Indications
Antipsychotics are used in the treatment of mental health conditions including schizophrenia, bipolar disorder, schizoaffective disorder, personality disorder, anxiety disorders, and depression but are mainly used to treat psychosis, which is a collection of symptoms involving loss of contact with reality.

Pharmacology
Antipsychotics are dopamine D2 receptor antagonists, but also act on some serotonergic, muscarinic, noradrenergic, and histaminergic receptors. Antipsychotics are thought to counteract a presumed excess of dopaminergic neurotransmission purported to be involved in psychotic symptoms.

Common side effects and their management
Antipsychotics vary in their side effect profiles. If any side effects are intolerable refer the patient back to the prescriber.

<table>
<thead>
<tr>
<th>Side effects more common at the start of treatment (may wear off with time)</th>
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</thead>
<tbody>
<tr>
<td><strong>Anticholinergic side effects</strong> (e.g. dry mouth, constipation, and blurred vision)</td>
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<tr>
<td>• These tend to wear off within the first few weeks.</td>
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<tr>
<td>• Most common with clozapine, chlorpromazine, flupenthixol, and zuclopenthixol.</td>
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<tr>
<td>• Drinking plenty of water, avoiding sugary drinks, and chewing sugar-free chewing gum may help with dry mouth.</td>
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<tr>
<td>• Increasing fibre intake, water intake, or exercise may help with constipation.</td>
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<tr>
<td>• Clozapine-induced constipation can be dangerous and requires urgent referral.</td>
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<tr>
<td>• Advise the patient to visit an optician if vision is a problem</td>
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<tr>
<td><strong>Drowsiness</strong></td>
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<tr>
<td>• Most common with clozapine, quetiapine, and chlorpromazine.</td>
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<tr>
<td>• Taking the antipsychotic at bedtime can sometimes help.</td>
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<tr>
<td>• Drowsiness can affect ability to perform skilled tasks such as driving or operating machinery.</td>
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<tr>
<td>• Most common with clozapine, olanzapine, quetiapine, and chlorpromazine</td>
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<tr>
<td><strong>Postural hypotension</strong></td>
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<tr>
<td>• More common during initial dose titration.</td>
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<tr>
<td>• Getting up slowly can help to avoid dizziness.</td>
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<tr>
<td>• A reduction in dose or speed of titration is sometimes needed.</td>
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<tr>
<td>• Refer the patient to the prescriber if it is troublesome</td>
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<tr>
<td><strong>Weight gain</strong></td>
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<tr>
<td>• Weight gain can occur throughout treatment, but is often greater during the first two months of treatment.</td>
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<tr>
<td>• Most common with clozapine and olanzapine.</td>
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<tr>
<td>• Give lifestyle advice.</td>
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<tr>
<td>• Encourage the patient to monitor body weight.</td>
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<tr>
<td><strong>Insomnia</strong></td>
</tr>
<tr>
<td>• Insomnia can occur with certain antipsychotics such as aripiprazole and is more common at the start of treatment.</td>
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<tr>
<td>• Taking the antipsychotic in the morning may help.</td>
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<tr>
<td>• Give sleep hygiene advice.</td>
</tr>
<tr>
<td>• Refer to prescriber if troublesome or persistent.</td>
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</tbody>
</table>

Side effects with ongoing treatment
### Extrapyramidal side effects (EPSEs)
- EPSEs include dystonia (muscle spasm), akathisia (restlessness), pseudo-parkinsonism (stiffness and shakiness), and tardive dyskinesia (involuntary abnormal movements).
- Most common with older antipsychotics such as haloperidol, trifluoperazine, zuclopenthixol, flupentixol, and chlorpromazine, or with higher doses of risperidone.
- Anticholinergic medication (e.g. procyclidine) is sometimes used to treat dystonia and pseudo-parkinsonism, but is unhelpful for akathisia and worsens tardive dyskinesia.
- Dose reduction or a switch to a different antipsychotic is sometimes required to address EPSEs.
- Refer the patient to the prescriber if EPSEs are new or no longer tolerated.

### Hyperglycaemia and diabetes
- Most common with clozapine and olanzapine.
- This can be linked to weight gain. Give lifestyle advice.
- Refer to the prescriber for glucose monitoring.

### Photosensitivity
- Commonly associated with chlorpromazine.
- Advise use of sunscreen and avoiding exposure to sunlight.

### Hyperprolactinaemia
- Hyperprolactinaemia is most common with risperidone, paliperidone, amisulpride, and sulphiride.
- This can be asymptomatic but can also cause symptoms such as sexual dysfunction, breast growth, galactorrhoea, and menstrual disturbances.
- Refer to the prescriber because a change in medication may be needed.

### Blood dyscrasias
- Symptoms: unexplained bleeding, sore throat, flu like symptoms, and fever.
- Can occur with clozapine, risperidone, olanzapine, and quetiapine.
- Requires urgent referral to prescriber and full blood count.

### Hypersalivation
- Commonly seen with clozapine.
- Use extra pillows and a towel on the pillow at night.
- Anticholinergic medication (e.g. hyoscine hydrobromide) can help with this.
- Refer to prescriber.

### Side effects associated with stopping treatment
- These can occur with some antipsychotics and can include insomnia, nausea, headache, diarrhoea, vomiting, dizziness, and irritability.
- Additionally, there is a risk of symptoms returning when antipsychotic medication is stopped (relapse of illness).
- These risks can be reduced by gradual rather than abrupt discontinuation of the antipsychotic.
- Refer the patient to the prescriber if the patient wishes to stop antipsychotic treatment.

