Illicit Drug Use

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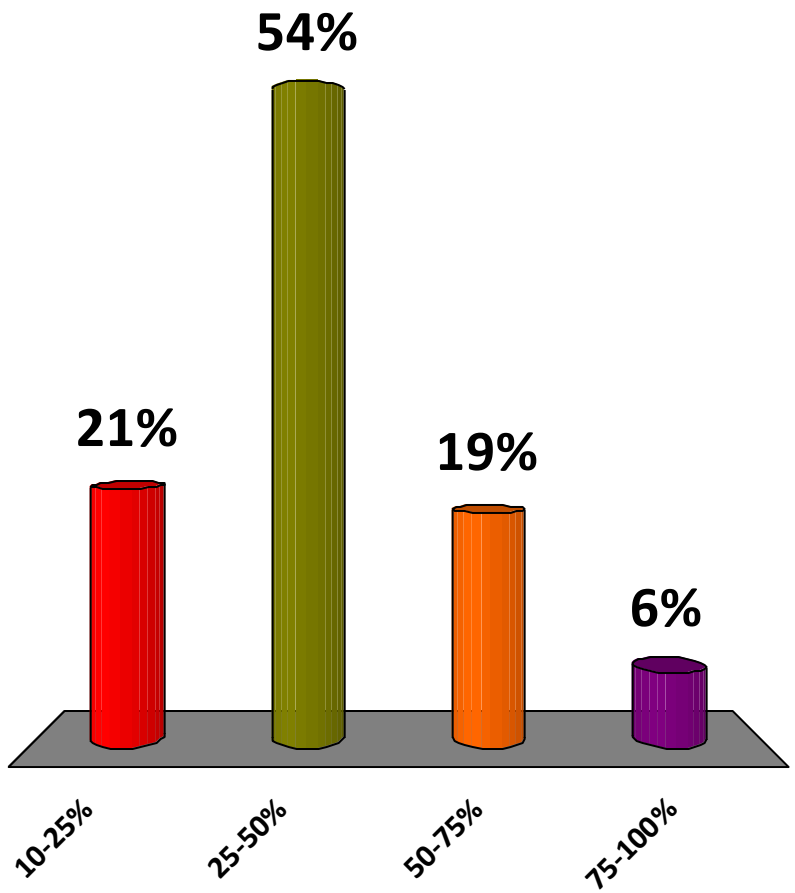
July 2015

Overview and Objectives

- Epidemiology
- What is addiction
- Reasons for drug use
- Classification of drugs
- Drugs - effects, risks
- Treatment approaches

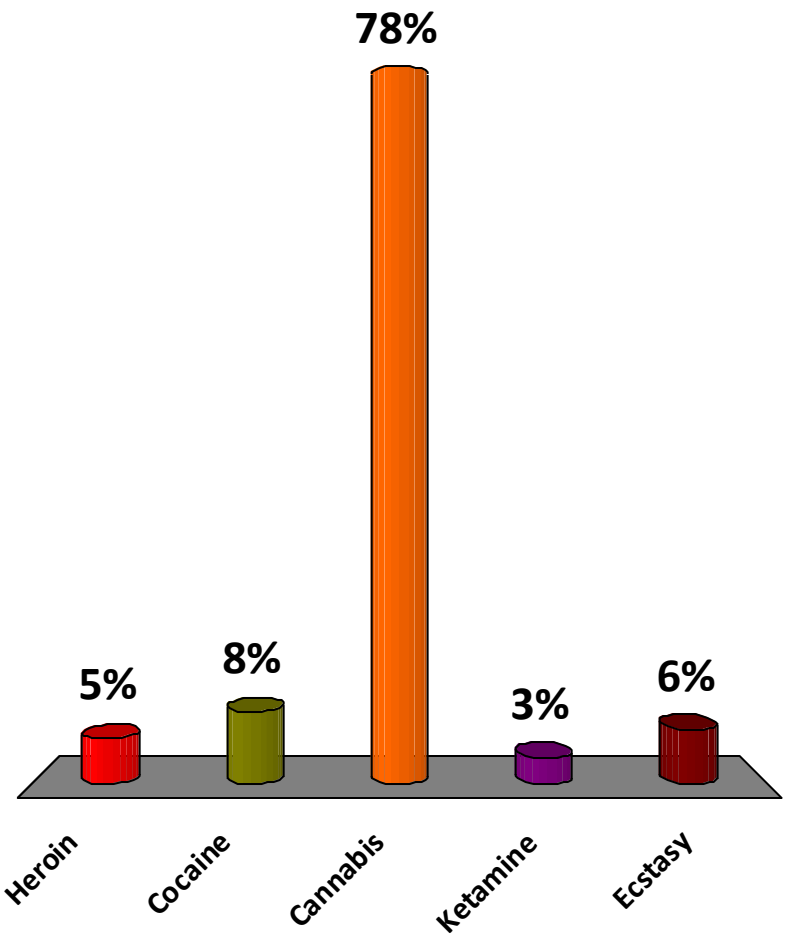
What percentage of adults (16-59) have used illicit drugs in the last year ?

