4) 4 or more times a week</p> <input type="text"/>
<p>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</p> <p>(0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7, 8, or 9 (4) 10 or more</p> <input type="text"/>
<p>3. How often do you have six or more drinks on one occasion?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <p><i>Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0</i></p> <input type="text"/>
<p>4. How often during the last year have you found that you were not able to stop drinking once you had started?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="text"/>
<p>5. How often during the last year have you failed to do what was normally expected from you because of drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="text"/>

<p>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="text"/>
<p>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="text"/>
<p>8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="text"/>
<p>9. Have you or someone else been injured as a result of your drinking?</p> <p>(0) No (1) Yes, but not in the last year (2) Yes, during the last year</p> <input type="text"/>
<p>10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?</p> <p>(0) No (1) Yes, but not in the last year (2) Yes, during the last year</p> <input type="text"/>

Source: Babor TF, Higgins-Biddle JC, Saunders JB, Monteiro MG.. AUDIT. WHO, 2001.
Available: http://www.who.int/substance_abuse/.

Evaluation of the AUDIT score



Source: Babor TF, Higgins-Biddle JC. *Brief Intervention for Hazardous and Harmful Drinking*. WHO, 2001.
Available: http://www.who.int/substance_abuse/publications/alcohol/en/index.html.

The patient was assessed - so what next?

Risk Level	Intervention	AUDIT score*
Zone I	Alcohol Education	0-7
Zone II	Simple Advice	8-15
Zone III	Simple Advice plus Brief Counseling and Continued Monitoring	16-19
Zone IV	Referral to Specialist for Diagnostic Evaluation and Treatment	20-40

Source: Babor TF, Higgins-Biddle JC. *Brief Intervention for Hazardous and Harmful Drinking*. WHO, 2001.
Available: http://www.who.int/substance_abuse/publications/alcohol/en/index.html.

Frequently asked questions (FAQ)

What's a Standard Drink?


1 standard drink =

 1 can of ordinary beer
(e.g. 330 ml at 5%)

or

 A single shot of spirits (whiskey, gin, vodka, etc.)
(e.g. 40 ml at 40%)

or

 A glass of wine or a small glass of sherry
(e.g. 140 ml at 12% or 90 ml at 18%)

or

 A small glass of liqueur or aperitif
(e.g. 70 ml at 25%)

What's a Low-Risk Limit?

- No more than two standard drinks a day
- Do *not* drink at least two days of the week

But remember. There are times when even one or two drinks can be too much – for example:

- When driving or operating machinery.
- When pregnant or breast feeding.
- When taking certain medications.
- If you have certain medical conditions.
- If you cannot control your drinking.

Source: Babor TF, Higgins-Biddle JC. *Brief Intervention for Hazardous and Harmful Drinking*. WHO, 2001.
Available: http://www.who.int/substance_abuse/publications/alcohol/en/index.html.

Illicit drug use



SU Department of Public Health



Some basic concepts

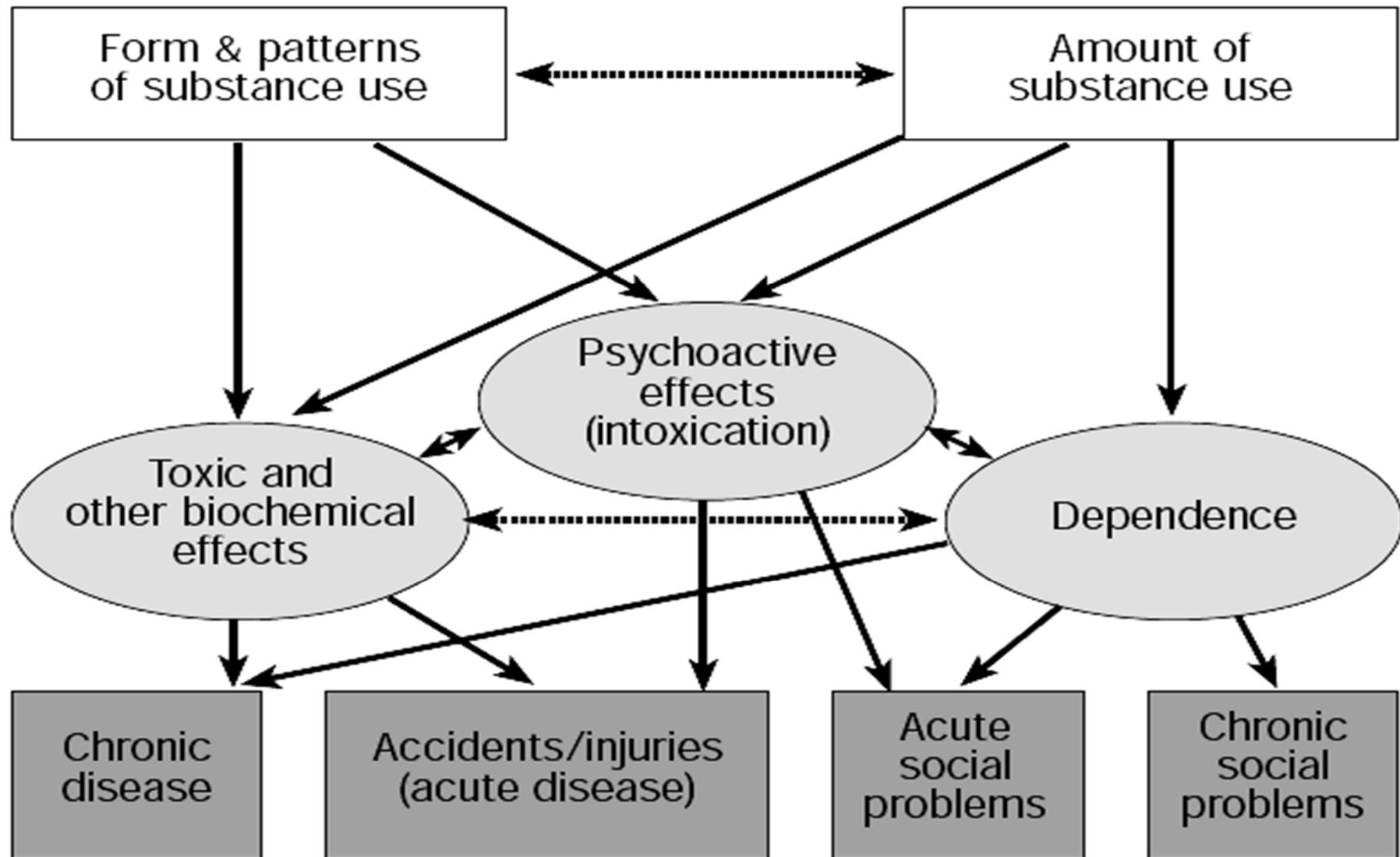
• **Drug abuse**: The use of illegal drugs or the inappropriate use of legal drugs. The repeated use of drugs to produce pleasure, to alleviate stress, or to alter or avoid reality (or all three).

