

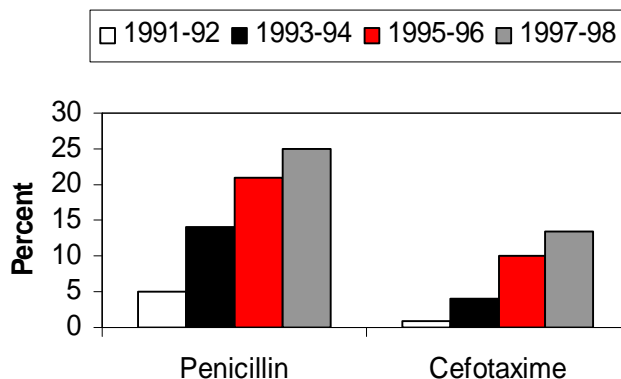
CAREFUL ANTIBIOTIC USE

RESISTANCE AND ANTIBIOTIC USE¹

The emerging threat of antibiotic resistance

The rate of drug resistant bacteria is dramatically increasing.²

Proportion of *S. pneumoniae* isolates not susceptible to penicillin or cefotaxime, identified by national surveillance from the CDC.



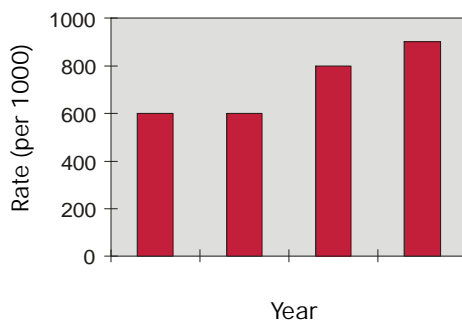
Over the past 5 years, the rate of penicillin resistance increased by more than 300% and the rate of cefotaxime resistance increased by more than 1000%.

Some pneumococci are resistant to all oral antibiotic agents.

Pneumococci have developed resistance to cephalosporins, erythromycin, trimethoprim-sulfamethoxazole, quinolones, and other agents. The only remaining antibiotic that is effective against all pneumococci is vancomycin.

Increasing antibiotic use is a likely cause.

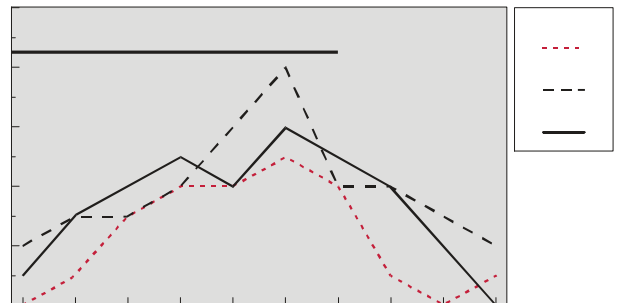
Antimicrobial prescription rate in children by office-based physicians, 1980-1992



A national office-based study suggested an increase of 48% in antibiotic prescribing for children.³

Antibiotics foster resistance in individual patients . . . In cases where they are not necessary, is it worth the risk?

Antimicrobial prophylaxis and carriage of penicillin-resistant pathogens⁴



Even prophylactic doses cause resistant organisms to proliferate.

Does antibiotic resistance put patients at risk for adverse clinical outcomes?

Seven studies have identified recent antibiotic use as a risk factor for invasive disease with nonsusceptible pneumococci.⁵

Otitis media with penicillin non-susceptible strains has an increased risk of bacteriologic and clinical treatment failure, even with commonly used cephalosporins.⁶

Experts now suggest vancomycin for empiric treatment of meningitis and other life threatening infections, to cover for penicillin resistance.

References

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6. Dagan R, Abramson O et al. Impaired bacteriologic response to oral cephalosporins in acute otitis media caused by pneumococci with intermediate resistance to penicillin. *Pediatr Infect Dis J*. 1996;15:980-85.