

Disease of the Day

Gonorrhoea

A bacterial sexually transmitted disease

Causative organism

✓ *Neisseria gonorrhoeae*

- Gram (-) cocci
- Diplococcus

- Fastidious
 - Chocolate agar - enriched
 - Thayer-Martin medium - selective
 - ✦ Vancomycin - inhibits Gram (+)
 - ✦ Colistin & trimethoprim lactate - inhibits Gram (-) rods
 - ✦ Nystatin - inhibit fungi

Transmission

✓ Direct contact

- Vaginal sex
- Oral sex
- Birth canal - neonates
- Anal sex
- Fomites - towels, laundry, sheets

Pathogenesis

- ✓ Pili attach to epithelial cells
- ✓ Pili evade phagocytosis
- ✓ Other surface antigens help attach
- ✓ Endotoxin, proteases, phospholipases
 - Cleave IgA antibodies
- ✓ Hitch rides on sperm?

Diagnosis

✓ *Neisseria gonorrhoeae* identification

- Cultures (Thayer-Martin medium)
- Gram stain of culture and discharge
 - Gram(-) diplococci
- An ELISA test (antibody)
- Nucleic acid probe

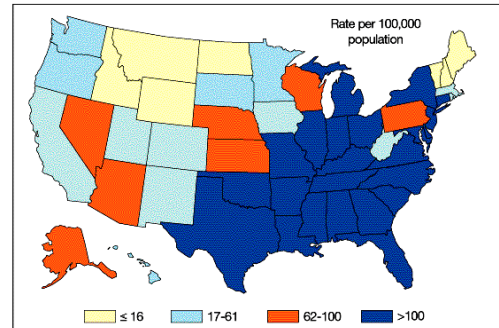
Treatment

- ✓ IM Ceftriaxone
- ✓ Penicillin
- ✓ Tetracycline
- ✓ Combination of ceftriaxone and tetracycline (doxycycline) or azithromycin

Prevention

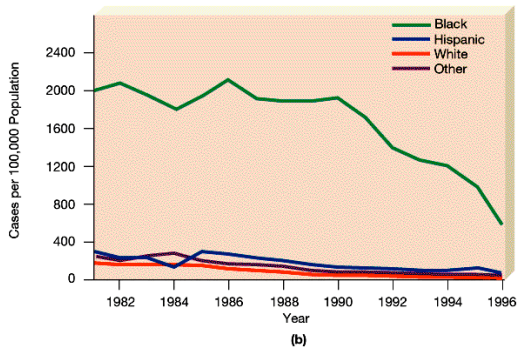
- ✓ No sexual contact
- ✓ Monogamous relationship
- Condoms

US incidence of gonorrhea



(a)

Gonorrhea by ethnicity



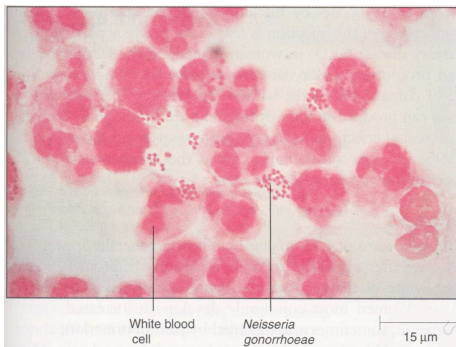
(b)

Streak plate of *Neisseria gonorrhoeae*

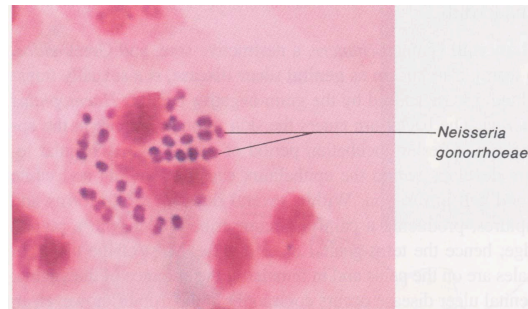


FIGURE 9.16 Streak plate on chocolate agar of *Neisseria gonorrhoeae*, the causative agent of gonorrhea.

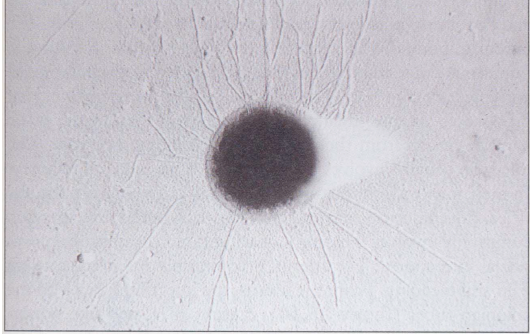
Discharge with *N. gonorrhoeae*



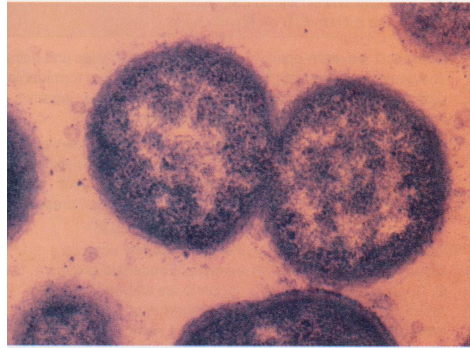
WBC with *N. gonorrhoeae*



Pili of *N. gonorrhoeae*



Diplococcus



Diplococcus