➤ **Addiction**: Chronic, relapsing disease characterized by compulsive drug-seeking and abuse and by long-lasting chemical changes in the brain.

➤ **Tolerance**: Condition in which higher doses of a drug are required to produce the same effect as during initial use; often leads to physical dependence.

➤ **Physical dependence**: Adaptive physiological state that occurs with regular drug use and results in a withdrawal syndrome when drug use is stopped; usually occurs with tolerance.

Main effects of psychoactive substance abuse



Source: WHO – Neuroscience of psychoactive substance abuse. 2004.

Groups of psychoactive substances

Class	Examples	Most common behavioural effects
Stimulants	Amphetamine Cocaine Ecstasy Nicotine	Stimulation, arousal, increased energy, increased concentration, decreased appetite, increased heart rate, increased respiration, paranoia, panic
Depressants	Alcohol Sedatives/hypnotics Volatile solvents	Relaxation, disinhibition, motor impairments, memory and cognitive impairments, anxiolysis
Hallucinogens	Cannabinoids LSD Phencyclidine	Hallucinations, increased sensory awareness, motor and cognitive deficits
Opioids	Morphine Heroin	Euphoria, analgesia, sedation

Source: WHO – Neuroscience of psychoactive substance abuse. 2004.

Common drugs and their addictive potential

Drug	Physical Dependence	Psychologic Dependence	Tolerance
CNS depressants			
Alcohol	+++	+++	++
Barbiturates	+++	+++	++
Ethchlorvynol	+++	+++	++
Glutethimide	+++	+++	++
Methaqualone	+++	+++	++
Methypylon	+++	+++	++
Opioids	++++	++++	++++
Synthetic opioids	++++	++++	++++
Anxiolytics			
Alprazolam, oxazepam, temazepam (short-acting)	++	+++	+
Chlordiazepoxide, diazepam (long-acting)	+	+++	+
Stimulants			
Amphetamine	?	+++	++++
Cocaine	0	+++	++
Methamphetamine	?	+++	++++
Hallucinogens			
LSD	0	++	++
Marijuana			
(low-dose Δ -9-THC)	0	++	0
(high-dose Δ -9-THC)	0	++	+
Mescaline, peyote	0	++	+

LSD = lysergic acid diethylamide; THC = tetrahydrocannabinol; 0 = no effect; + = slight effect to + + + + = marked effect.

Source: The Merck Manual of Diagnosis and Therapy (<http://www.merck.com>)

DRUGS

I. Opiates (opium, morphine, heroin, crack)

II. Cocaine

III. Cannabis (marijuana, hashis - THC (tetrahydrocannabinol))

III. Psychomotor stimulants (amphetamines - speed, ecstasy)

V. Hallucinogens (LSD (lysergic acid diethylamide),
PCP (phencyclidine
mescaline, psilocybin))

VI. Inhalants (paint thinner, butane, propane,
tetrachloroethylene)

Opioids (morphine, heroin, crack)

Quick dependence

Increased risk for overdose



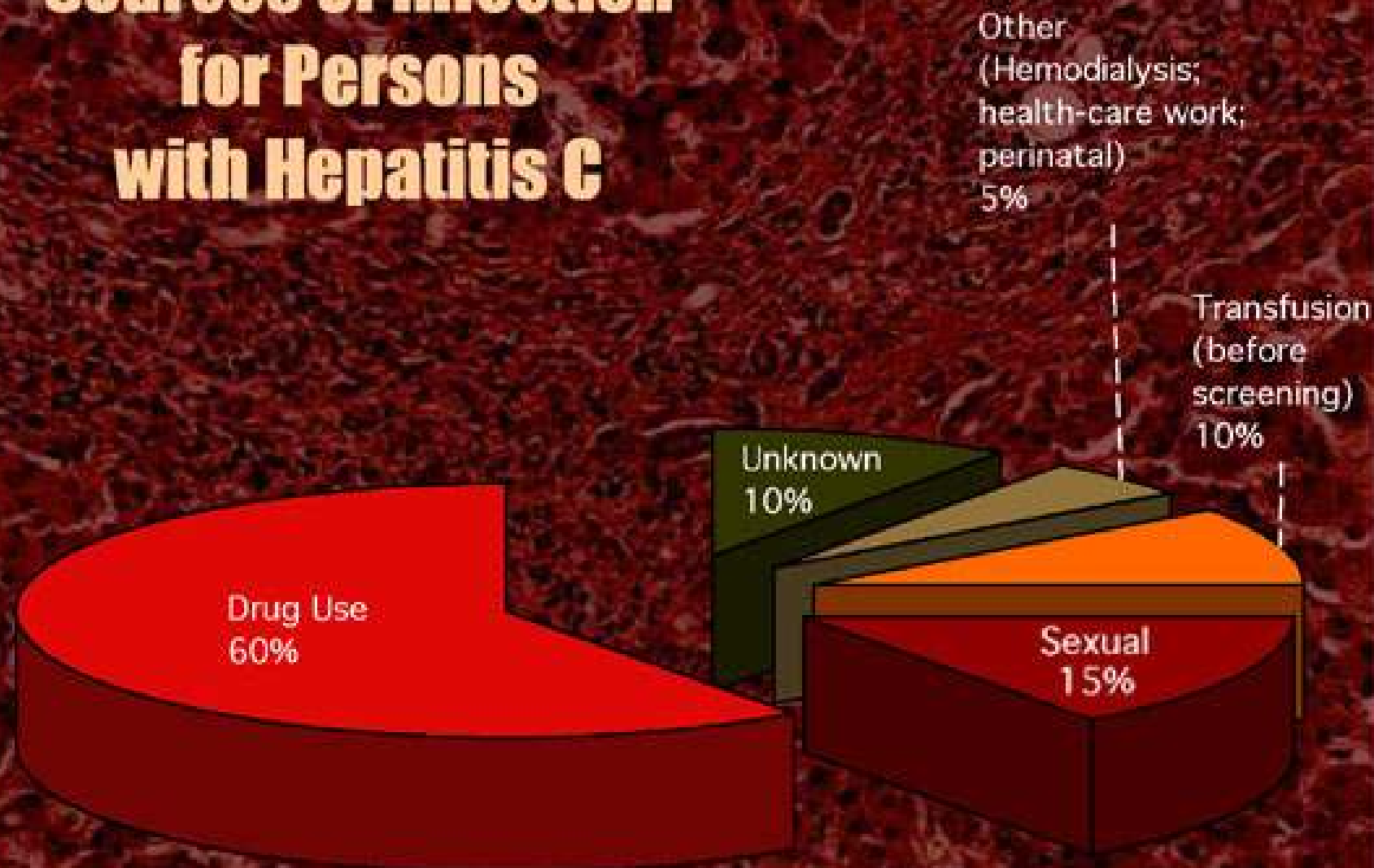
Heroin addict in Russia displays needle tracks



Is Needle Exchange Effective?

