



# Brief Guide to Drug Dependence and Drugs Prescribed at the Primary Care Clinic

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# Drug Dependence

- Characterised by
  - Tolerance
  - Withdrawal symptoms
  - Reinstatement of use after abstinence
- Not all drug users are dependent
- All opiates have a dependence potential



# Drug Dependence

- Several Strands to Dependence
  - Physiological
  - Behavioural & cognitive
- Effect of dependence are:
  - Physical
  - Psychological
  - Social
- **The 1993 World Health Organisation definition of drug dependence** (including opiate dependence) is
  - 'a cluster of physiological, behavioural and cognitive phenomena of variable intensity, in which the use of a psychoactive drug takes on a high priority. The necessary descriptive characteristics are preoccupation with a desire to obtain the drug and persistent drug-seeking behaviour. Determinants and the problematic consequences of drug dependence may be biological, psychological or social and usually interact.'



# History of heroin

- Heroin is a chemical derivative of morphine, the principle ingredient of opium
  - Synthetic
  - More potent per gram
- Modern use of Opium started in 16<sup>th</sup> Century
  - Introduction of Laudanum by Paracelsus
- Laudanum became popular in Britain in the 19<sup>th</sup> Century



# History of Heroin

- Heroin first produced in 1874 by CR Wright
- Also synthesised by Bayer Pharmaceuticals on 21<sup>st</sup> August 1897
- Bayer chemists experimented on themselves and concluded it was an excellent cough suppressant and had no ill effects
- Bayer started mass production of heroin cough mixture across the world



# Medical Demise of Heroin

- Heroin was welcomed and embraced by the “underground”
- Doctors began noticing ill effects and large doses of heroin being taken
  - 1918 – non-medical opiate use in UK made an illegal offence
  - 1920 – first reports of injecting in journals
  - 1924 – heroin banned in USA
- Heroin was not the wonder cure it was thought to have been



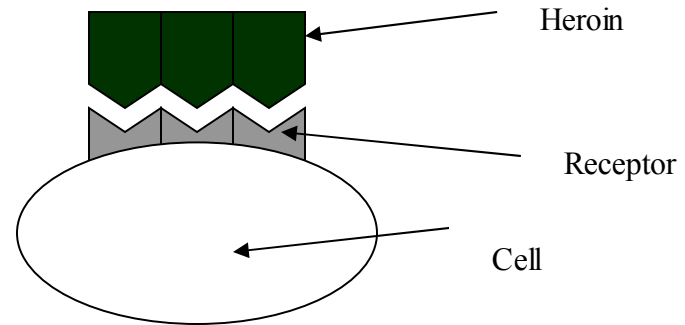
# The Illegal Heroin Market

- 1970's saw growth of illegally imported and manufactured heroin market
- 1980's – dramatic increase in numbers of heroin users
- 1990's – cheap availability of heroin in inner cities
  - government initiatives on drugs



# How heroin works

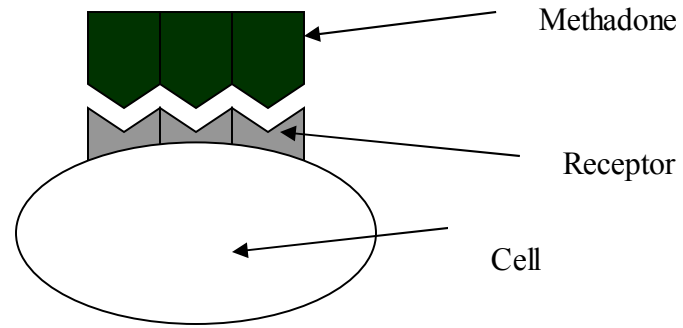
- Stimulates opiate receptors in the brain
  - Causes
    - Analgesia
    - Euphoria
    - Sedation
    - Respiratory depression
    - Nausea
    - Vomiting
    - Cough suppression