A. 10-25%
B. 25-50%
C. 50-75%
D. 75-100%



What is the most commonly used illicit drug? (excluding caffeine and alcohol)

A. Heroin
B. Cocaine
C. Cannabis
D. Ketamine
E. Ecstasy



Crime Survey for England and Wales 2013/14

- 1:11 (8.8%) adults aged 16-59 have used illicit drugs in the last year
- Increased to 18.9% in 16-24 yr olds (young adults)
- Levels of drug use has increased over the last year
- Increased levels of cocaine, ecstasy, LSD and ketamine in last year
- Lifetime use of illicit drugs – 1/3 of adults
- Most commonly used drugs – cannabis 6.6%, cocaine 2.4%

Figure 2.1: Trends in illicit drug use (excluding mephedrone) in the last year among adults, by age group, 1996 to 2013 to 2014, Crime Survey for England and Wales

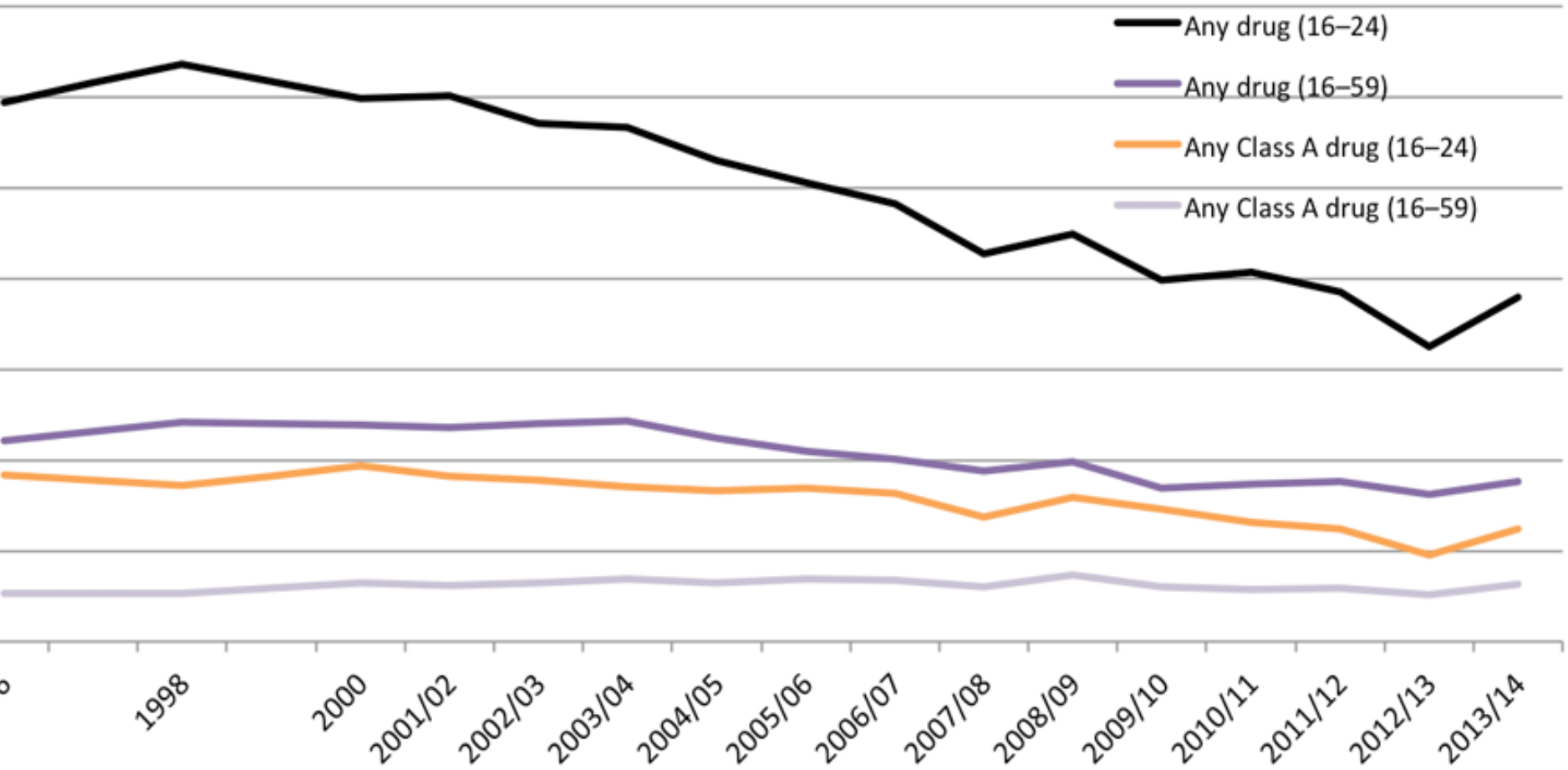
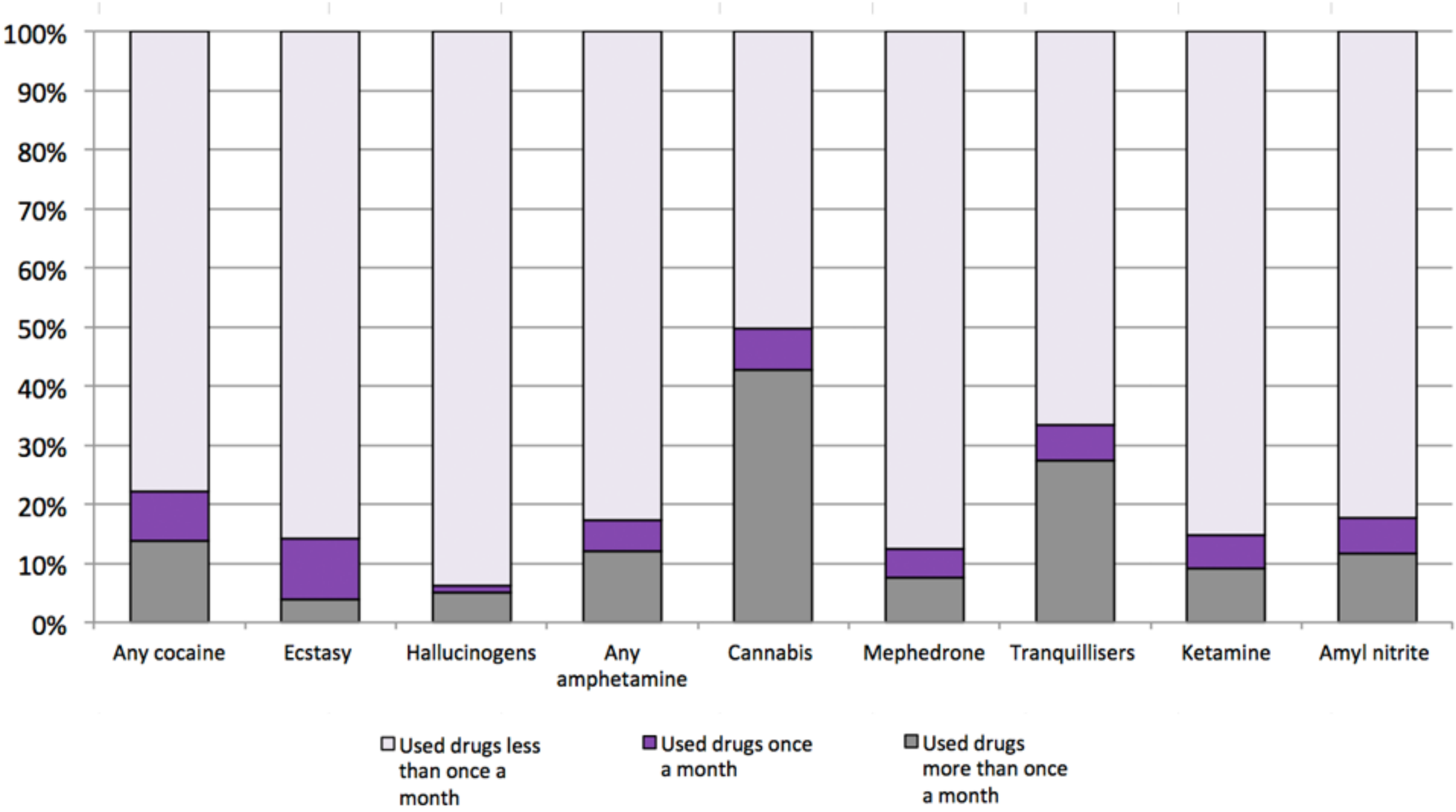


