Stimulants abuse in Russia

Stanislav Mokhnachev, M.D., Ph.D.
Head of Drug Addiction Clinical Research Unit
# Prevalence of drug addiction in the Russian Federation in 2001-2008

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drug Addiction</strong></td>
<td>335,317</td>
<td>342,446</td>
<td>343,335</td>
<td>342,719</td>
<td>343,509</td>
<td>350,267</td>
<td>356,188</td>
<td>358,120</td>
</tr>
<tr>
<td><strong>Opiates</strong></td>
<td>301,082</td>
<td>305,099</td>
<td>303,649</td>
<td>301,715</td>
<td>301,711</td>
<td>307,232</td>
<td>312,313</td>
<td>313,418</td>
</tr>
<tr>
<td><strong>Cocaine</strong></td>
<td>243</td>
<td>81</td>
<td>65</td>
<td>61</td>
<td>50</td>
<td>131</td>
<td>52</td>
<td><strong>52</strong></td>
</tr>
<tr>
<td><strong>Psycho stimulants</strong></td>
<td>5,698</td>
<td>5,733</td>
<td>5,576</td>
<td>5,273</td>
<td>5,150</td>
<td>5,251</td>
<td>4,248</td>
<td><strong>4,139</strong></td>
</tr>
<tr>
<td><strong>Polyabuse</strong></td>
<td>11,411</td>
<td>12,322</td>
<td>13,257</td>
<td>14,338</td>
<td>14,661</td>
<td>15,125</td>
<td>15,958</td>
<td>16,431</td>
</tr>
</tbody>
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<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Addiction</td>
<td>62,841</td>
<td>27,307</td>
<td>22,894</td>
<td>21,027</td>
<td>24,390</td>
<td>27,220</td>
<td>29,597</td>
<td>26,516</td>
</tr>
<tr>
<td>Opioids</td>
<td>58,371</td>
<td>23,069</td>
<td>18,575</td>
<td>17,514</td>
<td>21,016</td>
<td>23,817</td>
<td>26,123</td>
<td>22,968</td>
</tr>
<tr>
<td>Cocaine</td>
<td>10</td>
<td>5</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>24</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Psycho stimulants</td>
<td>621</td>
<td>552</td>
<td>428</td>
<td>304</td>
<td>260</td>
<td>238</td>
<td>218</td>
<td>204</td>
</tr>
<tr>
<td>Polyabuse</td>
<td>1,454</td>
<td>1,172</td>
<td>1,266</td>
<td>1,111</td>
<td>1,182</td>
<td>1,192</td>
<td>1,305</td>
<td>1,305</td>
</tr>
</tbody>
</table>
### ESPAD 2007 in the Russian Federation
(15-16 years old)
Lifetime use of drugs (%)

<table>
<thead>
<tr>
<th></th>
<th>ALL</th>
<th>boys</th>
<th>girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecstasy</td>
<td>3.2</td>
<td>3.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>1.3</td>
<td>1.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Cocaine</td>
<td>0.4</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Crack</td>
<td>0.6</td>
<td>1.0</td>
<td>0.1</td>
</tr>
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</table>
### Dynamics of lifetime use of drugs (%) ESPAD 1999-2007 in the Moscow (15-16 years old)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>2.4</td>
<td>↑0.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>0.9</td>
<td>↓0.1</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Psycho stimulants on illicit market

- Amphetamines and methamphetamines, including home made
- Cocaine, crack ("free base")
- MDMA
Home-made stimulants

- Ephedrine (“jeff”) – methcathinone (2-Methylamino-1-Phenylpropan-1-One)
- Pervitine (“vint”)– methamphetamine – (Desoxyephedrine)
- Phenylpropanolamine (PPA) – cathinone

Made from officially registered medicaments and legal components: ephedrine-containing compounds, anti-cold and anti-cough medicaments, potassium permanganate, 9% acetic acid, hydrochloric acid, crystal iodine, iodine tincture, petrol and other organic solvents, phosphor
Ephedrone ("jeff")

- Common drug of abuse in the USSR during the 1970s.
- 2-Methylamino-1-Phenylpropan-1-One
- Since 1985 in Schedule I drugs list
- Duration of intoxication 6-8 hours
- Acute psychosis in 1/3 of cases
- Cyclic use
- Systematical using – 2-4 months after first intake
- Up to 15-20 iv injections per day, tolerance up to 250 ml per day
Pervitine (“vint”)

- Methamphetamine hydrochloride (Desoxyephedrine)
- Popular drug of abuse in the USSR during the 1980s.
- Duration of intoxication 6-8 hours
- Acute psychosis in 1/3 of cases
- Cyclic use
- Systematical using – 2-3 weeks after first intake
- Up to 3-5 iv injections per day, tolerance up to 3-5 ml per day
- Rough and rapid toxic encephalopathy
Phenylpropanolamine (PPA)

