

ANTIMICROBIALS ANTIFUNGALS

Ringworm:

Microsporum spp,
Trichophyton spp

Candidia

Systemic fungal infections:

Aspergillus spp



ANTIMICROBIALS ANTIFUNGALS Griseofulvin

GRISEOFULVIN

(Penicillium griseofulvum)

Microtubular toxin - active uptake by fungi

- inhibits fungi (slow acting fungistatic)
- keratin precursor/stratum corneum



ANTIMICROBIALS ANTIFUNGALS

GRISEOFULVIN (microsize, ultramicrosize)

Absorption: improved with fatty foods

Distribution: keratinised tissues, fat, liver,
skeletal muscle

Liver metabolism: inactivated

induces hepatic mixed function oxidase

Excretion: urine

ANTIMICROBIALS ANTIFUNGALS

GRISEOFULVIN

Contraindications:

- liver disease
- hypersensitivity
- pregnancy
- cats with FIV

ANTIMICROBIALS ANTIFUNGALS

GRISEOFULVIN

Adverse Effects:

- teratogenic
- diarrhoea, depression, anorexia, fever
- anaemia, leukopaenia, neutropenia
- hepatotoxicity (uncommon)
- neurological effects in kittens - ataxia

ANTIMICROBIALS ANTIFUNGALS

AMPHOTERICIN B

- Polyene antibiotic

Binds to ergosterol

- fungal cell membrane



ANTIMICROBIALS ANTIFUNGALS

AMPHOTERICIN B - USES:

- Systemic infections
 - Aspergillosis, etc
- Yeast infections
 - candidia



ANTIMICROBIALS ANTIFUNGALS

AMPHOTERICIN B

- Not absorbed orally
- IV in 5% dextrose
- Poor distribution to CNS, eye, muscle or bone
- Elimination - slow binds to lipids

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AMPHOTERICIN B - Adverse Effects

- Renal toxicity
Monitor renal function

Note: Newer formulations with liposomes or lipid complexes reduce nephrotoxicity

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AMPHOTERICIN B - Side Effects

- Fever
- Anorexia
- Nausea

ANTIMICROBIALS ANTIFUNGALS

AZOLES

- MICONAZOLE
- KETOCONAZOLE
- CLOTRIMAZOLE
- ITRACONAZOLE
- FLUCONAZOLE
- ENILCONAZOLE



ANTIMICROBIALS ANTIFUNGALS

AZOLES

- Inhibit ergosterol synthesis
- Broad spectrum
- Dose dependent - static or cidal

ANTIMICROBIALS ANTIFUNGALS

AZOLES - USES

- systemic fungal infections
 - nasal aspergillosis
- yeast infections
- hyperadrenalcorticism



ANTIMICROBIALS ANTIFUNGALS

AZOLES - SIDE EFFECTS

- anorexia, vomiting and/or diarrhoea
- depression
- hepatotoxicity
- suppression of adrenal & gonad steroids

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SUMMARY

Griseofulvin

Fungistatic, ringworm, slow action,
keratin deposition, teratogenic, fatty
meals ↑ absorption

Polyenes (amphotericin B) - nephrotoxic

Azoles (ketoconazole) - systemic mycoses