GONOCOCCAL INFECTIONS

1. **Agent:** *Neisseria gonorrhoea*, (also called gonococcus or GC).

2. **Identification:**

   a. **Symptoms:** A sexually transmitted bacterial disease manifested in males primarily as a urethritis and in females as cervicitis, but differs in males and females in course, severity, and ease of recognition. In males, gonococcal urethritis presents as an acute purulent discharge from the anterior urethra with dysuria. A small percentage of gonococcal infections in males are asymptomatic. In females gonococcal infection may cause mucopurulent cervicitis, but frequently is asymptomatic. Some women may develop abnormal vaginal discharge and vaginal bleeding after intercourse. Pelvic inflammatory disease (PID) may develop with symptoms of endometritis, salpingitis or pelvic peritonitis, and subsequent risk of infertility and ectopic pregnancy.

   In females gonococcal infection may cause mucopurulent cervicitis, but frequently is asymptomatic. Some women may develop abnormal vaginal discharge and vaginal bleeding after intercourse. Pelvic inflammatory disease (PID) may develop with symptoms of endometritis, salpingitis or pelvic peritonitis, and subsequent risk of infertility and ectopic pregnancy.

   b. **Differential Diagnosis:** Clinical manifestations may be indistinguishable from chlamydia.

   c. **Diagnosis:** Because of high sensitivity and specificity, diagnosis of gonorrhea infection can be made by Gram stains of male urethral discharges demonstrating polymorphonuclear leukocytes with intracellular Gram-negative diplococci. Gram stain can not be used for testing endocervical, pharyngeal or rectal specimens.

   Specific testing for *N. gonorrhoea* includes: culture for testing specimens from any site; nucleic acid hybridization and nucleic acid amplification tests (NAAT) for testing of female endocervical or male urethral swab specimens; NAAT can also be used for vaginal swabs and for urine specimens in both men and women.

3. **Incubation:** Usually 2-7 days.

4. **Reservoir:** Strictly a human disease.

5. **Source:** Genital secretions from infected people.

6. **Transmission:** Sexual activity or perinatal transmission from an infected mother to her newborn during delivery.

7. **Communicability:** May extend for months in untreated individuals. People should be considered infectious until 7 days after treatment.

8. **Specific Treatment:**

   For uncomplicated gonococcal infections of the cervix, urethra and rectum in adults, recommended treatment is ceftriaxone (IM) 125 mg in a single dose. Other cephalosporins that may be considered include cefixime 400 mg (PO) in a single dose (if available) or cefpodoxime 400 mg (PO) in a single dose.

Other causes of urethritis and cervicitis can be found in the CDC’s *Sexually Transmitted Disease Treatment Guidelines 2006* (MMWR, Aug 4, 2006; Vol. 55, RR-11).
Due to high rates of drug resistant strains in California, fluoroquinolones should not be used.

For pharyngeal infections only ceftriaxone is recommended at the above dose.

In allergic patients alternate treatments include the use of one of the above cephalosporins after desensitization, or azithromycin 2 grams (PO) in a single dose, or spectinomycin 2 grams (IM) in a single dose (if available).

**NOTE:**
*Patients should also be treated for chlamydia with either azithromycin or doxycycline if that disease has not been ruled out by a sensitive test.*

If a female patient has PID, treatments specific for PID should be followed.

For more detailed treatment recommendations for gonorrhea in California, see the state STD Control Branch website www.dhs.ca.gov/ps/dc/dc/std/stdindex.htm

**REPORTING PROCEDURES**

Report within 1 week of identification of case or suspected case (Title 17, Section 2500, California Code of Regulations).

**CONTROL OF CASE & CONTACTS**

**CASE:**

Isolation: In the medical setting, contact isolation for all newborn infants with gonococcal infection until effective antimicrobial therapy has been administered for 24 hours. Patients should refrain from sexual activity for 7 days after treatment to prevent ongoing transmission to others. To avoid re-infection abstain from sex with previous sexual partner(s) until 7 days after they have been treated.

**Concurrent disinfection:** Care in disposal of discharges from genital secretions, lesions and contaminated articles.

**CONTACTS:**

Sex partners should be evaluated, tested and treated if they had sexual contact with the patient during the 60 days preceding onset of symptoms, or of the date of diagnosis if the patient was asymptomatic. **Presumptive treatment of sexual partners is recommended.** The most recent sex partner should be evaluated and treated even if the time of the last sexual encounter was over 60 days.

All infants born to infected mothers must receive prophylactic treatment. Mothers of infected infants and their sex partners must be tested and treated.

**PREVENTION-EDUCATION**

1. Patients should refrain from sexual intercourse for 7 days after both the patient and current sexual partners have completed treatment.

2. Patients given fluoroquinolones must return for repeat testing with a culture 1 week after treatment to ensure therapeutic cure.

3. Due to high rates of reinfection, re-testing of all infected patients 3 months after treatment is recommended.

4. The U.S. Preventive Services Task Force recommends routine screening for all sexually active females who are at increased risk for gonorrhea. Those at high risk includes women up to age 25, and those who have multiple or new sex partners, inconsistently use condoms, have a previous history of having a STD or use drugs.

5. Presumptive treatment of partners is important to prevent reinfection.

6. Use of newer urine tests may make screening of adolescent and young adults more acceptable.
DIAGNOSTIC PROCEDURES

San Joaquin County Public Health Laboratory services are available. Refer to the Laboratory Services Manual in Section 2, Disease Reporting.

NOTE:
For more detail on diagnosis and treatment of STDs see the CDC’s *Sexually Transmitted Disease Treatment Guidelines 2006 (MMWR, Aug 4, 2006; Vol. 55, RR-11).*