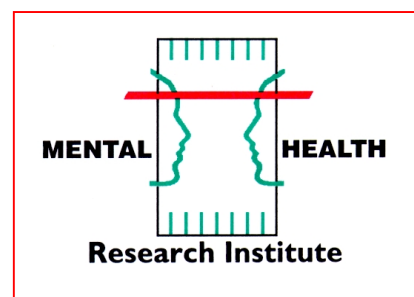

A GUIDE TO PSYCHOTROPIC DRUGS

**This is a brief guide to currently prescribed psychotropic medications.
Comprehensive information should be sought from experienced persons.**

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ANTIPSYCHOTICS (Neuroleptics, Major Tranquillisers)

What do they do?

Antipsychotics are used principally in the treatment of psychoses. They diminish the agitation, delusions, hallucinations and thought disorder of these illnesses. The drugs have less effect on the symptoms of apathy and withdrawal. Treatment response is most dramatic during the first six weeks thereafter it tapers off.

The medication is available as tablets, syrups and injectible formulations that allow for some flexibility in dosing. Injectible formulations also have a role in the treatment of those who cease medication against advice. They are loosely divided into typical (older) agents and atypical (newer) agents. The main differences are in the side effect profiles. The newer drugs are less likely to produce parkinsonian symptoms or other movement problems.

TYPICAL ANTIPSYCHOTICS

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
chlorpromazine	Largactil
haloperidol	Serenace
pericyazine	Neulactil
pimozide	Orap
thioridazine	Aldazine*
thiothixene	Navane
trifluoperazine	Stelazine

* use is restricted due to adverse effects on heart conduction.

LONG ACTING INJECTIBLES

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
flupenthixol decanoate	Fluanxol
fluphenazine decanoate	Modecate
haloperidol decanoate	Haldol
zuclopenthixolacetate	Clopixol-Acuphase
zuclopenthixol decanoate	Clopixol Depot

SIDE EFFECTS

- Drug-induced parkinsonism
- Loss of ability to initiate movement
- Rigidity, involuntary muscle twitching or spasm
- Restlessness
- Oversedation
- Dizziness, light-headedness particularly on standing
- Dry mouth, blurred vision, urinary retention, constipation
- Skin sensitivity to sunlight (especially chlorpromazine)

ATYPICAL ANTIPSYCHOTICS

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
amisulpride	Solian
aripiprazole	Abilify
clozapine	Clozaril, Clopine
olanzapine	Zyprexa, Zydis (wafers)
quetiapine	Seroquel
risperidone	Risperdal

As a group these medications are considered more effective for apathy and withdrawal associated with psychoses than the older medications and produce less movement disorders than the conventional antipsychotics. Overall, the side effect profile is different and may be more tolerable. Improved concentration, memory, clearer thinking and better social interactions are often experienced.

AMISULPRIDE

Amisulpride is a non-sedating antipsychotic agent that is often well tolerated. Common side effects include:

- insomnia
- agitation
- sexual side effects
- dose related movement disorders.

ARIPIPRAZOLE

Like amisulpride, aripiprazole is a non-sedating antipsychotic but its mechanism of action is different. It is relatively well tolerated. Common side effects include:

- headache
- nausea
- agitation
- insomnia.

CLOZAPINE

Clozapine is the only drug shown to be effective in treatment-resistant psychotic disorders. Common side effects include:

- dizziness, lightheadedness, particularly on standing
- increased heart rate (especially early in treatment)
- increased saliva
- sedation
- constipation.

It can also cause a potentially fatal blood disorder, agranulocytosis, in 1% of persons taking the drug. This means that the person has a reduced ability to fight infection. The blood is checked regularly for any change that may indicate a potential problem. Cardiomyopathy and myocarditis have been associated with the use of clozapine (rare adverse event) and doctors monitor for chest pain or shortness of breath on exertion and other symptoms that may indicate a problem.

RISPERIDONE

Risperidone is better tolerated than the older, antipsychotic drugs. Common side effects include:

- dizziness or lightheadedness on standing
- nausea, gastrointestinal upset
- drowsiness
- restlessness, agitation especially at higher doses
- sexual side effects
- dose-related parkinsonian symptoms.

A long-acting injectable formulation is available.

OLANZAPINE

Like risperidone, olanzapine is generally well tolerated. Common side effects include:

- sedation
- weight gain
- headache
- dry mouth
- dizziness or lightheadedness on standing
- dose-related parkinsonian symptoms.

QUETIAPINE

Quetiapine is generally well tolerated. Common side effects include:

- sedation
- dry mouth
- dizziness or light headedness on standing.

ANTIPSYCHOTICS - GENERAL PRECAUTIONS

All antipsychotics are central nervous system depressants therefore care should be taken when:

- prescribing them for persons with respiratory or cardiac problems;
- using with other central nervous system depressants including alcohol;
- driving a car or operating machinery as reaction times can be slowed.

