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Ketoconazole

Ketoconazole is an azole medicine used to treat [fungal infections](#). It is effective against a broad spectrum of fungi including:

- [Dermatophytes](#) (tinea infections)
- Yeasts such as [candida](#) and [malassezia](#).

In New Zealand, ketoconazole is available as 200 mg Tablets (Nizoral®) on prescription. Pharmaceutical Schedule subsidy of the capsules requires Specialist recommendation. Oral ketoconazole is less often prescribed than in past years, because the newer azole drugs, [itraconazole](#) and [fluconazole](#), are less likely to upset liver function.

Ketoconazole 2% Cream (Nizoral Cream®) daily and 2% Shampoo (Nizoral®, Sebizole®) twice weekly are used for [seborrhoeic dermatitis](#), a common scaly rash affecting scalp and face. They are subsidised on prescription, but can also be obtained over the counter at a chemist.

Ketoconazole binds to the fungal p450 enzymes and stops the cells making ergosterol, the main component of the cell wall.

The medication is somewhat better absorbed orally when it is taken with a fatty meal or acidic drink (e.g. orange juice). It is bound to proteins such as albumin in the circulating blood and is widely distributed in body tissues. It takes three to ten hours for half of the medication to be cleared from the blood stream. The rest is eliminated in faeces and urine either unchanged or after conversion by the liver into inactive compounds.

Ketoconazole reaches the surface of the skin through normal blood circulation, sweat and sebum (skin oils). Very high concentrations of the drug develop within the skin, so it is effective in treating superficial fungal infections.

Dose regime

The oral dose of ketoconazole in adults is 200 – 400 mg daily, taken for two to eight weeks (a single dose may be effective for [pityriasis versicolor](#)). Nail infections are treated for up to twelve months.

The dose in children is usually 50 mg per day for those weighing less than 20 kg and 100mg daily for those 20–40 kg.

Side effects

The main concern with ketoconazole is the risk of liver problems, usually after it has been taken for prolonged periods (weeks). Side effects may include:

- Nausea and vomiting.
- Constipation.
- Headache.
- Dizziness.
- Abnormal liver function tests (15%); severe hepatitis can occur in 1:10,000 patients.
- Allergic skin rash including [urticaria](#).
- Endocrine effects including enlarged breasts (in males), alopecia and impotence.

Ketoconazole should **not** be taken in pregnancy. Although only excreted in tiny amounts from breast milk, it

should only be taken by a breast-feeding mother if essential.

Drug interactions

Unfortunately, ketoconazole can interact with other medications.

As ketoconazole needs acid for its absorption, antacids, H2 antagonists (cimetidine, famotidine, ranitidine) and omeprazole should not be taken for 2 hours after ketoconazole.

Ketoconazole interacts with alcohol rather like disulfiram (Antabuse®) and can cause severe nausea and vomiting.

Ketoconazole may increase the concentration of these drugs and enhance their effect:

- Warfarin
- Methyl prednisolone
- Cisapride
- The [antihistamines](#) astemizole (Hismanal®) and terfenadine (Teldane®)
- [ciclosporin](#)
- Midazolam, triazolam
- Busulfan
- HMG Co-A reductase inhibitors (atorvastatin, fluvastatin, pravastatin, simvastatin)
- Antidiabetic sulphonylurea medication (tolbutamide, glibenclamide, gliclazide, glipizide)

The following drugs markedly decrease the concentration of ketoconazole:

- [Rifampicin](#)
- Isoniazid
- Phenytoin
- Carbamazepine

Ketoconazole is **not** thought to interact with the oral contraceptive pill.

Related information

On DermNet NZ:

- [Introduction to fungal infections](#)
- [Treatment of fungal infections](#)

Other websites:

- [Medsafe](#) consumer information on Nizoral tablets

Books about fungal infections:

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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