While most studies agree on the effectiveness of NEPs, some experts argue that it's difficult to isolate the preventative effect of providing clean needles from that of all the other services offered at most NEPs.

Sources of Infection for Persons with Hepatitis C





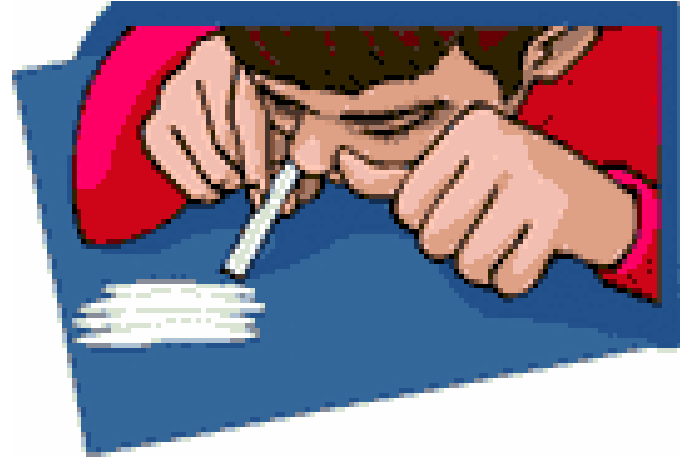
Afghanistan produces close to 90 percent of the world's opium, the raw material from which heroin is made.

Cocaine





Columbia





In the bottles are smuggled cocaine (Costa Rica).



Cocaine

**Hyperactive period:
over-alertness, euphoria,
sensation of immense
power to do anything)**

Strong dependence

**Overdose may lead to
stroke
and heart attack**

Cannabis (marijuana, hashis)



Marijuana (THC) is an extremely powerful and pleasurable intoxicant.

It affects, alters, and damages brain cells controlling thinking, emotion, pleasure, coordination, mood, and memory.

Marijuana accumulates in the microscopic spaces

between nerve cells in the brain-called "synapses,,, which interferes by slowing and impairing transfer of critical information.

Long term use causes the brain to stop production

of chemicals necessary to "feel good"- a negative feedback condition.

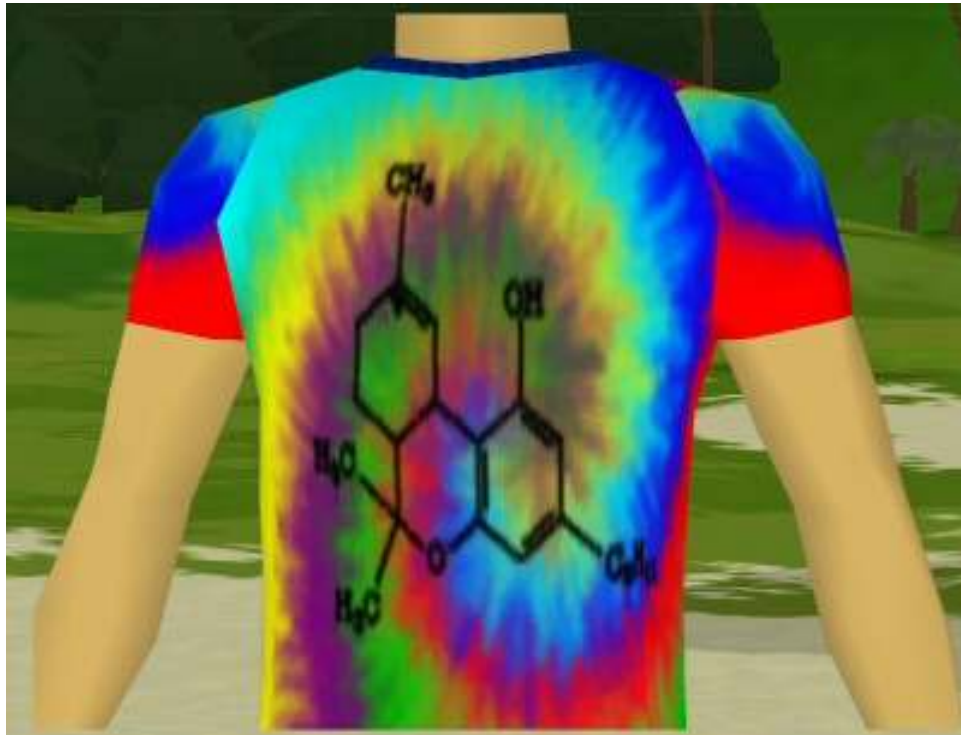
The user becomes chemically addicted to marijuana.

Marijuana or cannabis plants.

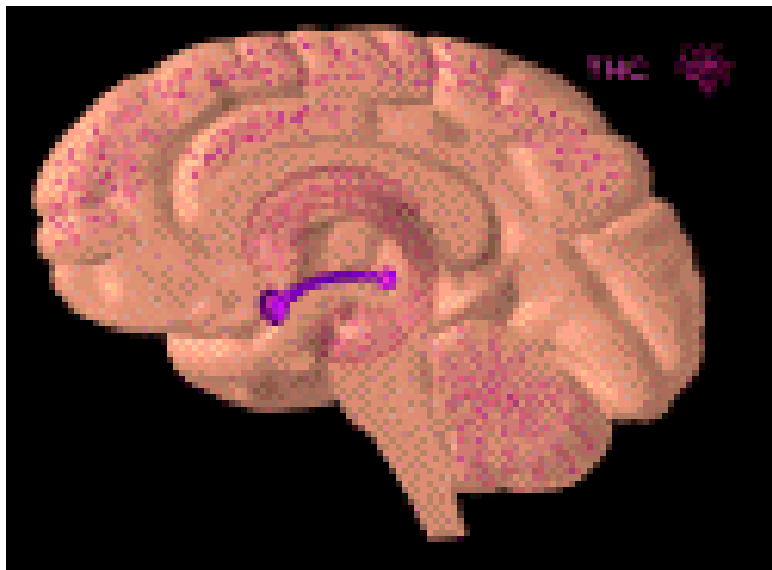
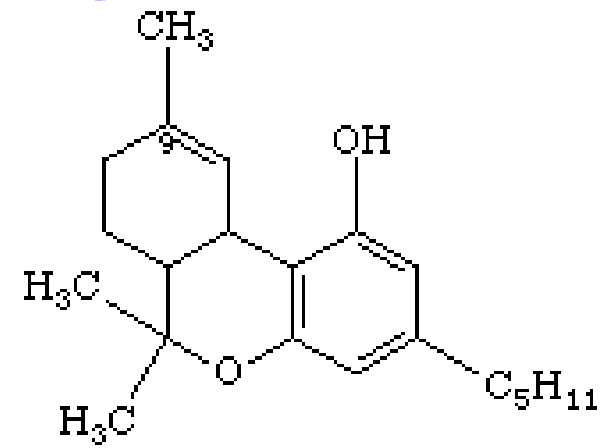