Figure 3.1: Proportion of users of each individual drug type who were frequent or less frequent users of that specific drug, 16 to 59 year olds, 2013 to 2014 Crime Survey for England and Wales



Spectrum of Substance Misuse

- Abstainer or non-user
- Non-hazardous use
- Hazardous use - repetitive use placing individual at risk of harm to health (physical or mental)
- Harmful use - repetitive use causing physical or psychological harm
- Dependence

What is dependence?

- Impaired control over use
- Strong desire or compulsion to use
- Preoccupation with substance to neglect of everything else
- Tolerance
- Withdrawal symptoms on cessation of use
- Relief of withdrawal symptoms by further use
- Persistent use despite clear evidence of harmful consequences

Dopamine Theory of Addiction

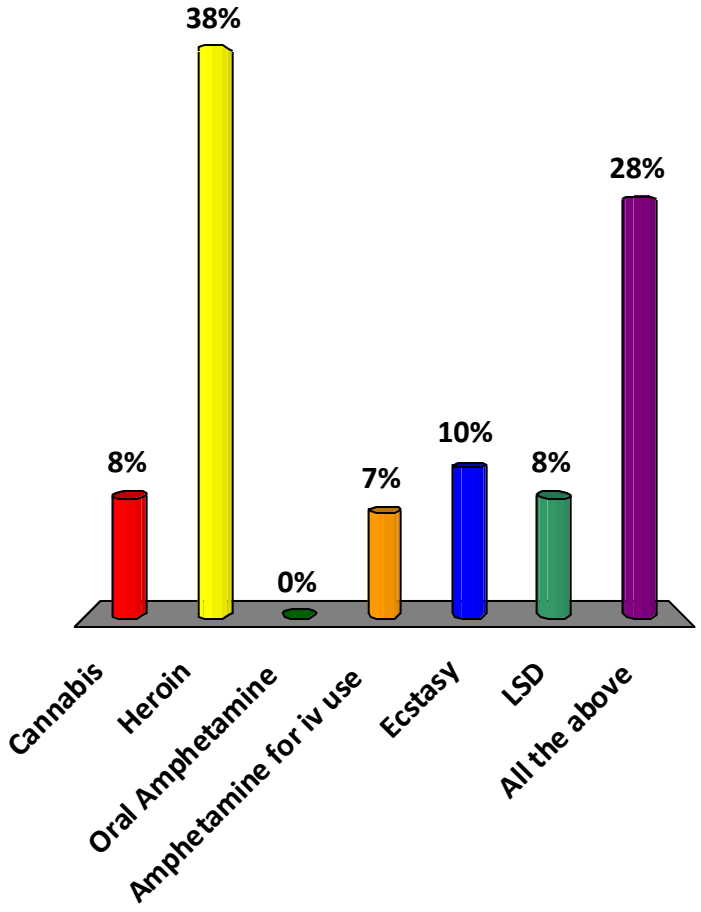
- Dopamine pathway identified in the brain
- Stimulation of the pathway leads to learning of association between behaviours and the relevance to the individual
- Most addictive substances release dopamine to a greater extent than natural sources e.g. food, sex, thereby “hijacking” the dopamine system, leading to more drug seeking behaviours