These drugs are metabolised in the liver therefore care should be taken when:

- prescribing for persons with liver problems;
- prescribing with other drugs metabolised in the liver.

Lower doses are usually required in the elderly.

They should be used with caution in children and adolescents.

These drugs should not be prescribed for persons with known hypersensitivity to the drugs.

ANTICHOLINERGICS
(Side Effect Drugs, Antiparkinsonians)

What do they do?

These drugs are used principally for the treatment of Parkinson's Disease. In this context, they are used to treat drug-induced parkinsonism and other movement disorders caused by the administration of antipsychotic medications. They may be taken orally or given by injection as the situation warrants.

COMMONLY USED ANTICHOLINERGICS

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
benhexol	Artane
benztropine	Benztrop (oral), Cogentin (injection only)

SIDE EFFECTS

- Sedation
- Dry mouth
- Blurred vision
- Urinary retention
- Constipation

PRECAUTIONS

If any of these symptoms are being experienced from the antipsychotics, the effects will be exaggerated.

There is potential for abuse of these drugs.

The taking of quantities greater than prescribed may induce an acute delirium state, worsening psychoses.

NOTE:

This list is not all-inclusive and a range of other medicines are used to manage the movement problems associated with antipsychotic use.

ANTI-DEPRESSANTS

What do they do?

These drugs are used to treat major depressive disorder. All anti-depressants can treat depression, however, not all depression sufferers will respond to treatment. The medicines have an immediate action in the body but the desired improvement in mood and depressive symptoms may take some weeks. There are a number of different types of antidepressants usually grouped by their chemical similarities.

1. TRICYCLICS

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
amitriptyline	Tryptanol, Endep
clomipramine	Anafranil, Placil, ETC
dothiepin	Prothiaden, Dothep
doxepin	Sinequan, Deptran
imipramine	Tofranil, Melipramine
nortriptyline	Allegron
trimipramine	Surmontil

SIDE EFFECTS

- Over-sedation
- Dry mouth, blurred vision, urinary retention, constipation
- Sweating
- Weight gain
- Dizziness when standing quickly

Tricyclic antidepressants can be dangerous in overdose.

2. MONOAMINE OXIDASE INHIBITORS (MAOIs)

These were used in patients resistant to tricyclic treatment and in phobic anxiety disorders, but are now rarely prescribed.

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
phenelzine	Nardil
tranylcypromine	Parnale

SIDE EFFECTS

- Overstimulation, restlessness
- Insomnia (give in the morning to limit sleep disturbance)
- Blurred vision
- Low blood pressure
- Chronic use may cause liver damage

PRECAUTIONS

A potentially fatal reaction can occur as a result of eating certain foods or combining with other medicines.

A strict diet must be adhered to while undergoing treatment with an MAOI and for 2 weeks after stopping the drug. The doctor or pharmacist will provide a list.

Certain drugs must be avoided during treatment with an MAOI, so check the safety of any drug with your doctor or pharmacist before taking it.

Always check with the doctor/pharmacist when starting ANY new medication while taking a MAOI, even herbal medicines or drugs available from the supermarket.

3. REVERSIBLE INHIBITOR OF MONOAMINE OXIDASE A (RIMA)

Reversible inhibition of the MAO-A enzyme limits the problem of food and drug interactions. This class of drug is a safer alternative to MAOIs and no major dietary precautions are needed. RIMAs have fewer interactions, fewer cardiovascular effects and greater safety in overdose.

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
moclobemide	Aurorix, Arima

SIDE EFFECTS

- Nausea
- Headaches
- Dizziness
- Insomnia (administer early in the day to minimise sleep disturbance)

4. SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)

This class of antidepressant is well tolerated, and relatively safe in overdose.

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
citalopram	Cipramil, Celepram, Talohexal, etc
Escitalopram	Lexapro
fluoxetine	Prozac-20, Lovan, Erocap, Zactin, etc
fluvoxamine	Luvox, Faverin, Movox
paroxetine	Aropax, Paxtine, Oxtine, etc
sertraline	Zoloft, Xydem

SIDE EFFECTS

- Nausea, diarrhoea, loss of appetite
- Headache
- Nervousness, irritability
- Excess stimulation in some patients
- Sleep disturbance (especially early in treatment) therefore morning dosing
- Sleepiness, drowsiness

5. SELECTIVE SEROTONIN NORADRENALINE REUPTAKE INHIBITOR (SNRI)

At low doses venlafaxine acts like an SSRI and at higher doses it is a bit more like a tricyclic without some of the adverse effects.