Cannabis (marijuana, hashis)

- mood swings
- memory impairment
- chronic bronchitis
- with tobacco smoking increases the risk of cancer (lung, oral)
- panic attacks, anxiety, depression, paranoid thinking, decreased motivation, interference with reproductive function, learning difficulties, psychological dependence
- suicidal thoughts, risk of psychosis
- barrier against self-awareness,
- interference with a young person's development
- interference with reproductive function (miscarriages, fetal deaths, or low birth-weights).



tetrahydrocannabinol





Smoking marijuana could damage the gums too.

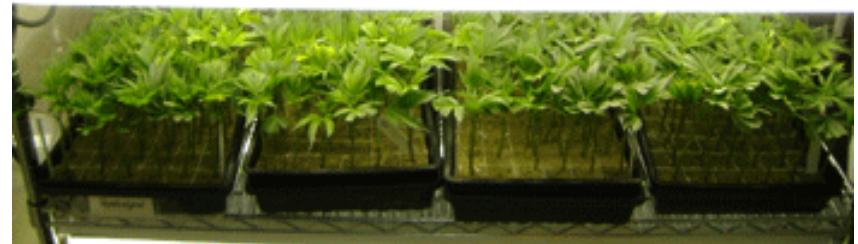
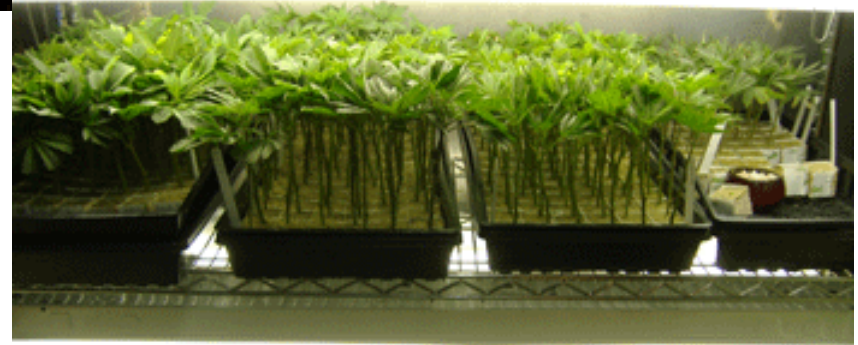


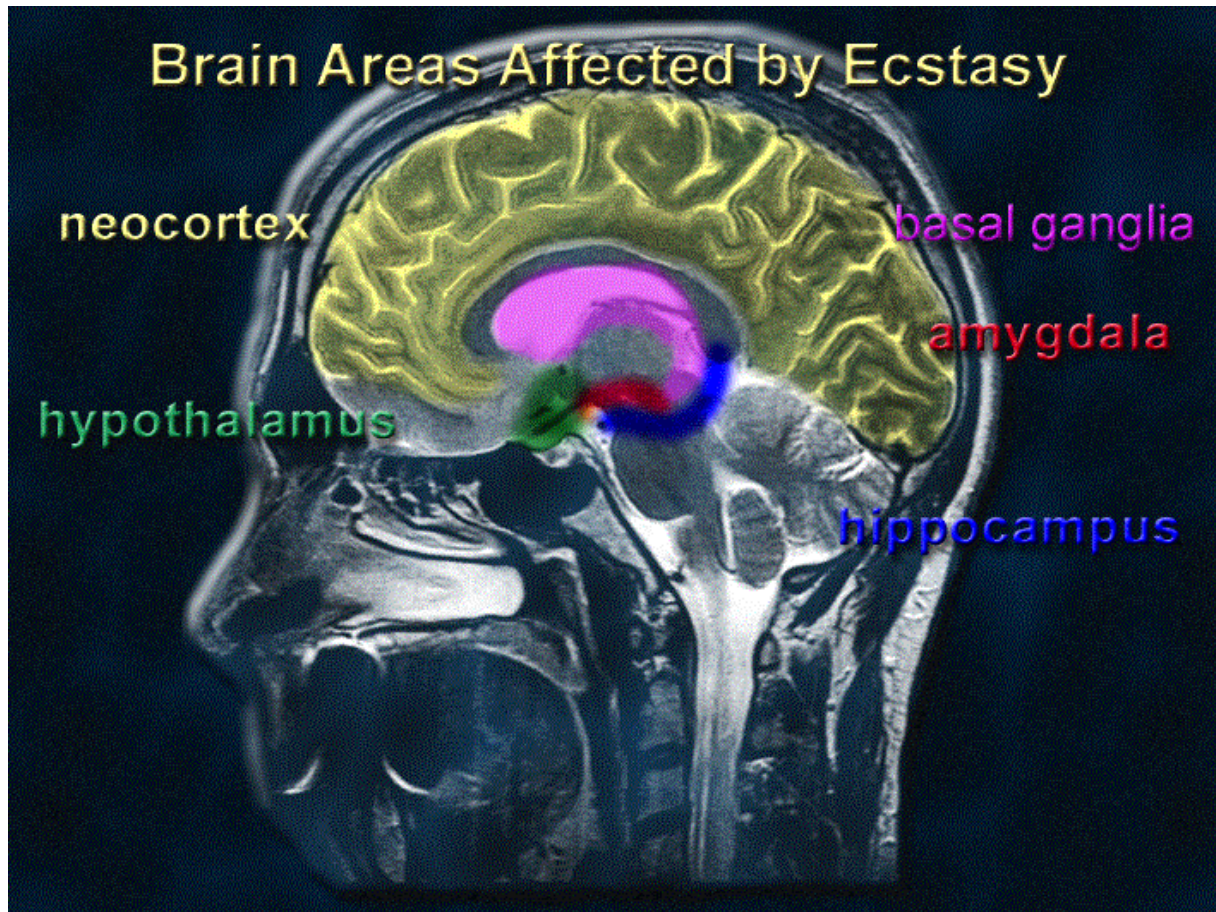
**California (USA):
the majority of
domestically grown marijuana
occurs on public land.**





