

# KEY WORDS OF MODERN ANTIFUNGAL THERAPY

## CYTOCHROME P450

### OR WHAT'S IN A NAME...

The metabolism of fungi is almost identical to that of other eukaryotic organisms, such as humans. Therefore, trying to design a systemic drug that kills fungi without harming their human host means searching for infinitesimal differences in metabolic pathways.

**Selective precision** for the metabolic pathways in fungi, as distinct from those in humans, remains the key determinant for any systemic antimycotic, regardless of its point of biochemical interaction. This precision has been achieved to an exceptional degree with itraconazole, alias Sporanox\*, because it selectively inactivates the fungal cytochrome P450 only.

Figure 1

Figure 1 is a simplified illustration of one of the pathways for the enzymatic ergosterol synthesis in fungal cell membranes. (Ergosterol is essential for the structural cohesion of these membranes). Pharmacologically one can disrupt this process at two distinct points. The first is where squalene is made into an oxide. Alternatively, one can interfere where lanosterol is converted into ergosterol, by inactivating **cytochrome P450** — a chemical catalyst that performs a vital function in the enzymatic reaction. The broadest research experience to date has been gathered with the latter approach. Importantly, in view of the close similarities between the enzymatic processes in fungi and humans, either approach must be highly selective in disrupting the fungal enzyme systems only.

# Sporanox\*

itraconazole

## SHORT AND SIMPLE ORAL THERAPY

standard dose in dermatomycoses: 1 capsule (100 mg) once daily for 15 days

standard dose in vaginal candidosis: 2 x 2 capsules (400 mg) for 1 day only

\* Trademarks: SPORANOX, SEMPERA, SISTIZOL, TRISPORAL.

**Properties:** Sporanox (itraconazole), a triazole derivative, is orally active against infections with dermatophytes (*Trichophyton* spp., *Microsporum* spp., *Epidermophyton floccosum*), yeasts (*Candida* spp., *Pityrosporum* spp.), *Aspergillus* spp. and various other yeasts and fungi. **Indications:** Sporanox (itraconazole) is indicated for vulvovaginal candidosis, pityriasis versicolor, dermatophytoses, fungal keratitis and oral candidosis. **Dose and administration:** Vulvovaginal candidosis: 2 capsules (200 mg) morning and evening for 1 day, Pi-

tyriasis versicolor: 2 capsules (200 mg) once daily for 7 days. - Tinea corporis, tinea cruris, tinea pedis, tinea manus: 1 capsule (100 mg) daily for 15 days; highly keratinized regions, as in plantar tinea pedis and palmar tinea manus, require 1 capsule (100 mg) daily for 30 days. - Oral candidosis: 1 capsule (100 mg) daily for 15 days. - Fungal keratitis: 2 capsules (200 mg) once daily for 21 days. **Contra-indications:** Sporanox (itraconazole) is contra-indicated during pregnancy. **Warnings and precautions:** Although clinically Sporanox (itraconazole)

has not been associated with hepatic dysfunction, it is advisable not to give this drug to patients with a known history of liver disease. **Nursing mothers:** It is recommended not to breast feed whilst taking Sporanox (itraconazole).

**Drug Interactions:** Sporanox (itraconazole) should not be given concomitantly with rifampicin.

Full prescribing information is available on request.

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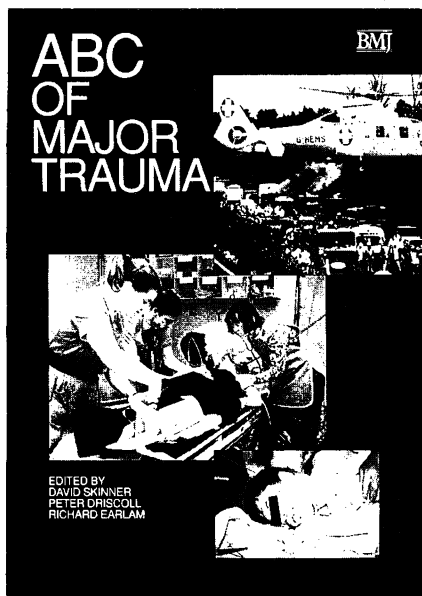
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**March 1991**

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The second edition of the *ABC of Resuscitation* incorporates the latest standards and guidelines for cardiopulmonary resuscitation issued by the Resuscitation Council (UK) in 1989. The are three new chapters—one on trauma, one on resuscitation in late pregnancy, and one on avoiding HIV infection—and throughout, recommendations have been updated where necessary and other revisions have been made in view of current theory and practice. Written by members of the Resuscitation Council (UK) and other invited experts, the new edition of *ABC of Resuscitation* offers the most up to date information and advice on this vital aspect of health care.