Why do people get addicted

- Environmental factors:
  - Role modeling - family, peers
  - Adverse early life
  - Availability of substance
  - Employment
- Individual factors:
  - Genetics, good evidence for alcohol, less for drugs
  - Personality traits - impulsivity, risk taking
  - Response to psychoactive substance use
  - Psychiatric disorders

Which of the following Drugs are Class A?

A. Cannabis
B. Heroin
C. Oral Amphetamine
D. Amphetamine for iv use
E. Ecstasy
F. LSD
G. All the above



Classification of Drugs

- Misuse of Drugs Act 1971
- Class A - heroin, cocaine, ecstasy, LSD, magic mushrooms
- Class B - cannabis, amphetamines, MKAT
- Class C - benzodiazepines, GHB, ketamine
- Classification of the drug impacts on the penalty received if found in possession or in supplying

Cannabis

- Most commonly used illicit drug in the world
- Derived from the Indian Hemp plant
- Active ingredient - delta 9-tetrahydrocannabinol
- Different preparations of plants contain varying THC content

Cannabis

- Marijuana - dried leaves and flowers “bud”
- Hashish or resin
- Skunk - artificially grown e.g. hydroponics
- Synthetic cannabinoids e.g. Black Mamba, Spice
- Typically smoked with tobacco “joint”, in a water pipe “bong” or used in food e.g. cookies

Effects of Cannabis

- Euphoria, relaxation, floating sensation
- Heightened perceptions e.g. colours
- Talkativeness, giggles
- Increased appetite “munchies”
- Anxiety, panic, “paranoia”
- Exacerbate existing mental illness, especially psychotic illness
- Can precipitate psychotic illness if already predisposed
- Impact on cognitive function e.g. ability to learn

Cannabis Dependence

- Heavy users show some signs of dependence
  - Tolerance
  - Poor control over use
  - Inability to cut down
  - Prioritising cannabis use
  - Withdrawal symptoms - lethargy, irritability, anxiety, mood changes, insomnia,muscle spasm

Amphetamines

- Commonly called Phet, Whizz, Speed
- Stimulant drug - increased energy, enhanced confidence, reduced appetite, anxiety, agitation
- Used orally - rubbed in to gums, “bombed”
- Can be injected
- Frequently taken for the “high”, but also, weight loss, staying awake and increased sexual performance

Risks of Amphetamine Use

- Acute - nausea, vomiting, jaw clenching, scratching, raised temperature, raised BP and heart rate
- Over stimulation of nervous system - restlessness, agitation, panic attacks, fits, stroke, “paranoia”
- Psychiatric - psychosis, depression during “crash”, suicidal thoughts
- IV use - risks of blood borne virus, injecting injuries