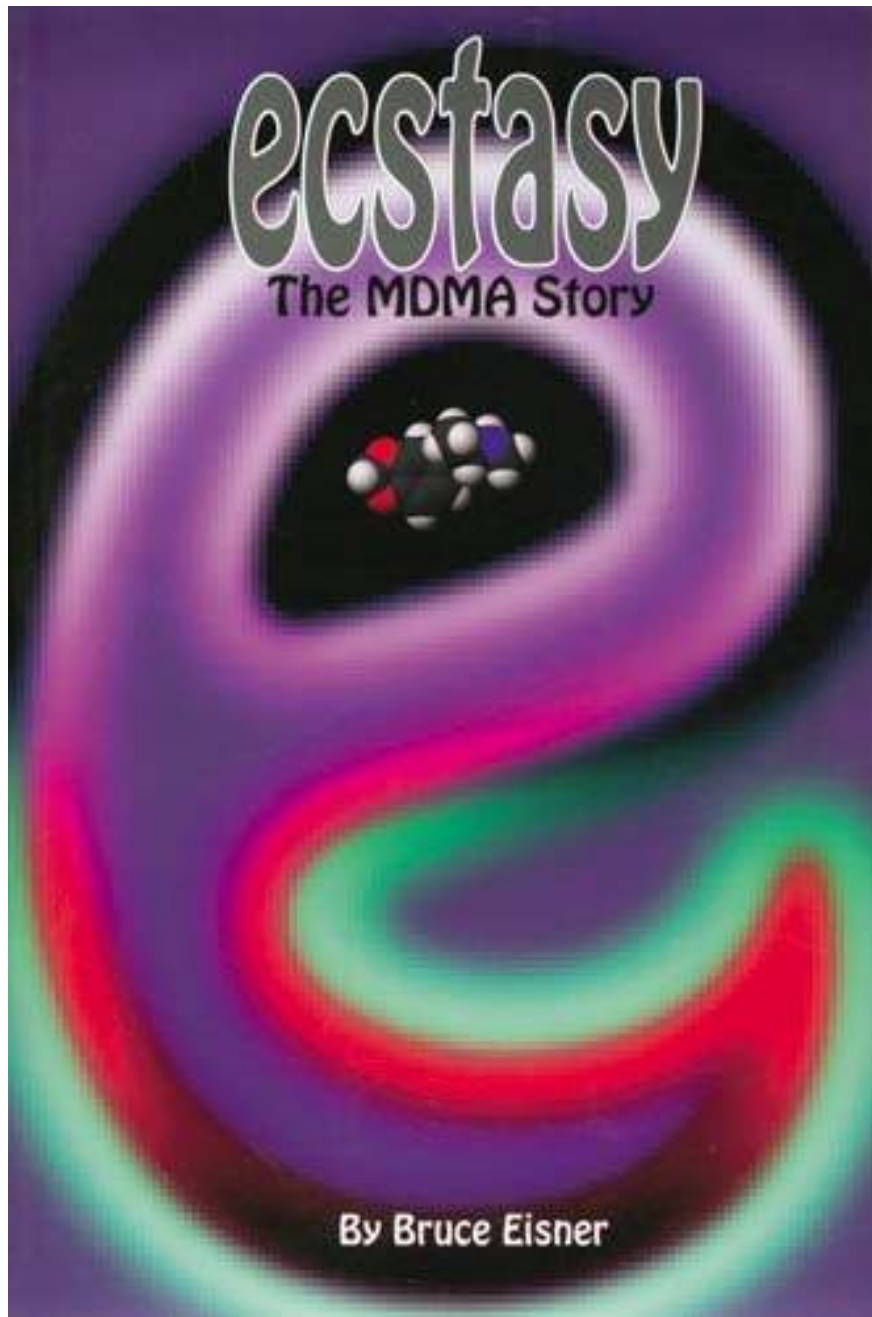
Marijuana cultivation





Amphetamine Ecstasy

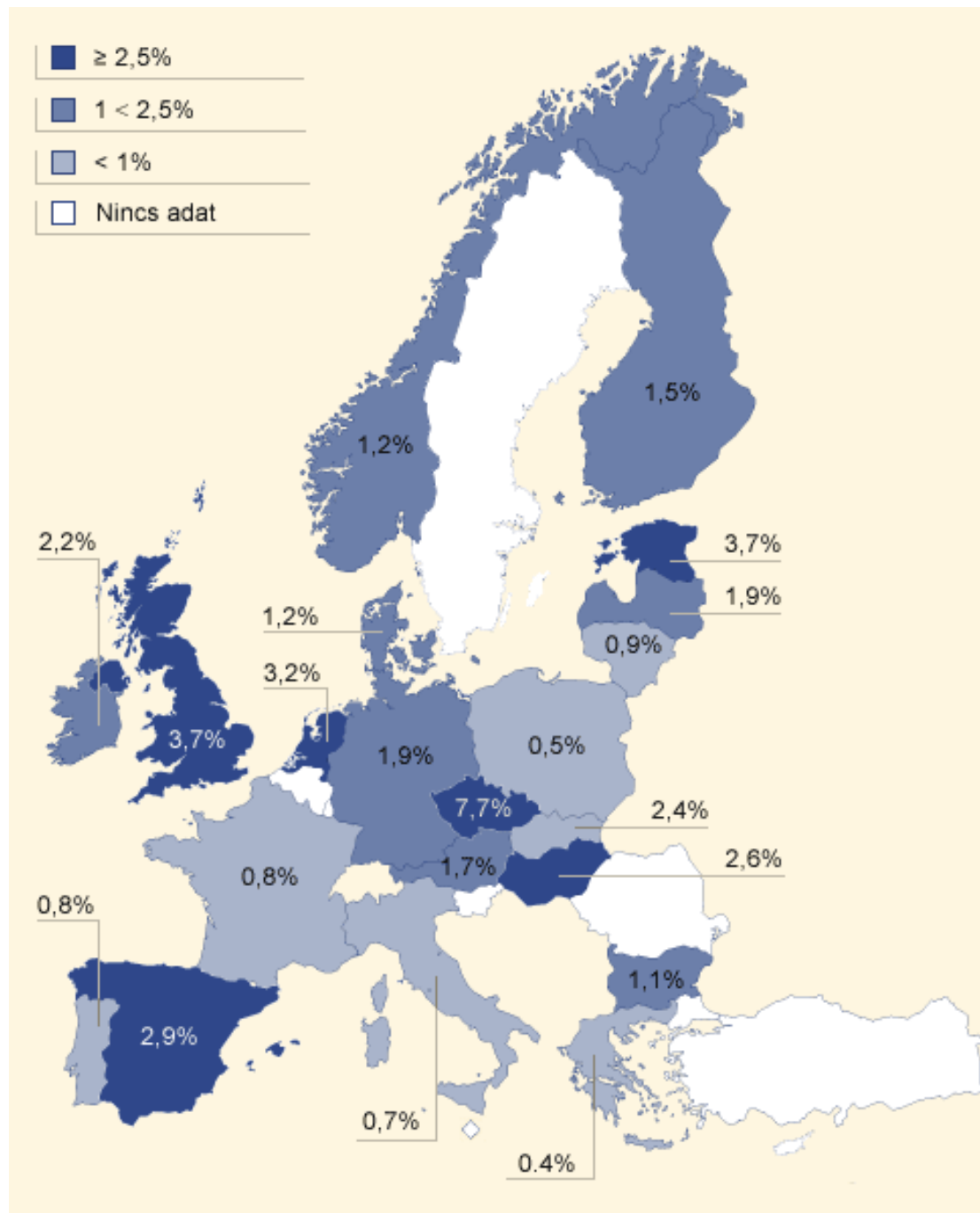
neocortex (in yellow): cognition, memory, and altered perceptions, the amygdala (red), hippocampus (blue), basal ganglia (purple), and hypothalamus (green), which is involved in changes in mood, emotions, and the production of anxiety (the hippocampus is also involved in memory).