# Methadone

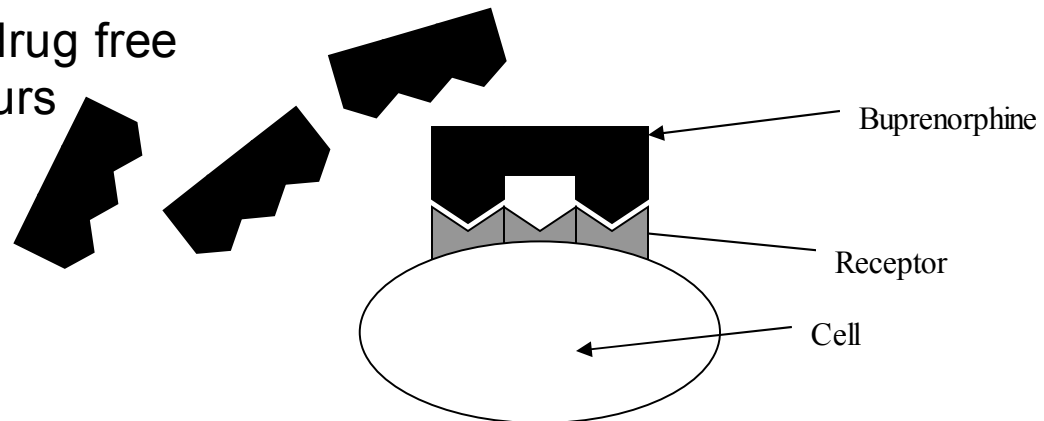
- Synthetic Opiate
- Opiate agonist
- Used to substitute heroin
  - Prevents withdrawal
- Addictive
- 1mg/1ml solution
- Dose adjusted according to degree of dependence





# Buprenorphine

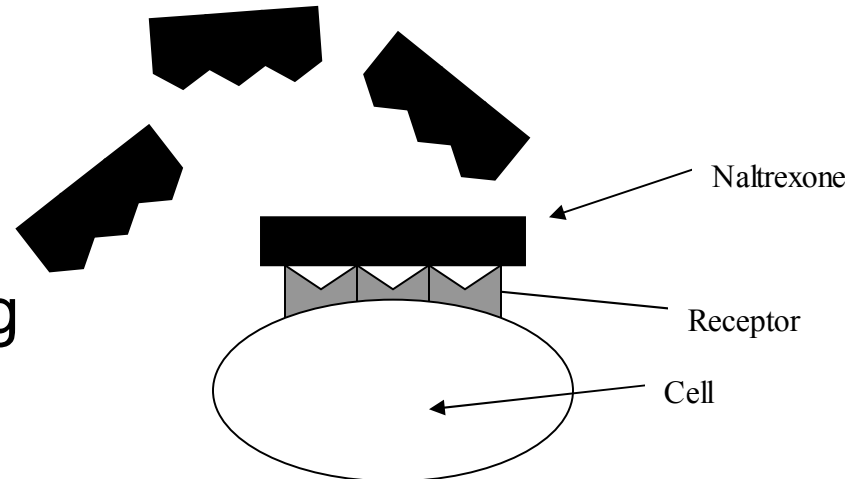
- Partial agonist
- Antagonistic properties
- Has high abuse potential
- High affinity for receptor
  - Precipitates fast withdrawal
  - Patient must be drug free for at least 12 hours





# Naltrexone

- Opiate receptor antagonist
- Block actions of opiates
- High affinity for receptor
  - Precipitates rapid withdrawal
- Used as relapse prevention
- Patient should be drug free for 7-10 days before use





# Lofexidine & others

- $\alpha$ -adrenergic receptor agonist
  - Works on sympathetic nervous system
  - Helps to relieve withdrawal symptoms
  - Decreases sympathetic tone
  - Decreases BP
- DF118
- MST Conti
- Diamorphine



# Non-opiate drugs

- Benzodiazepines
  - Short term use
  - Tranquilisers
    - Sleeping
    - Anxiety
- Addictive Potential
- Amitriptyline
- Zopiclone
- Fluoxetine
- Cyclizine
- Hyoscine
- Lactulose