- Fast acting stimulant, originating from coca plant leaves
- 3 types
  - Powder cocaine - white powder, usually snorted
  - Freebase cocaine - crystals prepared for smoking
  - Crack - a small rock, prepared for smoking in a pipe
- All forms can be injected
- Rapid euphoric effects, short lasting leading to binges

Powder Cocaine

Examples of Crack pipes

Risks of cocaine use

- Heavy use - overdose due to heart failure, seizures, heart attacks
- Damage to nasal cartilage
- Heavy smoking of Crack - lung damage
- Risks from injecting
- Reduced appetite and weight loss
- Psychiatric risks - psychosis, paranoia, violence, confusion

Stimulant Dependence

- Can develop in heavy users of amphetamines or cocaine
- Withdrawal is an “exaggerated crash”
  - Craving
  - Low mood
  - Lack of energy
  - Sleep and appetite disturbance
- Diminishes over 2-4 weeks
- Depressive symptoms are common

Stimulant withdrawal

- Acute withdrawal
  - Low mood
  - Reduced energy
  - Hypersomnia $\Rightarrow$ insomnia
  - Agitation, craving, anxiety
  - Increased appetite
- First few days - “crash”, risk of suicidal ideas
- Protracted - anhedonia, dysphoria, depression, amotivation, craving
- Treatment - symptomatic and supportive

Heroin

- Made from morphine, extracted from the opium poppy
- Very effective painkiller, historically also used to treat diarrhoea and coughs
- Commonly referred to as “gear”, “brown’ or “smack”
- Used either by smoking on foil or injecting
- Average price is £15 for 1/2 gram - varies according to area

Effects of heroin

- Feeling of warmth and well being, relaxation and sleepiness
- First dose can lead to vomiting
- Quickly develop dependence
- Pain killing effects

Risks of heroin use

- Dependence
- Injecting injuries
- Overdose
- Blood borne virus
- Dental problems
- Mood disorders
- Criminal activity
- Family problems
- Marginalisation

Goals of Treatment

- Management of withdrawal
- Substitute pharmacotherapy with harm reduction goals
- Maintenance of abstinence
- Prevention of complications
- Promotion of recovery

Withdrawal from opioids

- Heroin - onset around 6 hours, peaks 36-72 hours
- Methadone - onset around 24-36 hours, peaks 4-6 days
- Symptoms - craving, anxiety, yawning, sweating, runny eyes and nose, dilated pupils, goose bumps, flushes, cramps, D&V, raised pulse and BP, sleep disturbance, aches and pains

Treating opioid withdrawal

- 3 options:
  - Methadone reducing regime
  - Buprenorphine (Subutex) reducing regime
  - Lofexidine (alpha 2 adrenergic agonist)
- Usually need symptomatic medication also - hypnotic, anti-emetic, agitation etc
- All options require psychosocial input to optimise treatment completion
- Evidence suggests buprenorphine detox is more effective, and clients more likely to complete

Opioid Substitution Therapy

- Methadone
- Buprenorphine (Subutex)
- Buprenorphine with naloxone (Suboxone)
- Injectables - methadone, diamorphine

Methadone

- Oral solution
- Taken once daily, occasionally split dose
- Takes at least 5 days to reach steady state after last dose increase - important not to increase too rapidly
- Maintenance dose range 60-120mg
- Good evidence for effectiveness - reduced heroin use, crime, injecting , mortality and HIV; improved psycho-social well being

Buprenorphine and Suboxone

- Sublingual tablet
- Mixed agonist and antagonist
- Dose range 12-24mg for maintenance
- Suboxone - buprenorphine combined with naloxone to reduce misuse by iv use - aim is to reduce diversion
- Can cause precipitated withdrawal when starting

Relapse Prevention and Recovery

- Naltrexone - opioid antagonist - “blocker”; used after detox
- Poor compliance
- All pharmacological treatment should be part of a psychosocial care package
  - Motivational work
  - Relapse prevention
  - NA, SMART - peer support
  - Day programmes