Methamphetamine hydrochloride - use before and after 3 Years:



There is a high risk of addiction, including through smoking. Damage can occur to lungs through smoking it, to the lining of the nose through snorting, and if injected it can lead to scarring, abscesses and vein damage.

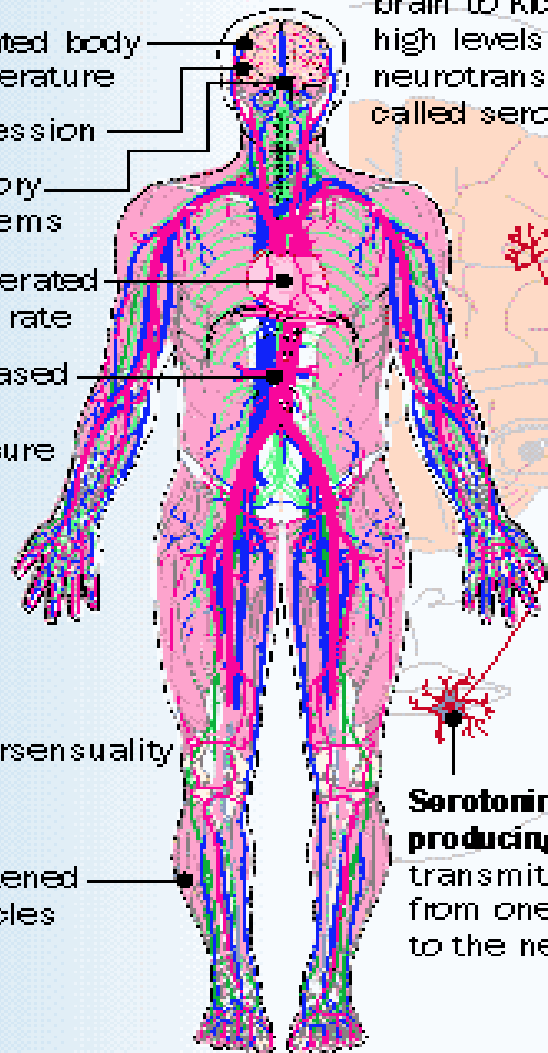


Last year prevalence of ecstasy use among young adults (aged 15-34) (2005)

How Ecstasy affects the body

The symptoms

- Elevated body temperature
- Depression
- Memory problems
- Accelerated heart rate
- Increased blood pressure
- Hypersensitivity
- Tightened muscles



The brain

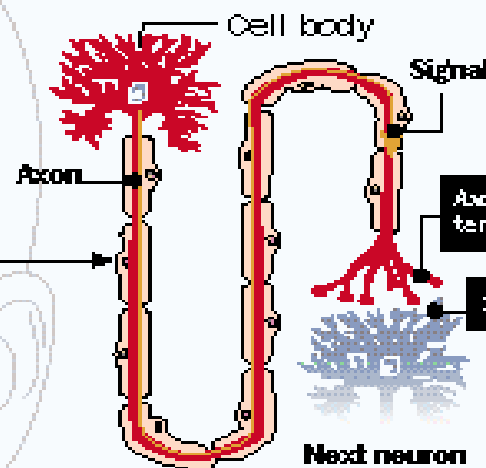
Ecstasy forces the brain to kick out high levels of a neurotransmitter called serotonin.

Serotonin-producing cells transmit signal from one nerve to the next.

THE SIGNAL

Releases serotonin stored in the axon terminals to the next neuron.

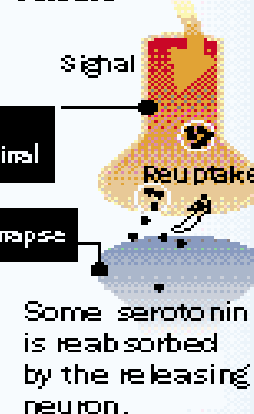
Serotonin neuron



THE RELEASE

Ecstasy releases serotonin without a signal and keeps it from being reabsorbed, causing heavy concentration in the synapse.

Normal release



Release after taking Ecstasy



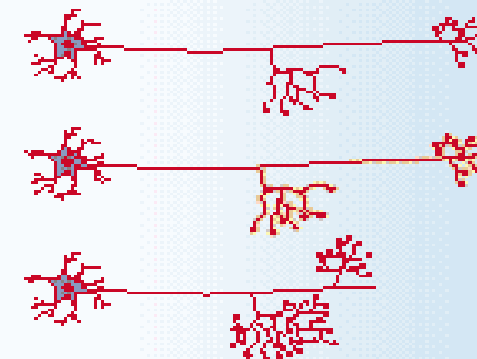
THE DAMAGE

Blood circulation is reduced and temperature may be elevated, damaging brain tissue.

Normal nerve — Axon can stretch to reach distant areas.

