

ANTIBACTERIALS > OTHER

Nitrofurantoin

11-May-2020

● INDICATIONS AND DOSE

Lower urinary-tract infections

- ▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES
- ▶ Child 3 months–11 years: 750 micrograms/kg 4 times a day for 3 days
- ▶ Child 12–15 years: 50 mg 4 times a day for 3 days (7 days in pregnant women)
- ▶ Child 16–17 years: 50 mg 4 times a day for 3 days (7 days in males and pregnant women)
- ▶ BY MOUTH USING MODIFIED-RELEASE MEDICINES
- ▶ Child 12–15 years: 100 mg twice daily for 3 days (7 days in pregnant women)
- ▶ Child 16–17 years: 100 mg twice daily for 3 days (7 days in males and pregnant women)

Urinary-tract infections (catheter-associated)

- ▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES
- ▶ Child 16–17 years: 50 mg 4 times a day for 7 days, to be used if modified-release preparations are unavailable
- ▶ BY MOUTH USING MODIFIED-RELEASE MEDICINES
- ▶ Child 16–17 years: 100 mg twice daily for 7 days

Severe chronic recurrent urinary-tract infections

- ▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES
- ▶ Child 12–17 years: 100 mg 4 times a day for 3–7 days

Prophylaxis of recurrent urinary-tract infection

- ▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES
- ▶ Child 3 months–11 years: 1 mg/kg once daily, dose to be taken at night
- ▶ Child 12–15 years: 50–100 mg once daily, dose to be taken at night
- ▶ Child 16–17 years: 50–100 mg once daily, dose to be taken at night, alternatively 100 mg for 1 dose, following exposure to a trigger

Genito-urinary surgical prophylaxis

- ▶ BY MOUTH USING MODIFIED-RELEASE MEDICINES
- ▶ Child 12–17 years: 100 mg twice daily on day of procedure and for 3 days after

- **UNLICENSED USE** [EvGr] Duration of treatment for lower urinary-tract infection differs from product literature and adheres to national guidelines. ⚠ See Urinary-tract infections p. 400 for further information. [EvGr] Nitrofurantoin can be given as a single dose for the prophylaxis of recurrent urinary tract infection following exposure to a trigger, ⚠ but this dosing regimen is not licensed. See Urinary-tract infections p. 400 for further information.
- **CONTRA-INDICATIONS** Acute porphyrias p. 652 · G6PD deficiency · infants less than 3 months old
- **CAUTIONS** Anaemia · diabetes mellitus · electrolyte imbalance · folate deficiency · pulmonary disease · susceptibility to peripheral neuropathy · urine may be coloured yellow or brown · vitamin B deficiency
- **INTERACTIONS** → Appendix 1: nitrofurantoin
- **SIDE-EFFECTS** Agranulocytosis · alopecia · anaemia · angioedema · aplastic anaemia · appetite decreased · arthralgia · asthenia · chest pain · chills · circulatory collapse · confusion · cough · cyanosis · depression · diarrhoea · dizziness · drowsiness · dyspnoea · eosinophilia · euphoric mood · fever · granulocytopenia · haemolytic anaemia · headache · hepatic disorders · idiopathic intracranial hypertension · increased risk of infection · leucopenia · lupus-like syndrome · nausea · nerve disorders · nystagmus · pancreatitis · psychotic disorder · pulmonary hypersensitivity · pulmonary reaction (possible association with lupus erythematosus-like syndrome) · respiratory disorders · skin reactions · Stevens-Johnson syndrome ·

thrombocytopenia · urine discolouration · vertigo · vomiting

- **PREGNANCY** Avoid at term—may produce neonatal haemolysis.
 - **BREAST FEEDING** Avoid; only small amounts in milk but enough to produce haemolysis in G6PD-deficient infants.
 - **HEPATIC IMPAIRMENT** Manufacturer advises caution.
 - **RENAL IMPAIRMENT** Risk of peripheral neuropathy; antibacterial efficacy depends on renal secretion of the drug into urinary tract. Avoid if estimated glomerular filtration rate less than 45 mL/minute/1.73 m²; may be used with caution if estimated glomerular filtration rate 30–44 mL/minute/1.73 m² as a short-course only (3 to 7 days), to treat uncomplicated lower urinary-tract infection caused by suspected or proven multidrug resistant bacteria and only if potential benefit outweighs risk.
 - **MONITORING REQUIREMENTS** On long-term therapy, monitor liver function and monitor for pulmonary symptoms (discontinue if deterioration in lung function).
 - **EFFECT ON LABORATORY TESTS** False positive urinary glucose (if tested for reducing substances).
 - **PATIENT AND CARER ADVICE** Medicines for Children leaflet: Nitrofurantoin for urinary tract infections www.medicinesforchildren.org.uk/nitrofurantoin-urinary-tract-infections
 - **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug. Forms available from special-order manufacturers include: oral suspension, oral solution
- Tablet**
- CAUTIONARY AND ADVISORY LABELS 9, 14, 21
- ▶ **Nitrofurantoin (Non-proprietary)**
 - Nitrofurantoin 50 mg** Nitrofurantoin 50mg tablets | 28 tablet [PoM] £31.33 DT = £10.41 | 100 tablet [PoM] £28.21-£111.89
 - Nitrofurantoin 100 mg** Nitrofurantoin 100mg tablets | 28 tablet [PoM] £12.99 DT = £8.66 | 100 tablet [PoM] £21.07-£38.14
 - ▶ **Genfura** (Genesis Pharmaceuticals Ltd)
 - Nitrofurantoin 50 mg** Genfura 50mg tablets | 28 tablet [PoM] £8.00 DT = £10.41 | 100 tablet [PoM] £28.57
 - Nitrofurantoin 100 mg** Genfura 100mg tablets | 100 tablet [PoM] £30.36

Oral suspension

CAUTIONARY AND ADVISORY LABELS 9, 14, 21

- ▶ **Nitrofurantoin (Non-proprietary)**
- Nitrofurantoin 5 mg per 1 ml** Nitrofurantoin 25mg/5ml oral suspension sugar free sugar-free | 300 ml [PoM] £446.95-£603.38 DT = £525.17

Modified-release capsule

CAUTIONARY AND ADVISORY LABELS 9, 14, 21, 25

- ▶ **Macrobid** (Advanz Pharma)
- Nitrofurantoin 100 mg** Macrobid 100mg modified-release capsules | 14 capsule [PoM] £9.50 DT = £9.50

Capsule

CAUTIONARY AND ADVISORY LABELS 9, 14, 21

- ▶ **Nitrofurantoin (Non-proprietary)**
- Nitrofurantoin 50 mg** Nitrofurantoin 50mg capsules | 30 capsule [PoM] £16.47 DT = £12.20
- Nitrofurantoin 100 mg** Nitrofurantoin 100mg capsules | 30 capsule [PoM] £10.43 DT = £10.43

2 Fungal infection

Antifungals, systemic use

Fungal infections

The systemic treatment of common fungal infections is outlined below; specialist treatment is required in most forms of systemic or disseminated fungal infections. Local