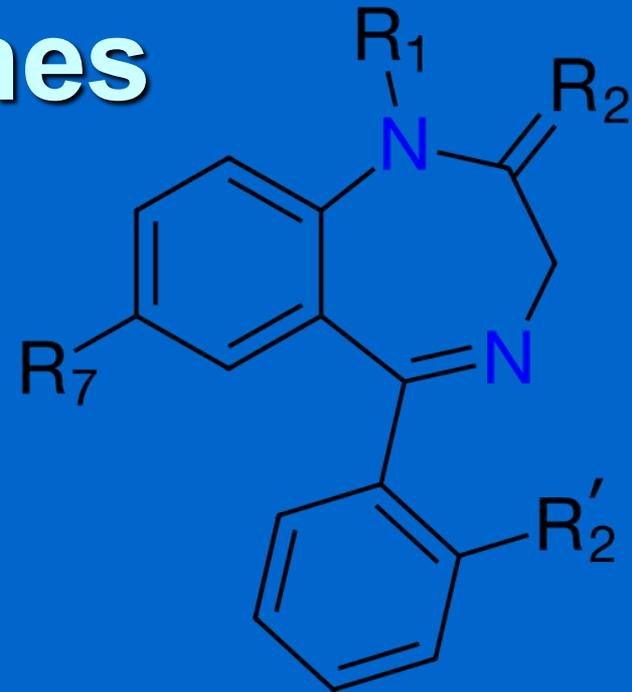


Benzodiazepines



Prevalence

- Benzos are the most prescribed drugs globally
- 16.5 million annual prescriptions in the UK – more 4 weeks BNF
- 2014 Online survey RCP - indicated widespread misuse
- NPS legal benzos
- Trials into Benzos are pharmaceutical industry funded

History

- **6 BC** “Noah planted a vineyard — drank of the wine and was drunken”
- **2,100 BC** alkaloids of opium, cannabis, jimsonweed, belladonna, etc used hypnotic and/or sedative properties
- **1864** synthesis of malony-lurea by Adolf von Baeyer
- **19th** centuries, agents such as paraldehyde, chloral hydrate, and bromides were used

History

- **1904** Clinical introduction of barbiturates -
- improved prognosis esp. neuroses and psychoses, sleep disorders, epileptic seizures
- **WW2** - Goofballs, Pacific
- **1920s mid-1950s**, practically the only drugs used as sedatives and hypnotics were barbiturates - 2500 barbiturates were synthesised, 50 employed clinically

History

- **1950 -60s** Barbs overdoes - low therapeutic threshold
- **1957** Chlordiazepoxide synthesised
- **1960s** Benzo's first comes onto market in the form of Librium - offered an improved safety profile
- **1963** - Diazepam introduced onto the market, Marketed as safer, stronger and more effective – mothers little helper

History

- **1965** according to the FDA half of the capsules marketed diverted to the street
- **1970s** in the UK alone scripts were reaching 30m - Significant numbers of dependency cases emerge
- **1980s** a significantly-harmful form of benzodiazepine abuse emerged in the UK. Temazepam commonly known as 'jellies' or 'jelly'.

History

- 1990s - date rape drug rohypnol
- 1998 - zopiclone introduced
- 2003 – online, legal highs
- 2015 Over last decade BZs used for short term anxiety has steadily risen
- 2015 – NPS benzos - steadily increasing
- 2016 – New safe alcohol developed from benzo

Benzodiazepines

CNS Depressant

- **Category:** depressants, hypnotics, anxiolytics
- Increase GABA
- Sedation effect
- Muscle relaxant
- Anxiolytic effect
- Hypnotic effects

Benzos

- **Slang names:**
- **Benzos:** tranx, downers, sleepers
- **Valium:** blues, vallies
- **Temazepam:** jellies, eggs, temazies
- **Flunitrazepam:** rohypnol, roofies
- **Quality:** prescription is pharma quality (pure), internet bought and street sourced pills vary greatly

Benzos

- Fusion of a benzene & diazepine ring
- **Route of administration:** Oral, injecting very rare, usually sealed with a coating to avoid people snorting.
- **Duration:** 2-200hrs+ depending on type.
- **Effects:** relaxation, calm, drowsiness, euphoria, relaxed muscles, anxiety, disinhibition, amnesia
- **Law:** Mostly Class C, Schedule 4. except Rohypnol and Temazepam

Benzos

- **Source:** prescribed, internet, illicit £1 a pill on the street
- **Presentation:** drowsiness, slow to react, “nod or gouch”, calm
- **Risks:** physical dependency, overdose (risk increased when mixed with other depressants), counterfeit product, dangerous withdrawals that may and can led to seizures



0140-0004-01



27899231

Usual dosage: See package insert.
 Made in Canada
 Distr. by: Roche Laboratories Inc., Nutley, New Jersey 07110
 for Roche Products Inc.




