

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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Drug-induced depression

A number of drugs may contribute to the aetiology of depressive symptoms and depressive disorders, although this is not a common sole cause for major depression. Listed below are a range of drugs or other substances that have been implicated in causing depression, either during treatment or withdrawal. In most cases, little empirical evidence is available or the evidence is conflicting, and a large number of drugs are associated with depression only by case reports. Further discussion of the association between the highlighted drugs (*italicised*) and depression is provided below.

If drug-induced depression is suspected, careful questioning about the timing of drug administration in relation to the symptoms is important. If suspected, the drug may be withdrawn (if appropriate) and the patient monitored for a correlation between relief of symptoms and washout (about five half lives) to confirm or refute the diagnosis.

Some evidence (clinical trials or several case reports showing association)	<i>α</i> -interferon, anticonvulsants, corticosteroids, interleukin-2, <i>isotretinoin</i> , mefloquine, progesterone (particularly with implanted progestin-releasing contraceptives)
Weak, controversial, or conflicting evidence	ACE inhibitors, acitretin, alcohol (abuse), benzodiazepines, beta-blockers (esp. propranolol), <i>β</i> -interferon, calcium channel blockers, ecstasy, finasteride, GnRH analogues, HMG-CoA reductase inhibitors, levodopa, marijuana abuse, methyldopa, metronidazole, neuroleptics, quinolones, tamoxifen, topiramate, zolpidem
Withdrawal symptom	alcohol, benzodiazepines, caffeine, corticosteroids, nicotine

α-interferon

Interferon-induced depression has been shown to be highly responsive to antidepressant treatment.

Isotretinoin

The association between isotretinoin and depression appears controversial. A causal relationship has not been demonstrated in the medical literature. In fact, some evidence suggests isotretinoin may improve psychiatric symptoms in patients with acne. However, numerous case reports describe depression, suicidal behaviour and completed suicide, possibly associated with this drug, including many with positive dechallenge and rechallenge. Caution is warranted. Patients and their relatives should be educated to look for symptoms of depression, and these should be actively assessed at each visit. Note also that severe acne is associated with an increased incidence of depression and suicidality.

Beta-blockers (especially propranolol)

The evidence linking beta-blockers with depression is controversial. A recent systematic review found no increase in depressive symptoms with beta-blockers, and only a small increased risk of fatigue. It is generally thought that fatigue and exercise intolerance sometimes associated with these agents can be misinterpreted as signs of a depressive illness. However, case reports do describe depressive symptoms particularly with propranolol, and trials to date have numerous methodological limitations, such that the presence of an association cannot be ruled out.

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FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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