

Psychotherapeutics

[PS01](#) [Mar96] [Jul98] [Jul01] [Jul02] [Benzodiazepines](#):

- A. Are all lipid soluble (OR: None are water-soluble) **midaz water in ampoule**
- B. Are all renally excreted unchanged - **liver metab**
- C. Causes retrograde amnesia
- D. [Lorazepam](#) is more lipophilic than midazolam **false hence slower onset**
- E. Block GABA receptors
- F. Have high therapeutic index **?true - safer than barbituates!**

[PS02](#) [Mar97] [Jul97] [Jul99] [Mar03] Which is TRUE regarding [monoamine oxidase inhibitors](#) (MAOI)?

- A. Should/must be ceased for two weeks prior to general anaesthesia **now thought ↑ risk for rebound depression**
- B. Cause hypotension and sedation in combination with pethidine - **nope opposite - HTN, agitation**
- C. Inhibit activity of indirect sympathomimetics - **metaraminol & ephedrine activity ↑ ed**
- D. **Ingested tyramine causes hypertension due to indirect effects**
- E. Includes doxepin and amitriptyline = **TCA**s

MAOIs phenelzine, moclobamide and selegiline

[PS03](#) [Jul97] [Jul98] [Jul00] [Jul01] [Neuroleptic malignant syndrome](#):

- A. Occurs only with chronic use
- B. 80% (or 60%) mortality **10-20%**
- C. **?Treated** /? not treated with **dantrolene**
- D. **Can be caused by acute withdrawal of L-Dopa therapy**
- E. **Is treated with bromocriptine**

[PS04](#) [Jul97] Inhibitors of monoamine oxidase A

- A. **Allow tyramine to enter the circulation from the gut would norm be metabed by MAOI in gut preventing systemic absorption**
- B. ?
- C. ?
- D. ?

[PS05](#) [Jul97] [Feb00] [Benzodiazepines](#):

- A. Have no analgesic effect
- B. Have an antanalgesic effect
- C. Have an analgesic effect
- D. Have dose-related analgesic and antanalgesic effects

[PS06](#) [Jul98] [Jul99] [Mar03] [Jul04] The benzodiazepine with the longest elimination half-life is:

- A. Diazepam 20-80
- B. Oxazepam 10-20
- C. Temazepam 10-40
- D. Midazolam 2-4
- E. Lorazepam 10-20
- F. Flunitrazepam 20-30

[PS07](#) [Jul98] [Fluoxetine](#):

- A. Inhibits noradrenaline & adrenaline uptake
- B. Inhibits serotonin uptake
- C. ?
- D.

[PS08](#) [Mar99] [Jul00] [Flumazenil](#):

- A. Formulated In propylene glycol in commercial preparation
- B. Inverse agonist
- C: Is slowly metabolised making resedation unlikely
- D. Does not reliably reverse sedation and resp depression (in large agonist dose ?)
- E. Is a partial agonist at mu opioid receptors

Option D has also been remembered as:

- D. May significantly reverse evidence of sedation whilst hypoxia or hypercapnia persist and-> ie does not reverse hypoventilation
- D. Reliably reverses the sedating effects of benzodiazepines but marked respiratory depression still can occur

In support of preceding statements, Peck & Williams says that flumazenil acts as:

1. Competitive BZ antagonist.
2. Some agonist activity.
3. Inverse agonist activity.

PS09 [Mar99] Diazepam:

- A. Half-life of 5 to 10 hours
- B. Metabolised to oxazepam & temazepam /?desmethyldiazepam
- C. ?
- D. ?

PS10 [Mar99] [Jul99] Droperidol:

- A. Substituted phenothiazine
 - B. Reliably produces mental tranquility is less effective against anxiety
 - C. Does not act (directly) on CTZ great antiemetic
 - D. Alpha-blockade with hypotension is not a problem with 2mg dose mild a blocking properties
 - E. Slows alpha rhythm on EEG but otherwise EEG unchanged
- (Note: Mar 99 paper had 2 questions on droperidol so options above may be a combo of both Qs.)

PS11 [Mar99] Monoamine oxidase inhibitors (MAOI):

- A. Moclobemide is a reversible inhibitor
- B. Interacts with tyramine to cause hypertension prevents breakdown of tyramine but doesnt really react
- C. Interacts with pethidine to cause hypothermia
- D. ?

PS11b [Feb04] Monoamine oxidase inhibitors

- A. Moclobemide is a reversible type B inhibitor type A
- B. Prevent hepatic metabolism of tyramine enabling it to enter the circulation and act as an indirect agonist ??

PS12 [Jul99] [Apr01] Metabolites of diazepam, all EXCEPT:

- A. Temazepam
- B. Oxazepam

C. [Desmethyldiazepam](#)

D. Lorazepam

[PS13](#) [Jul00] With respect to action of [midazolam](#):

A. Acts on GABA-B receptors **GABA-A**

B. increases duration of opening of Cl⁻ channels

C. ? competes with barbiturates for receptor site on GABA receptor **have separate binding sites**

D. Metabolism is decreased by cimetidine

E. Decreases chloride conductance

F. Interacts with the B1 subunit of GABA **acts at α**

[PS14](#) [Jul00] Benzodiazepines - which statement is true ?

A. ?

B. **Midazolam has active & inactive metabolites**

1-hydroxymidazolam, has approximately half the activity of the parent compound. other active metabolite 4-hydroxymidazolam, ... not present in detectable concentrations in plasma following IV administration"

C. ?

D. **All depend on hepatic clearance**

[PS15](#) [Jul00] [Mar03] [Jul04] [Tricyclic antidepressants](#):

A. Do not cause sedation

B. **Formed from modification of the phenothiazine ring - extra atom in central ring**

C. Avoid anti-cholinergic effects compared to other anti-depressants - **cause anticholinergic effects**

D. Does not decrease reuptake of 5HT ?at 5HT3 R **block NA & 5HT3 reuptake pumps**

E. Decrease CNS amine levels - **↑ amine levels by blocking reuptake**

[PS16](#) [Jul00] [Diazepam](#) 0.1 mg/kg given orally, the percent absorption is:

A. **100%**

B. 94%

C. ?

D. ?

[PS17](#) [Feb04] Clinical uses of [Diazepam](#) include:

- A. Anticonvulsant
- B. Skeletal muscle relaxation
- C. Treatment of Delirium Tremens
- D. Induction of anaesthesia
- E. All of the above

PS18 Midazolam:

- A. open ring structure above pH 4. pH 3.5 is threshold
- B. poor oral bioavailability so less than 50% reaches systemic circulation
- C. has approximately the same affinity for GABA receptor which is similar to diazepam twice affinity/potency
- D. ?
- E. ?

PS19 You are about to anaesthetise someone taking a MAOI (*tranylcypamine I think*) Which drug is least likely to be problematic?

- A. Ephedrine indirect & direct
- B. Tramadol serotonergic
- C. Etomidate epileptiform EEG!!!
- D. Phenylephrine - direct α . no risk HTN crisis
- E. ?Metaraminol indirect effects
- ?F. Pethidine serotonin syndrome

PS20 Feb13 Flumazenil:

- A. ?
- B. ?
- C. Predictably reverses the respiratory depression caused by benzodiazepine overdose
- D. ?
- E. ?