

# Psychostimulants

## Abuse of psychostimulants

See cocaine, amphetamines, amphetamine substituted substances and synthetic cathinones

## ADHD and other disorders, where we use psychostimulants

### ADHD

- **Drugs used** : Methylphenidate, dextroamphetamine, methamphetamine, lisdexamfetamin
- Other nonstimulant alternatives with less proven efficacy include clonidine, guanfacine, bupropion, and/or nortriptyline.
- **Indication**
  - ADHD: first-line therapy for patients  $\geq 6$  years of age
- Mechanism of action: indirect and central sympathomimetic activity  $\rightarrow$  increased release and **blocked reuptake of norepinephrine and dopamine** (minor effect on serotonin)  $\rightarrow$  increased concentration in the synaptic cleft

### Other disorders and their indications

- Caffeine (group of methylxanthines): In coffee. Proposed to block adenosine receptors, making oneself less tired
- Depression with suicidality and only a few weeks left to live (e.g. palliative patients)
- Binge-eating disorder (obesity)
- Narcolepsy (Modafinil- nonamphetamine CNS stimulant)
- Hypersomnolence disorder: modafinil or methylphenidate or atomoxetine

### Side-effects of stimulants (in general)

- Insomnia, anorexia, tachycardia, hypertension, dry mouth, irritability, anxiety...psychoses