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
venlafaxine	Efexor, Efexor XR

SIDE EFFECTS

- Nausea
- Sedation, drowsiness
- Dizziness
- Dry mouth
- Headaches
- Sweating

6. **NORADRENERGIC AND SPECIFIC SEROTONIN ANTAGONIST**

GENERIC NAME

mirtazapine

BRAND NAME(S)

Avanza, Remeron, etc

SIDE EFFECTS

- Sedation
- Weight gain

7. **HETEROCYCLIC**

GENERIC NAME

mianserin

BRAND NAME(S)

Tolvon, Lumin

SIDE EFFECTS

- Sedation
- Dry mouth

8. **SELECTIVE NORADRENALINE REUPTAKE INHIBITORS**

GENERIC NAME

reboxetine

BRAND NAME

Edronax

SIDE EFFECTS

- Urinary retention
- Dry mouth
- Constipation
- Sweating
- Blood pressure increase
- Insomnia

ANTIDEPRESSANTS - GENERAL PRECAUTIONS

Care should be taken in combining these drugs with other sedative drugs or alcohol as the sedative effects are additive.

Care should be taken when driving or operating machinery as reaction times may be slowed.

MOOD STABILISERS

What do they do?

This group of drugs effectively treat a current episode of mania or depression. They also help prevent future episodes of mania and depression when taken consistently.

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
lithium carbonate	Lithicarb, Quilonum SR
carbamazepine	Tegretol, Teril
sodium valproate	Epilim, Valpro
lamotrigine	Lamictil

The group of medicines used as mood stabilisers includes a number of medicines also prescribed in epilepsy. This can be confusing.

1. LITHIUM CARBONATE

Lithium is used in the treatment of bipolar affective disorder and major depression where there are frequent and increasing bouts of depression.

Signs of improvement start to emerge seven to ten days after treatment commencement when the concentration of lithium reaches therapeutic levels.

Lithium should be taken consistently to be effective.

SIDE EFFECTS

- Fine tremor
- Mild gastric disturbance
- Weight gain
- Frequency of urination
- Thirst

PRECAUTIONS

Routine blood monitoring is required because:

- the therapeutic range of lithium is small. Blood tests help to make sure lithium is at the right level to be effective. Too much lithium can make you sick. Too much lithium can cause a coarse tremor, slurred speech, incoordination, nausea, vomiting, diarrhoea and extreme drowsiness;
Immediate medical attention is required when this occurs.
- Lithium can affect thyroid function;
- Lithium can affect with kidney function.

Care should be exercised when prescribing other drugs eg. Diuretics and antiinflammatory agents – check with the doctor or pharmacist.

Care should be taken to maintain fluid and electrolyte (salt) balance.

2. CARBAMAZEPINE

Carbamazepine is an anti-epileptic compound structurally related to tricyclic antidepressants. It is used in bipolar disorder often when treatment with lithium has failed or cannot be used for other reasons.

Clinical examination is the primary monitoring technique to determine efficacy as a therapeutic blood level has not been determined. However, blood monitoring is used to ensure that there is not too much carbamazepine in your body.

SIDE EFFECTS

- Drowsiness, sedation
- Muscle incoordination
- Double vision
- Nausea, vomiting
- Dizziness
- Headache

PRECAUTIONS

Care should be taken:

- when combining this drug with other sedative drugs, including alcohol, as the common side-effects may be additive;
- when driving or operating machinery as reaction times may be slowed;
- as blood disorders can occur, blood monitoring is required;
- prescribing carbamazepine with other medications as their efficacy may be affected eg. oral contraceptives;
- when combining carbamazepine with lithium treatment as a serious reaction may develop.

3. SODIUM VALPROATE (Epilim)

Sodium valproate is another anti-epileptic agent found to be useful in the treatment of bipolar affective disorder. As with carbamazepine, a therapeutic blood level has not been established for this disorder but those for epilepsy are used as a guide to avoid too much sodium valproate in the body.

SIDE EFFECTS

- Tremor
- Nausea and vomiting
- Appetite stimulation, weight gain
- Thinning of the hair
- Ankle swelling
- Sedation

PRECAUTIONS

Care should be taken when:

- driving or operating machinery as reaction times may be affected - particularly if sedation occurs;
- combining sodium valproate with other medications as their efficacy may be affected.

Blood monitoring is needed:

- to check that there is not too much sodium valproate in the body;
- to check the liver is working properly as sodium valproate can affect liver function in a small number of people.

4. LAMOTRIGINE (Lamictil)

Lamotrigine is an antiepileptic agent that has been trialled and found to be useful to stabilise mood in bipolar disorder. Its efficacy has been demonstrated in bipolar depression.

SIDE EFFECTS

- Headache
- Tremor
- Somnolence
- Dizziness

PRECAUTIONS

Severe life-threatening skin problems have been observed with lamotrigine. These are seen more often in children or when the dose is increased quickly or in combination with some drugs.

