To use or not to use

studying with stimulants
and partying with alcohol

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KULeuven
Background

• Stimulants and alcohol in Flanders
  o 93% used alcohol last 12 months (n=20,000)
  o 8% used stimulants, 11% of medical students (n=3,159)

• My own work experience
  o <8 years alcohol addiction
  o <1 year student health centre

Alcohol = healthy when moderate socially everywhere, accepted fun at parties

= what we know already
Alcohol guideline

- Max. 10 units a week
- Spread over several days
- Have a few sober days

No alcohol:
- Under 18
- During pregnancy

http://www.vad.be/materialen/detail/presentatie-richtlijn-voor-alcoholgebruik
Stimulants = ‘cognitive enhancers’

used to ameliorate studying
### Stimulants risks

<table>
<thead>
<tr>
<th>e. amphetamine type stimulants</th>
<th>Your risk of experiencing these harms is:........</th>
<th>Low □</th>
<th>Moderate □</th>
<th>High □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular use of amphetamine type stimulants is associated with:</td>
<td>Low □</td>
<td>Moderate □</td>
<td>High □</td>
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<tr>
<td>Difficulty sleeping, loss of appetite and weight loss, dehydration</td>
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<tr>
<td>Jaw clenching, headaches, muscle pain</td>
<td>□</td>
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<tr>
<td>Mood swings –anxiety, depression, agitation, mania, panic, paranoia</td>
<td>□</td>
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<tr>
<td>Tremors, irregular heartbeat, shortness of breath</td>
<td>□</td>
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<td>Aggressive and violent behaviour</td>
<td>□</td>
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<tr>
<td>Psychosis after repeated use of high doses</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Permanent damage to brain cells</td>
<td>□</td>
<td>□</td>
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</tr>
<tr>
<td>Liver damage, brain haemorrhage, sudden death (ecstasy) in rare situations</td>
<td>□</td>
<td>□</td>
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</tr>
</tbody>
</table>
Methods

• Non-systematic review
• Biased selection
Results

• Alcohol
  o Biological aspects
  o Psychological aspects
  o Social aspects
• Stimulants
  o Cognitive effects
Alcohol

• Biological

But correlation does not imply causation…

• Psychological
  o Social anxiety (self-medication…)
  o ADHD (self-medication?…)
  o Trauma
  o Coping styles? Attachment styles? …
  o …
comorbidity

• if seeking treatment:

• If alcohol => 50% chance of mental disorder
• If mental disorder => 20% chance of SUD

• Social
  o Italy

- **Tournee minerale**

- **Ikpas.nl (n>3000)**
  - After 6 weeks:
    - Fitter (52%), better sleep (48%), weight loss (25%)
  - Start After 6 weeks After 6 months
    - 4.7d/w 3.3d/w 3.8d/w
    - 16.5u/w 9.5u/w 11.3u/w

Stimulants and ADHD

• ‘As first-line treatment for ADHD, stimulant drugs are well-known to improve **attention** and **concentration**. Yet, there is increasing evidence that (as with children and adolescents), they do not promote **learning** and **academic** achievement in adult college students with ADHD.’

• ‘MPH may reduce **behavioral** disturbance in children with ADHD while it is taken. **Academic** performance does not appear to be improved with stimulants.’


Advokat, C. (2010, July). What are the cognitive effects of stimulant medications? Emphasis on adults with attention-deficit/hyperactivity disorder (ADHD). *Neuroscience and Biobehavioral Reviews*
ADHD

- Other interesting thoughts
  - Age at onset of treatment
    - Early? Later-on? Never?
  - Academic dosing < behavioral dosing (‘toxicity’)
  - Duration of treatment
    - MPH blocks DAT (beneficial acute effects)
    - But DAT upregulation…

No ADHD

- Review
  Lakhan & Kirschgessner

Cognitive enhancer

ADHD + stimulants + addiction

- Safe!

Conclusion

• Stimulants ≠ ‘cognitive enhancers’
  o no better academic performance even if ADHD
• Alcohol dangerous, no fun at all
  o https://www.youtube.com/watch?v=MNjNYKn6hic
• If SUD treat comorbid problems:
  o Anxiety?!
  o ADHD: stimulants are safe!
  o Trauma
  o Depression…
Discussion

• Evidence-based?
• Belief-based!
Changed beliefs?

Alcohol = very toxic substance
Stimulants = complex agents
Probably the most effective drug I could recommend for your child's problems is Ritalin.

Mum! Dad said that if strange men offer me drugs, I should just say 'No'.