Street Drug use amongst young adults with Type 1 Diabetes

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Diabeticare The Hillingdon Hospital
KP’s story

- 22 yr. old male
- Occasional “guest appearance” in clinic
- Rx Humalog + Insulatard
- 5 admissions with DKA (2000 - 2002)
- Inpatient for 3-4 days
- June 2002 admitted with DKA
- Confessed to street drug use
The Observer poll reveals that 28 per cent of people over 16 - 13 million adults - have taken illegal drugs. Men are twice as likely to have taken drugs as women. Two million people say they took drugs while under 14. Four out of five illegal drug users have taken cannabis, 27 per cent ecstasy, 25 per cent amphetamines and more than one in five LSD and cocaine.
Introduction

• 37% of teenage students used street drugs

• Street drug users ≠ diabetes

• Are surveys useful/valid in drug users?

• ? UK information
Introduction - Drugs and Diabetes

- Psychological & behavioural effects
- Physiological effects
  - Amphetamines $\uparrow$ 5HT mediated catecholeamine release
  - Cocaine powerful sympathomimetic
  - Opiates $\uparrow$ glucagon release, N & V, cold turkey
  - Marijuana ? Food cravings

Street drugs tendency to promote hyperglycaemia, insulin skipping etc
Hillingdon

- PCT shares same boundary as borough
- Population 253 000
- Jarman index - 0.54 (ranked 5/16th London)
- 12.3% non white (15.5% North London, 5.6% England)
The Hillingdon Drug Survey

- **Anonymous Questionnaire** (with prepaid reply envelopes)
- Young adults with type 1 diabetes
- Aged between 16 and 30yrs (158 subjects)
  - Have you used drugs (heroin, cocaine, ecstasy, amphetamines, LSD, special K, solvents etc)
  - How often do you use drugs (daily, weekly, special occasions)?
  - Are you aware of the effect of drugs on your health and diabetes?
  - Do you take “special precautions“?
  - Have you been unwell after using drugs?

Ethics from Hillingdon Ethics committee
Results

85/158 respondents (54%)
25/85 admitted to drug use (29%)

<table>
<thead>
<tr>
<th>DRUG</th>
<th>N</th>
<th>%</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td>Cannabis</td>
<td>24</td>
<td>28.2</td>
<td>19.8 to 38.6</td>
</tr>
<tr>
<td>Cocaine</td>
<td>10</td>
<td>11.8</td>
<td>6.5 to 20.3</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>7</td>
<td>8.2</td>
<td>4.0 to 16.0</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>4</td>
<td>4.7</td>
<td>1.8 to 11.5</td>
</tr>
<tr>
<td>Magic Mushrooms</td>
<td>3</td>
<td>3.5</td>
<td>1.2 to 9.9</td>
</tr>
<tr>
<td>LSD</td>
<td>2</td>
<td>2.4</td>
<td>0.6 to 8.2</td>
</tr>
<tr>
<td>Solvents</td>
<td>2</td>
<td>2.4</td>
<td>0.6 to 8.2</td>
</tr>
<tr>
<td>Drug users</td>
<td>25</td>
<td>29.4</td>
<td>20.8 to 39.8</td>
</tr>
<tr>
<td>Polydrug use (&gt;1 drug</td>
<td>13</td>
<td>15.3</td>
<td>9.2 to 24.4</td>
</tr>
</tbody>
</table>

Table 1 Prevalence of street drugs used in Diabetic patients (N=85)
Table 2 Occurrence of drug usage in 25 Type 1 diabetic subjects who use street drug
## Awareness - Drug users

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Aware of adverse effects</td>
<td>24% (6/25) 10.1 to 43.4</td>
<td>76% (19/25) 56.6 to 89.9</td>
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<tr>
<td>Take precautions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Extra blood tests</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Inform friends</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unspecified/eating first</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Awareness of adverse effects of recreational drugs on diabetes
### Awareness - Non drug users

<table>
<thead>
<tr>
<th></th>
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<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of adverse effects</td>
<td>23% (14/60)</td>
<td>77% (46/60)</td>
</tr>
<tr>
<td></td>
<td>15.2 to 37.1</td>
<td>62.9 to 84.8</td>
</tr>
</tbody>
</table>

Awareness of adverse effects of recreational drugs on diabetes
Hospitalisations

• 3 respondents admitted to hyperglycaemia / DKA
• 2/3 admitted with DKA after cocaine/cannabis
• 1/3 hyperglycaemia after heroin use
Summary

• 1/3 of young adults with type 1 diabetes admit to street drug use.
• Drugs of choice
  – Cannabis, Cocaine, Amphetamine, Ectasy
• 50% of user are polydrug abusers
• 50% (11/25) are habitual user (frequency ≤ weekly)
• Low level of awareness of adverse effects of street drugs
Contributors

- Ray Ng
- R M Hillson
- Gay Bineham & Averil Cooke
- Diabetes Nurses
- Diabeticare Hillingdon

- Subjects (respondents & non respondents)