

# Vancomycin

**Vancomycin** is Glycopeptide antibiotic.

File:Vankomycin.png

## Pharmacokinetics

It is not absorbed from the digestive tract - it only acts locally when enteral, so it is used to treat **enterocolitis**. It is administered intravenously for systemic effect. It is eliminated by renal excretion in a metabolically unchanged form. Impaired renal excretory function requires dose reduction. It can also accumulate in case of liver insufficiency. The therapeutic window is narrow, so **therapeutic level monitoring** is appropriate.

## Pharmacodynamics

The effect of vancomycin is independent of concentration.

## Indications

Vancomycin is used to treat infections caused by susceptible gram-positive microorganisms and anaerobes - such as peritonitis, sepsis, endocarditis, and to treat other serious diseases. It is administered orally in pseudomembranous colitis. Almost all staphylococcal strains are still susceptible to vancomycin, making this antibiotic the drug of choice for methicillin-resistant staphylococcal infections (MRSA). The use of vancomycin should be reserved for cases where penicillins or cephalosporins cannot be administered, or for patients who have not responded to these antibiotics or for whom there is another specific indication.

## Side effects and toxicity

Phlebitis is formed by local irritation, especially after paravenous application. Ototoxicity and nephrotoxicity are directly dependent on plasma concentrations. Therefore, **control of plasma levels** is recommended. "Red man syndrome", *red man syndrome* (' flush, itching, hypotension, apparently unsensitized release of histamine from mast cells may occur with rapid administration. Therefore, vancomycin is administered by i.v. infusion over at least 1 hour.

## Contraindication

Vancomycin must not be used in allergies to glycopeptide antibiotics. It must not be used i.v. It should be used with caution in hearing loss, renal function and pregnancy. Ototoxicity and nephrotoxicity are increased by concomitant administration of other such toxic substances (eg aminoglycosides).

## Links

### related articles

- Antibiotics
- Glycopeptides
- Exercise: Vancomycin Syrup

### Source

- MARTÍNKOVÁ, J, S MIČUDA and J CERMANOVÁ. Antibiotics [online]. [feeling. 2010-07-14]. < <https://www.lfhk.cuni.cz/farmakol/predn/bak/kapitoly/atb-bak.doc/> >.

### References

- LINCOVÁ, Dagmar and Hassan FARGHALI, et al. Basic and applied pharmacology. 2nd edition. Prague: Galén, 2007. ISBN 978-80-7262-373-0 .

### Reference

- SÚKL ,. SPC on VANCOMYCIN KABI 500 MG [online]. [feeling. 2016-04-26]. < <http://www.sukl.cz/modules/medication/detail.php?code=0156258&tab=texts> >.