Report ALL rashes or flu-like symptoms including fever, malaise, sore throat, sores or blisters on soles, palms or mucous membranes.

Dose may need to be reduced in patients with renal impairment.

Lamotrigine should be used cautiously in patients with heart problems.

ANXIOLYTICS **(Antianxiety Drugs)**

What do they do?

These compounds are effective in relieving the symptoms of anxiety. The main compounds in this category are the benzodiazepines.

BENZODIAZEPINES

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
alprazolam	Xanax, Kalma
bromazepam	Lexotan
clobazam	Frisium
clonazepam	Rivotril, Paxam
diazepam	Antenex, Ducene, Valium
lorazepam	Ativan
oxazepam	Alepam, Murelax, Serepax

Diazepam is the standard against which these are compared. If given in large enough doses at night these drugs will induce sleep.

Benzodiazepines are also used to manage restlessness and agitation associated with the use of antipsychotic drugs, because of their anxiolytic and muscle relaxant effects.

Physical dependence, impaired performance and decreased attention are the main disadvantages. Impairment of performance and attention can affect driving and other skilled tasks.

SIDE EFFECTS

- Drowsiness
- Impairment of concentration and reaction times
- Impairment of some memory functions
- Muscle incoordination – especially in the elderly which can lead to falls
- Muscle weakness
- Blurred vision

PRECAUTIONS

- Care should be taken because of the risks of tolerance, dependence and withdrawal syndromes.
- Care should be taken driving or operating machinery, as performance may be impaired.
- Care should be taken in combination with other central nervous system depressants including alcohol as common side effects may be exaggerated - additive effects.
- Care should be taken in the elderly as they are more sensitive to the sedative effects.

BUSPIRONE (BUSPAR™)

Buspirone is a non-benzodiazepine anxiolytic. Symptom relief is delayed (unlike the benzodiazepines, which immediately relieve symptoms). It is generally well tolerated. It does not impair alertness, attention, memory, reaction time or driving.

Its use does not lead to abuse, tolerance or withdrawal neither does it influence the effects of alcohol or sedative-hypnotics.

SIDE EFFECTS

- Dizziness
- Headache
- Nausea

SEDATIVE – HYPNOTIC AGENTS

These agents are used to help in the short-term management of insomnia. Generally the medications are prescribed for 2-4 weeks to help re-establish normal sleeping patterns. Occasionally, they are prescribed for a longer period of time.

The main agents used are benzodiazepines. Other non-benzodiazepine agents have also been used. The disadvantages of the hypnotics are similar to anxiolytics.

Tolerance and physical dependence can develop rapidly hence their indication for short-term intervention in sleep disturbance.

BENZODIAZEPINES

<u>GENERIC NAME</u>	<u>BRAND NAME(S)</u>
flunitrazepam	Hypnodorm
nitrazepam	Mogadon, Alodorm
temazepam	Euhypnos, Normison, Temaze, Temtab
triazolam	Halcion

NON-BENZODIAZEPINES

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
zopiclone	Imovane
zolpidem	Stillnox

SIDE EFFECTS

- Hangover effects the next day
- Drowsiness
- Impairment of concentration and reaction times
- Impairment of some memory functions
- Muscle incoordination – can increase risk of falls in elderly
- Muscle weakness
- Blurred vision

PRECAUTIONS

Care should be taken:

- because of the risk of tolerance, dependence and withdrawal syndromes;
- when driving or operating machinery, as performance may be impaired;
- when combined with other central nervous system sedatives including alcohol as common side effects can be additive;
- in the elderly as they are more sensitive to the sedative effects and the duration of action may be prolonged;
- when there is another cause for the sleep disturbance. That should be the primary management goal.

SUBSTANCE ABUSE

There are a number of medicines used to help in the withdrawal and recovery from substance abuse.

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
methadone	
naltrexone	Revia
acamprosate	Campral
buprenorphine	Subutex

METHADONE

Methadone is used to help in opiate withdrawal. Commonly abused opiates include heroin, codeine, pholcodine, and oxycodone.

NALTREXONE

Approved for use in alcohol dependence. It reduces the craving for alcohol in abstinent persons. It should not be prescribed for persons currently consuming large amounts of alcohol.

ACAMPROSATE

Is used to help alcohol dependent persons abstain from alcohol use. It reduces the craving for alcohol.

BUPRENORPHINE

Approved for use in opiate dependence.

PSYCHOSTIMULANTS

These medicines are used to treat attention deficit disorder, usually in children. They may also be used in narcolepsy

<u>GENERIC NAME</u>	<u>BRAND NAME</u>
Atomoxetine	Strattera
Dexamphetamine	
Methylphenidate	Ritalin, Attenta