

# RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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## Depot antipsychotics

Antipsychotics are the mainstay in the pharmacological management of schizophrenia. They reduce symptoms and, when used as maintenance treatment, reduce relapse. The success of antipsychotic treatment may however be lessened by poor compliance due to reasons including side effects, level of insight, and severity of illness.

Depot or long acting injectable antipsychotics were first developed in the 1960s in an effort to promote compliance. Their use is primarily reserved for maintenance treatment when relapse prevention is indicated, although some patients may also voluntarily choose this route of administration.

Possible advantages of depot over oral antipsychotics include:

- Improved adherence to treatment
- Easier early detection of relapse
- Increased opportunity for psychosocial support
- Reduced risk of accidental or deliberate self-poisoning
- Consistent drug delivery due to more predictable and stable serum concentrations

Possible disadvantages include:

- Lack of flexibility should side-effects develop or when titrating the dose (dose increases with depot formulations can take three to six months to take effect)
- Local tissue reactions at the injection site
- Feeling of being “controlled”
- Perception of stigma

Previously, only conventional antipsychotics (flupenthixol, fluphenazine, haloperidol and zuclopenthixol) were available as depot formulations in Australia. These formulations are produced via esterification and consist of the decanoate form of the antipsychotic. When injected deeply into muscle, the ester slowly diffuses into the circulation with a prolonged duration of action. After hydrolysis, the free form of the drug is released.

Only recently has a long acting injectable formulation of an atypical antipsychotic become available in Australia. Risperidone depot uses risperidone molecules in a synthetic and absorbable polymer microsphere base suspended in water. After a single intramuscular injection, there is a small initial release of drug (<1% of the dose), followed by a lag time of 3 weeks. Antipsychotic supplementation should therefore be given during the first 3 weeks of treatment. Depot formulations of olanzapine and paliperidone (a derivative of risperidone) are also reportedly being trialled.

Depot preparations are given by deep intramuscular (IM) injection usually every 2 to 4 weeks. Before commencement, a small test dose is advised to be given in order to check for adverse effects. As it may take several months for patients to stabilise on a depot, oral antipsychotic supplementation may initially be required. This may also apply at times of acute exacerbation. Doses of depot antipsychotics should not be raised or lowered for minor reasons over short periods as this has the potential to increase adverse effects or compromise symptom control.

As with the oral antipsychotics, atypical agents are generally preferred due to better tolerability and reduced risk of extrapyramidal side effects such as tardive dyskinesia. Where a patient is clinically stable on a conventional depot, the continuation of this treatment is normally recommended, however risks and benefits of treatment options need to be taken into account.

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