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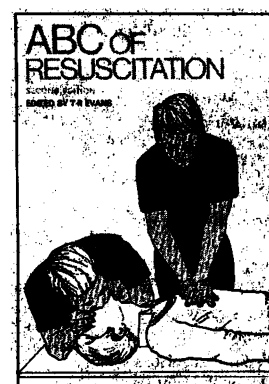
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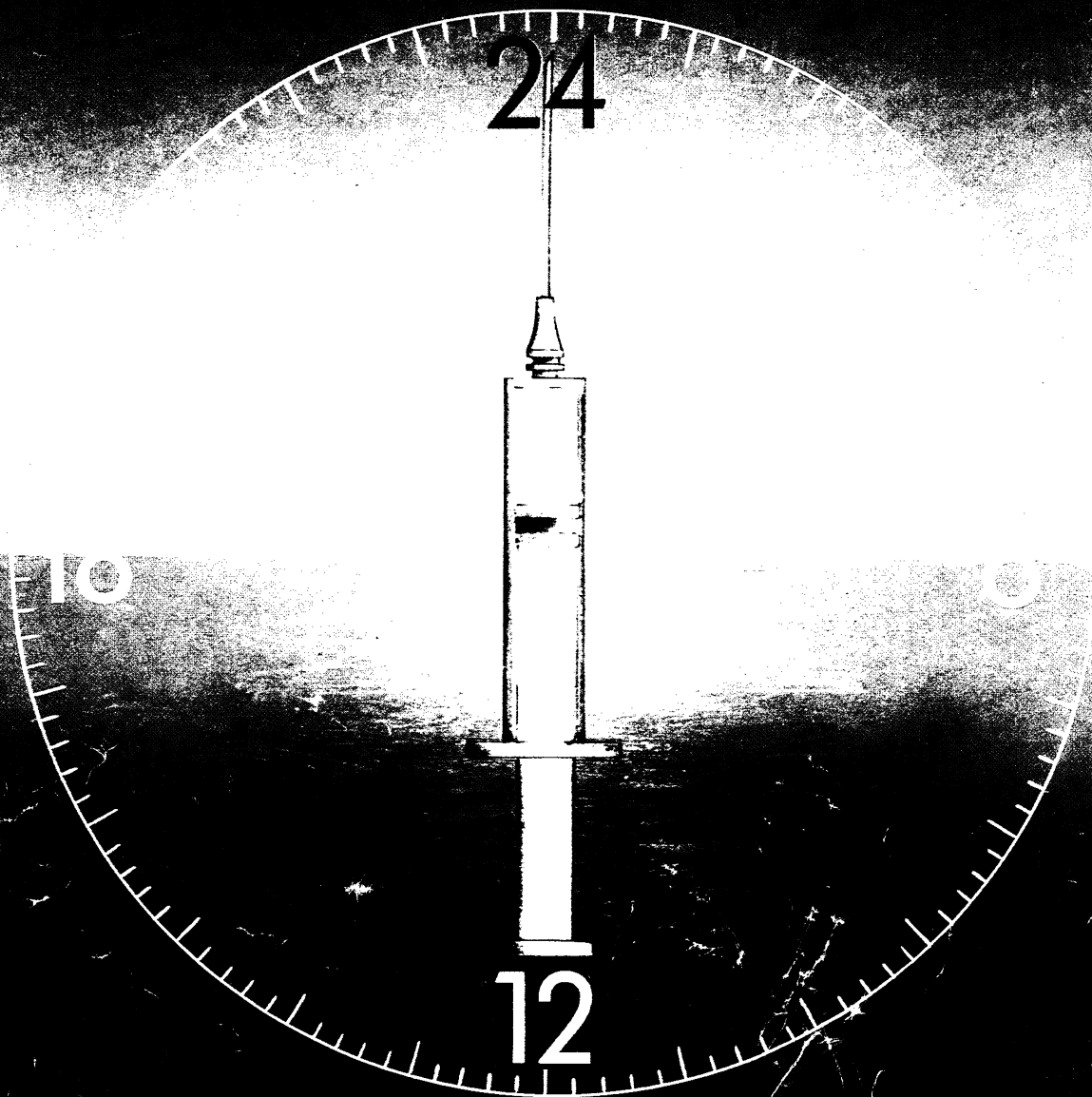
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ceftriaxone

## 24-HOUR BACTERICIDAL POWER

### Indications

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### Dosage

Usual dosage for adults: 1-2 g once daily (every 24 hours). Further informations on administration and special dosage recommendations are available on request.

### Contraindications

Known hypersensitivity to cephalosporins.

### Precautions

Pregnancy (particularly in the first trimester), unless absolutely necessary. Hypersensitivity to  $\beta$ -lactam antibiotics (possibility of allergic cross-reactions, anaphylactic shock).

### Side effects

Gastrointestinal complaints. Hematological changes. Skin reactions.

Full details are available on request.

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