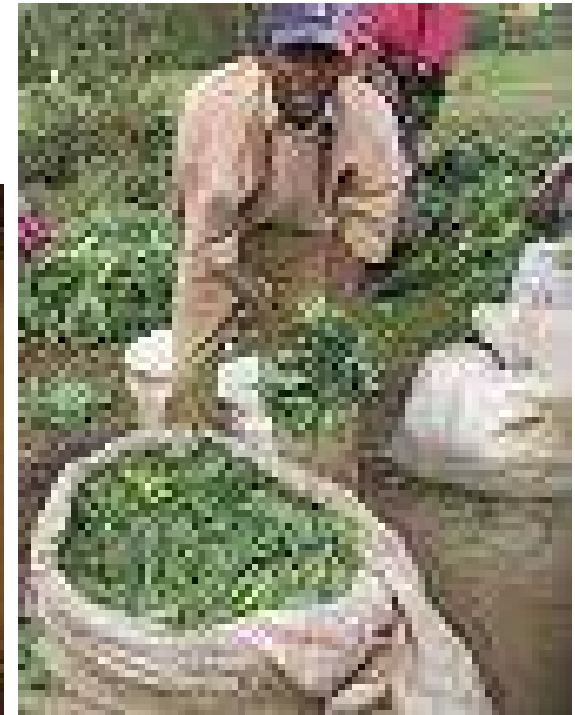
Damaged nerve — It is believed that axon ends die after the rush of serotonin.

Nerve recovery — Studies indicate nerves may grow back but they may no longer reach distant areas. This may particularly affect memory, as well as control over the emotions.



Source: National Institute of Drug Abuse; Time Magazine; Advertiser staff research

Khat





Many Yemenis spend up to eight hours a day chewing the stimulant and more than 80% of the agricultural land is given over to growing it

Hallucinogens

- **LSD (lysergic acid diethylamide)**
- **PCP (phencyclidine)**
- **mescaline**
- **psilocybin**

LSD (lysergic acid diethylamide)



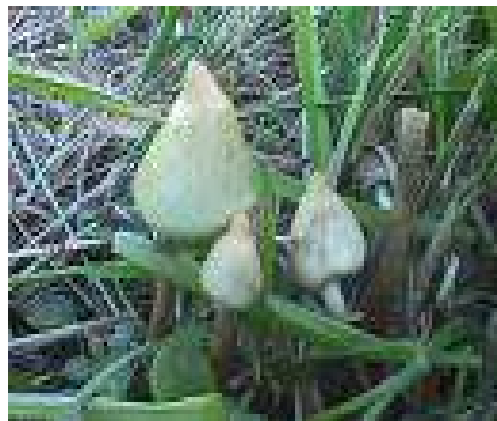
PCP (phenylcyclohexylpiperidine)

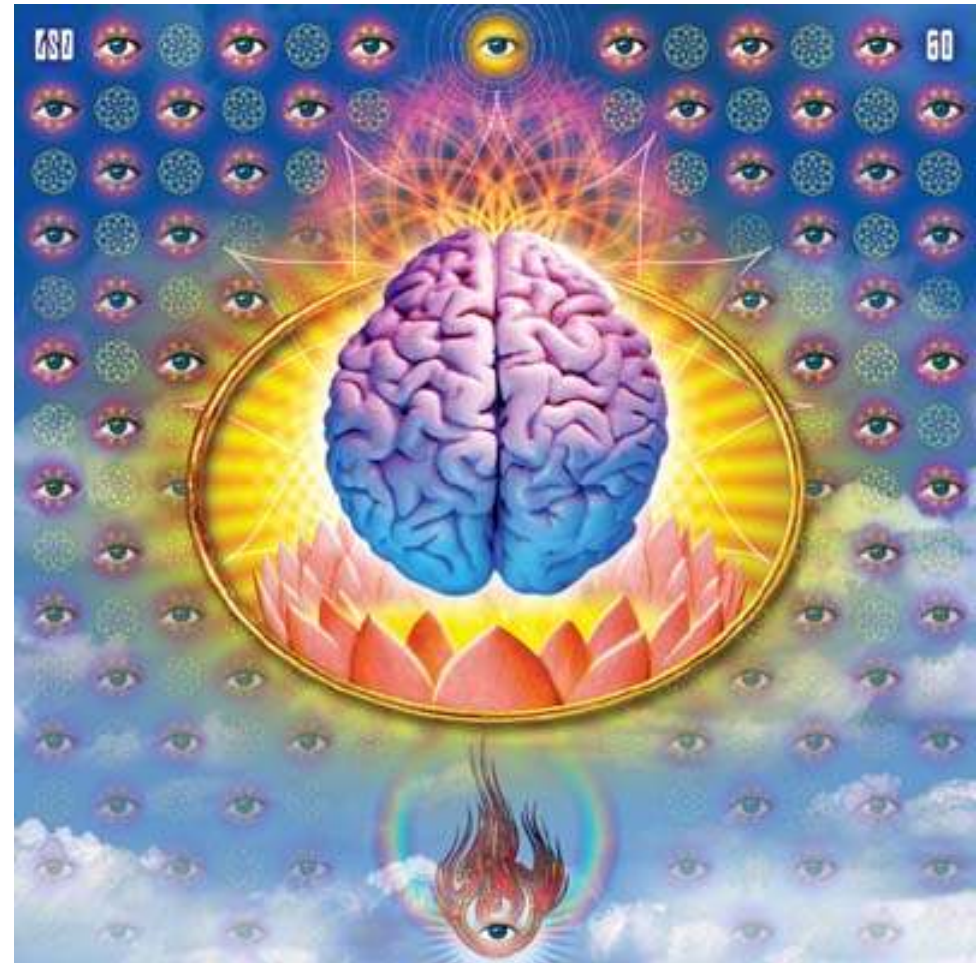


PEYOT cactus (mescaline)

PSILOCYBE gombák

(psilocybin)





LSD (lysergic acid diethylamide)

- unusual and extended interest in common objects
- conversation tends to be esoteric
- hallucinations flashbacks
- LSD users may develop long-lasting psychosis, such as schizophrenia or severe depression

Peyote cactus



Peyote (*Lophophora Williamsii*) is a spineless cactus with a long root.

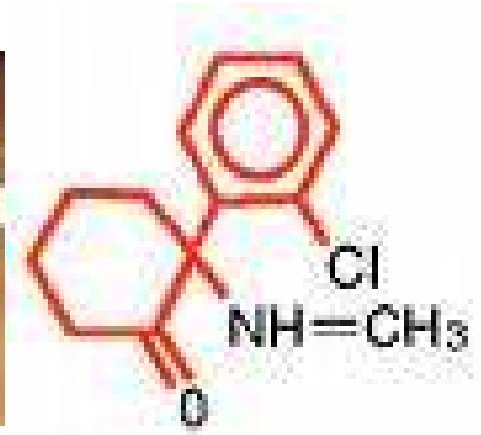
It grows in the southwestern United States and Mexico. Its crown, or 'button', is used as a psychedelic

Psilocybe mushroom



Psilocybe cubensis

Effects usually start after approximately 20-60 minutes and may last from four to five hours, depending on dosage. Hallucinatory effects often occur, including walls that seem to breathe, a vivid enhancement of colors and the animation of organic shapes. At higher doses, experiences tend to be less social and more entheogenic, often intense and spiritual in nature.