NDC 0140-0004-01
Valium®
 (diazepam)
 2 mg
 Each tablet contains
 2 mg diazepam.
 100 tablets



Dispense in tight, light-resistant
 containers as defined in USPNF
 Store at 59° - 86°F
 (15° - 30°C).
 6505-01-230-3129
 LOT
 EXP.

LB-5523/S

Librium

- Chlordiazepoxide was the first benzo to be synthesised by pure chance
- It is short-term (2–4 weeks) treatment of anxiety
- Alcohol detox
- Persistent headaches

Diazepam

- **Diazepam** - marketed as Valium
- Diazepam is a long-acting "classical" benzodiazepine. Other classical benzodiazepines include chlordiazepoxide, clonazepam, lorazepam, oxazepam, nitrazepam, temazepam, flurazepam, bromazepam, and clorazepate
- **Online** (dark web) purchases



Temazepam

- Came into use 1969
- Prescribed for severe insomnia
- Disturbs sleep pattern
- Most prescribed benzo in the 80s
- IV use heaviest in Scotland



Rohypnol

- 1963 - Flunitrazepam referred to as a date rape drug
- high potency and ability to cause strong amnesia
- short-term treatment of chronic or severe insomniacs not responsive to other hypnotics
- intermediate acting benzodiazepine



NPS Benzos

Etizolam, flubromazolam, diclazepam, pyrazolam, nifoxipam, flubromzepam and clonazolam are all examples of new synthetic benzodiazepines

- Etizolam is a new strong benzo
- Side effects include short-term memory loss, reduced cognitive ability and double vision.



Non benzodiazepines

- "Z-drugs" Zopiclone, Zolpidem, Zaleplon
- Z-drugs emerged in late 1980s and early 1990
- Non-benzodiazepine share a similar mode of action but **are chemically distinct**
- Zolpidem is controlled as Class C
- Almost entirely the same as other benzos
 - **similar benefits, side effects and risks**

Health

- Include drowsiness, dizziness, and decreased alertness and concentration.
- Lack of coordination falls and injuries
- Decreased libido
- Hypotension and suppressed breathing IV users
- **Paradoxical effects**

Long term health

- Depression, agoraphobia and social phobia, increased anxiety
- Cognitive impairment
- Feelings of turmoil

Pregnancy

- The research into the safety of benzodiazepines during pregnancy is limited
- If clordiazepoxide is used during pregnancy the risks can be reduced via using the lowest effective dose and for the shortest time possible
- Detoxing pregnant women - Mary Hepburn

Tolerance & Dependence

- **Tolerance** - 3-6 months? Muscle / anxiety
- **Physical dependence** – severe and life threatening withdrawals
- **Rapid Benzo Detox**
- **Flumazenil** provides rapid relief from withdrawal symptoms while getting rid of the benzodiazepines from the body
- Psycho-social interventions

Withdrawal

- Two groups of symptoms — rebound and withdrawal
- Rebound - return of the symptoms for which the patient was treated but worse
- Withdrawal - insomnia, gastric problems, tremors, agitation, fearfulness, and muscle spasms.

Detox

- Over-rapid withdrawal from benzodiazepines increases the severity of the withdrawal syndrome and increases the failure rate
- A slow and gradual withdrawal customised to the individual and, if indicated, psychological support is the most effective way of managing the withdrawal
- four weeks to several years to recover

Harm Reduction

- If you have become addicted to a benzodiazepine, the symptoms of abruptly stopping are likely to be even worse- it's important to get proper medical advice on how to reduce your intake slowly
- If you run out of benzodiazepines, see your GP as soon as possible.
- When on high doses of benzodiazepines, you are likely to black out and potentially hurt themselves.
- Ensuring you are in a safe environment,
- Some users report benzodiazepines can lead to compulsive redosing, chasing a nod/goucn

Harm Reduction

- Any benzodiazepine use should be monitored by a Doctor. Especially should dependence occur.
- Mixing any benzodiazepines with any CNS depressant (alcohol, heroin) results in high risk of overdose. $2+2 = 6$
- Check TripSit's interaction chart when taking any benzodiazepine with another psychoactive substance
- Benzodiazepines can also interact with one another, so it's not a good idea to take a benzodiazepine if you are already taking another.
-

Harm reduction

- If you've been prescribed a benzodiazepine and you notice a tolerance starting to develop, speak to your doctor- don't just start increasing your dose yourself.
- Keeping a diary of times throughout the day you take benzodiazepines and the dosage too, can help professionals suggest a safe and planned reduction of use.

Don't suddenly stop taking them, or you may start to experience symptoms of withdrawal- people can die from withdrawals as they can often cause seizures. It is difficult to tell who is susceptible to this.