### Recommended physical health monitoring for antipsychotics:
- Baseline U&Es, full blood count, liver function tests, thyroid function then annually.
- Lipid profile at baseline, 3 months then annually.
- Fasting plasma glucose baseline and at 4-6 months then annually.
- Baseline weight and frequently monitored for first 3 months then annually.
- Baseline lipid profile, and then at 3 months and annually.
- Prolactin at baseline, 6 months, and then annually.
- Blood pressure baseline and frequently in dose titration.
- ECG baseline and annually or more often where cardiac risk factors are present.
- Annual physical health check discussing alcohol, smoking status, and lifestyle interventions.
- Clozapine – full blood count weekly for the first 18 weeks then fortnightly until 52 weeks then 4 weekly. Blood pressure, pulse and temperature should be monitored closely during titration.

**Significant drug and other interactions** (refer to the BNF for more)

- Caution is needed with medications that may cause electrolyte imbalance or prolong the QTc interval e.g. citalopram and escitalopram are contraindicated with other medications that prolong QTc. Regular ECGs should be recommended where such combinations are unavoidable.
- Antiepileptic medication – antipsychotics lower the seizure threshold.
- Cytotoxic medication and certain antibiotics increase the risk of blood disorders with clozapine.
- The polycarbons in cigarette smoke can increase the metabolism of antipsychotics via CYP1A2 induction. Stopping smoking can lead to increased plasma levels of clozapine, olanzapine, haloperidol and chlorpromazine which may cause side effects and necessitate dose adjustments.

**Key counselling points:**

- **Early effects** - often the side effects such as sedation, anticholinergic side effects, and postural hypotension will wear off.
- **How/when to take it** – If taking medication is difficult for the patient once daily dosing or long acting depot medications may be appropriate.
- **Missed doses** - never double up on any medication. If a dose has been missed, then take the dose as soon as it is remembered, unless it is nearly time for the next dose. Any missed doses should be communicated to the doctor or mental health team.
- **Time to effect** – most oral medication will take 4-6 weeks to have an effect, the benefits of clozapine can continue develop up to a year after initiation. Depot medication can take up to 2-3 months to reach steady state and will usually be trialled for up to 6 months.
- **Alcohol** – if you drink alcohol with certain antipsychotics, then this can increase sedation. Whether or not to drink alcohol with antipsychotics will depend on a number of factors including whether the dose is stable, if other sedating medications are taken, how much alcohol is consumed, and if the patient has any other co-morbidities. Driving after drinking alcohol whilst on antipsychotic medication is not recommended and patients should be counselled to drink within safe limits.
- **Driving** – some antipsychotics can affect alertness, concentration and cause blurred vision. It can be more common at the start of treatment and after increasing the dose. If medication has this effect, then it is important to avoid driving. The DVLA may also need to be notified – refer to the prescriber.
- **Pregnancy/breastfeeding** - Some medications can increase prolactin and affect fertility. Refer to prescriber or mental health services if in the planning phase to discuss risks to mother and baby from taking medicines during pregnancy and possible. If pregnant, then there can be even more risks from stopping medicines suddenly and referral is needed to discuss background risk factors and monitor mental state throughout pregnancy and breastfeeding.
- **Duration of treatment** – Every individual responds differently so it will depend on a number of factors including how unwell the patient has been, how bad the symptoms have been, what the indication is and the balance of risk of becoming unwell and taking medications. Relapse rates are
around 80% in patients with schizophrenia who are untreated. Therefore, long term antipsychotic medication is an important relapse prevention strategy and concordance is imperative.

- **Discontinuation** – Relapse is common if treatment is stopped too early. Symptoms will usually come back within 3-6 months, sometimes sooner. Stopping abruptly can also cause discontinuation symptoms. Monitoring of symptoms should occur for at least 2 years after discontinuation. Any concerns should be discussed with the prescriber. More detailed information can be found on the Handy Fact Sheet on "Stopping or coming off medicines" Choice and Medication website.

**Advise the patient to contact their care team / consider contacting their care team if:**

- Side effects are problematic and the patient is contemplating stopping medications.
- Noted deterioration in the patient’s mental health e.g. confusion, reduced attendance for prescriptions, change in behavior or mood, paranoia/increased anxiety, poor sleep reported. Signs and symptoms will vary for each person, it is useful to discuss such signs with your patient in advance as you build a relationship with them.
- Changes in menstruation or sexual function and if planning a pregnancy or pregnant.

**Refer urgently if:**

- Missed doses of clozapine due to risk of seizure and/or agranulocytosis where 48hrs or more are missed and clozapine is restarted at the same dose – refer urgently.
- Symptoms of blood dyscrasias such as fever, sore throat, malaise, chills, or signs of infection.
- Symptoms of tardive dyskinesia such as involuntary movement of tongue, face, and jaw.
- Symptoms of parkinsonism such as rigidity, tremor, slowness of movement, dystonia, or akathisia.
- Cardiovascular symptoms such as breathlessness, ankle oedema, and chest pain.
- Symptoms of neuroleptic malignant syndrome such as raised temperature, severe muscle rigidity, confusion, sweating, and incontinence.
- Severe or prolonged constipation or signs of gastrointestinal bleeding with clozapine.

**More information at:**


Choice and Medication website which your local mental health trust may be able to provide access to.

Royal College of Psychiatrists: [http://www.rcpsych.ac.uk/](http://www.rcpsych.ac.uk/)

[www.patient.co.uk](http://www.patient.co.uk)