- Systematical using – 2-4 weeks after first intake
- Acute psychoses are seldom
- After 6-8 weeks of daily use – compulsive intensive craving, 10-12 iv injections per day, tolerance up to 150 ml per day
- No “cycles”
- Neurological consequences, early CNS damage (I.A.Nosatovsky, 2007)
- Rapid disadaptation and disability
Acute toxic encephalopathy and polyneuropathy due to chronic manganese intoxication (I.A.Nosatovsky, 2007)

- Ataxia – 96.4%
- Dysarthria – 93.8%
- Parkinsonic-like disorders – 76.8%
Treatment of PPA misuse

- Specific manganese antidotes:
  Tetacium-calcium (Sodium calcium edetate), Pentacin (calcium trisodium pentetate)
- Akatinol Memantine – N-methyl-D-aspartat antagonist
- Levodopa and other anti-parkinsonic medicaments are uneffective
MEPHEDRONE

- 4-methylmethcathinone (4MMC), 4-methylenephedrone
- “Legal high” available for purchase online as plant feed, bath salt, washing powder ingredient
- Swallowed, snorted, smoked
- Delusions and vivid hallucinations after several days of misuse
- Cardiovascular problems, headaches
- Will be restricted in 2010?
Cocaine and MDMA (Ecstasy)

- Club drugs, subcultural
- Users are “Rich and famous”
- It seems to be very popular in big cities, but addicts are unavailable for addiction treatment service and statistics
- Wide range of somatic consequences
- “Crack” (“free base”) is not popular
Clubbing in Moscow

Federal Antidrug Service antinarcotic raid in 7 Moscow clubs (March 2010):

- 1/3 of night club visitors in Moscow were drug intoxicated
- Seized: cocaine, marijuana, resin, synthetic drugs
- Arrested about 100 people
- Amongst them: president of development company, bank clerk, personal fitness trainer, satellite communication engineer, tax inspector, students of prestigious institutes
- 25% of arrested are unemployed
## Russian Federation
### World Drug Report (UNODC 2009)

<table>
<thead>
<tr>
<th>Narcotic</th>
<th>Retail price (US $)</th>
<th>Range</th>
<th>Purity</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine</td>
<td>218.0</td>
<td>102.1-458.3</td>
<td>38.0-54.0</td>
<td>2007</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>90.7</td>
<td>17.6-274.3</td>
<td>NA</td>
<td>2007</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>61.3</td>
<td>48.0-66.6</td>
<td>NA</td>
<td>2007</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>44.8</td>
<td>13.5-114.6</td>
<td>18.0-40.0</td>
<td>2007</td>
</tr>
</tbody>
</table>
Treatment of stimulant abuse in Russia

Regulated and based on the documents:

- “Federal Law on Psychiatric Care” (1992)
- “Standards (Protocols) of Diagnostics and Treatment for Addiction Patients” (1998)
- “Standards of Treatment for Patients with Mental and Behavioural Disorders Due to Psychoactive Substance Use” (2007) – still not approved
Psychopharmacology of stimulant abuse

- Benzodiazepines: Diazepam, Phenazepam
- Antipsychotic agents: Haloperidol, Risperidone, Quetiapine, Zuclopenthixol, Aripiprazole
- SSRIs antidepressants: Fluvoxamine, Paroxetine, Sertraline
- Anticonvulsants: Topiramate, Carbamazepine, Lamotrigine
- Nootropics: Piracetam, Phenotropil (Fonturacetam)
- Disulfiram
- N-Acetylcysteine
- Bromocriptine
- Symptomatic therapy
Substitute treatment

- Dexamphetamine – List I of Narcotic Drugs Under Control
- Methylphenidate - List I of Narcotic Drugs Under Control
- Mazindol - List III of Narcotic Drugs Under Control
- Bubropion – not registered in Russia
- Modafinil – not registered in Russia
- Baclophene - high risk of medication abuse
Problems

- Hidden population of stimulant abusers who are not seen by State Addiction Treatment Service and official statistics.
- No official data of illicit drugs purity
- Readily available low cost home-made stimulants
- Wide range of stimulant misuse complications
- Weak inter-agency interaction and collaboration, especially between medical services
- Delay with new amendment of “Standards of Treatment for Patients with Mental and Behavioural Disorders Due to Psychoactive Substance Use”
- Insufficient quality and amount of psychotherapeutic and rehabilitation programs
- Treatment effectiveness assessment: no validated scales for psychostimulants craving assessment
Perspectives

- Restriction of medicaments and precursors
- Pharmacy control
- Evidence-based clinical trials of medications able to reduce craving and prevent relapses
- Revelation of cocaine and stimulant abusers on early stages – collaboration with other medical services (internists, emergency service, surgeons, toxicologists, psychiatrists)
- CBT specialists training
THANK YOU