Ketamin (anaesthetic): lack of coordination, quick development of tolerance, psychological dependence, psychosis, flashbacks, loss of memory, attention and vision impairment. Using with depressant drugs such as alcohol, heroin or tranquilizers, it can be particularly harmful.

Ketamine



So good,
the horses want it back

Is that what you were trying to do?



GHB (gammahidroksibutirat)



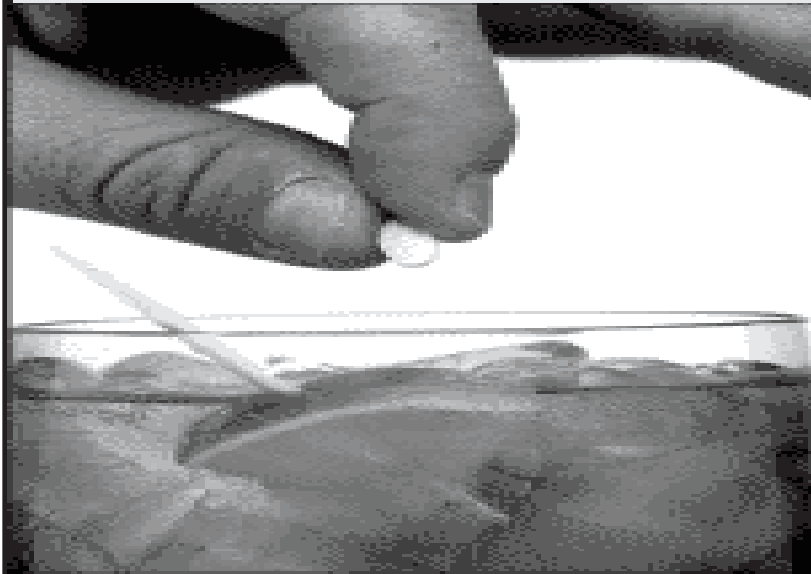
Rape and GHB (gammahidroxitirat)



A California court convicted and sentenced Luster in absens of him to 124 years for **multiple counts of rape, poisoning and drug possession involving three women (at the women he used GHB).**

Publicity about the use of roofies in date rapes hit the national media when Newsweek published a story in 1996. A few months later Congress approved the federal Drug-Induced Rape Prevention and Punishment Act of 1996, which imposed 20-year penalties for slipping someone a sex-inducing mickey.

Warning!



GHB (date rape), 'Special K' and 'Roofies' are "predatory" drugs that can be slipped into your drink easily. Symptoms can include:

- Feeling of rapid drunkenness
- Nausea
- Vomiting
- Loss of inhibition
- Loss of muscle control
- Coma or death

**Don't leave your drink unattended.
Don't accept a freebie from a stranger.**

If you suspect you've been drugged, freeze your pee & call victim's assistance.

The Hill's Responsible Hospitality Group

learning the
BOULDER
way

Inhalants



Inhalant use, also referred to as glue sniffing and solvent abuse, has been defined as "the deliberate inhalation of a gas or fumes given off from a substance at room temperature for its intoxicating effect,,.

Their abuse potential is directly related to their ability to produce intoxication and **repeated abuse may result in psychological dependence or other harmful health effects.** These substances are **often used by children and adolescents**

Risk factors and protective factors for substance abuse

Risk factors

Environmental

- availability of drugs
- poverty
- social change
- peer culture
- occupation
- cultural norms, attitudes
- policies on drugs, tobacco and alcohol

Individual

- genetic disposition
- victim of child abuse
- personality disorders
- family disruption and dependence problems
- poor performance at school
- social deprivation
- depression and suicidal behaviour

Protective factors

Environmental

- economic situation
- situational control
- social support
- social integration
- positive life events

Individual

- good coping skills
- self-efficacy
- risk perception
- optimism
- health-related behaviour
- ability to resist social pressure
- general health behaviour

SIGNS AND SYMPTOMS OF TEEN DRUG ABUSE: Physical

- » **Bloodshot or red eyes**
- » **Unexplained bruises or an increase in bruises**
- » **Difficulty speaking or slurring of words**
- » **Drastic change in appearance or weight**
- » **Lack of attention to hygiene**
- » **Poorly kept clothing and appearance**
- » **Change in sleep (insomnia or sleeping all day)**
- » **Fatigue**
- » **Persistent cough**

SIGNS AND SYMPTOMS OF TEEN DRUG ABUSE

Social:

- » **Lack of interest in things or activities**
- » **A sudden disassociation from friends**
- » **A sudden acquiring of a new social group**
- » **Dropping of grades**
- » **Failure to go to school**
- » **Secretive or sneaky behavior**
- » **Staying out late frequently**
- » **Stealing**
- » **Leaving for extended time periods**
- » **Sudden anger or agitation when asked about reason for behavioral changes**
- » **Avoidance of eye contact**

SIGNS AND SYMPTOMS OF TEEN DRUG ABUSE: Emotional

- » Suffers emotional breakdowns**
- » Very aggressive or argumentative**
- » Depression or withdrawal from social activities**
- » Irritability**
- » Lack of judgment skills**

SIGNS AND SYMPTOMS OF TEEN DRUG ABUSE Behavioral:

- » Abnormal odor on breath or clothing**
- » Prescription medications, alcohol and/or money disappearing from the household**
- » Failure to meet responsibilities to work, school and extracurricular activities**
- » Notification from a teacher, coach or employer of abnormal behavior**
- » Discovering pipes, rolling papers, bong, needles, powdery substances in their room**



India: children without knowing the seriousness and risk of illicit drug trades are involved in it or get addicted to drugs and other stuff.

On the photo: **informal discussion with these children.**

Prevention of drug abuse

advices for parents, grandparents, neighbors, teachers, counselors and other concerned adults.

Show caring and acceptance of kids.

Build security, self- esteem and values in children.

Encourage good school performance, but in a supportive rather than punitive way.

Teach kids healthy ways to have fun and to cope

with stress: sports, music, art, friendships, relaxation techniques. Develop good communication with children!

While they are still in elementary school, talk to children about drugs, but not with a lecturing or reprimanding approach

Be a good role model. Know the effects of the drugs which are most prevalent in your community and be alert to the signs and symptoms of drug use in teens.