

# Nitrofurantoin

**Nitrofurantoin** belongs to the group of nitrofurans and is used for the treatment and prophylaxis of **urinary and vaginal infections** (urinary disinfectants). It has **bactericidal** effects.

## Pharmacokinetics

It is administered orally and preferably **with food**, thereby increasing absorption. It does not reach effective concentrations in tissues and blood, but is rapidly eliminated by the kidneys, where it is concentrated **only in the interstitium**. A small amount is excreted in the bile. In renal insufficiency, it is "contraindicated" because it does not produce effective concentrations in the urine and, in addition, can reach toxic levels in the serum.

## Pharmacodynamics

The mechanism of action is likely to be **inhibition of bacterial enzymes** or **interference with the bacterial DNA**.

## Spectrum of effect

- Mainly ***Escherichia coli***, *Klebsiella spp.* and *Enterobacter spp.* which are the dominant etiological agents of urinary tract infections.
- Further *Neisseria gonorrhoeae* (gonorrhea), *Citrobacter spp.*, *Enterococcus spp.* and *Staphylococcus epidermidis* or *saprophyticus*.
- Conversely, *Pseudomonas spp.*, *Proteus mirabilis*, *Acinetobacter spp.* And *Serratia spp.* are resistant.

## Indication

Nitrofurantoin is used to treat:

- acute urinary tract infections,
- genital infections (topical use - vaginal cream).

It can also be used **prophylactically for recurrences of urinary tract infections** and for patients with an indwelling urinary catheter.

## Dosage

1 tbl. (100 mg) **orally** after 6-8 hours to a total dose of 200-400 mg/day.

## Side effects

They are quite common and include **gastrointestinal problems** (vomiting and nausea), severe pulmonary complications (dyspnoea), skin reactions, polyneuropathy and myalgia. Hemolytic anemia is rare.

## Links

### Related articles

- Antibiotics
- Urinary tract infections