

11. Foxman B, Aral SO, Holmes KK. Interrelationships among douching practices, risky sexual practices, and history of self-reported sexually transmitted diseases in an urban population. *Sex Transm Dis.* 1998;25(2):90-99.

12. Moscicki A-B, Hills NK, Shiboski S, et al. Risk factors for abnormal anal cytology in young heterosexual women. *Cancer Epidemiol Biomarkers Prev.* 1999;8(2):173-178.

13. Bolan G, Ehrhardt AA, Wasserheit JN. Gender perspectives and STDs. In: Holmes KK, Sparling PF, Mardh P-A, et al. *Sexually Transmitted Diseases.* 3rd ed. New York: McGraw-Hill, Health Professions Division; 1999:119-121.

14. McHutchison JG. Hepatitis C advances in antiviral therapy: what is accepted treatment now? *J Gastroenterol Hepatol.* 2002;17(4):431-441.

15. Han SH. Natural course, therapeutic options and economic evaluation of therapies for chronic hepatitis B. *Drugs.* 2006;66(14):1831-1851.

16. Centers for Disease Control and Prevention (CDC). STD-prevention counseling practices and human papillomavirus opinions among clinicians with adolescent patients--United States, 2004. *MMWR Morb Mortal Wkly Rep.* 2006;55(41):1117-1120.

17. Mao C, Koutsky LA, Ault KA et al. Efficacy of human papillomavirus-16 vaccine to prevent cervical intraepithelial neoplasia: a randomized controlled trial. *Obstet Gynecol.* 2006;107(1):18-27.

18. National Institute of Allergy and Infectious Diseases. Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention. Bethesda, MD: National Institute of Allergy and Infectious Diseases; 2001. Available from: <http://www.niaid.nih.gov/dmid/stds/condomreport.pdf>. Accessed: 2006 Nov 20.

19. Weller S, Davis K. Condom effectiveness in reducing heterosexual HIV transmission. *Cochrane Database Syst Rev.* 2002;1(CD003255):1-22.

20. Pinkerton SD, Abramson PR. Effectiveness of condoms in preventing HIV transmission. *Soc Sci Med.* 1997;44(9):1303-1312.

21. Davis KR, Weller SC. The effectiveness of condoms in reducing heterosexual transmission of HIV. *Fam Plann Perspect.* 1999;31(6):272-279.

22. Manhart LE, Koutsky LA. Do condoms prevent genital HPV infection, external genital warts, or cervical neoplasia? A meta-analysis. *Sex Transm Dis.* 2002;29(11):725-735.

23. Vaccarella S, Franceschi S, Herrero R, et al, for the IARC HPV Prevalence Surveys Study Group. Sexual behavior, condom use, and human papillomavirus: pooled analysis of the IARC human papillomavirus prevalence surveys. *Cancer Epidemiol Biomarkers Prev.*

2006;15(2):326-333.

24. Winer RL, Hughes JP, Feng Q, et al. Condom use and the risk of genital human papillomavirus infection in young women. *N Engl J Med.* 2006;354(25):2645-2654.

25. Ahmed S, Lutalo T, Wawer M, et al. HIV incidence and sexually transmitted disease prevalence associated with condom use: a population study in Rakai, Uganda. *AIDS.* 2001;15(16):2171-2179.

26. Baeten JM, Nyange PM, Richardson BA, et al. Hormonal contraception and risk of sexually transmitted disease acquisition: results from a prospective study. *Am J Obstet Gynecol.* 2001;185(2):380-385.

27. Shlay JC, McClung MW, Patnaik JL, Douglas JM, Jr. Comparison of sexually transmitted disease prevalence by reported level of condom use among patients attending an urban sexually transmitted disease clinic. *Sex Transm Dis.* 2004;31(3):154-160.

28. Wald A, Langenberg AGM, Link K, et al. Effect of condoms on reducing the transmission of herpes simplex virus type 2 from men to women. *JAMA.* 2001;285(24):3100-3106.

[<http://www.medinstitute.org/content.php?name=stifacts,1/2008>]

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Pamphlet 479

## Facts about Sexually Transmitted Diseases/Infections

**How many STIs are there and what are their names?**

The number of STIs (sexually transmitted infections) will vary depending on what is counted as an STI and whether sexually transmissible infections are also counted.

The Medical Institute uses a list of STIs that is adapted from chapter headings in a standard STI textbook (usually referred to by the name of its primary editor, KK Holmes).

**This list, which appears below in alphabetical order, has 29 different infections.**

#### Bacterial:

- 1 bacterial vaginosis
- 2 campylobacteriosis
- 3 chancroid
- 4 chlamydia
- 5 Donovanosis
- 6 gonorrhea
- 7 lymphogranuloma venereum
- 8 mycoplasmas, genital
- 9 salmonellosis
- 10 syphilis
- 11 treponematoses, endemic

#### Ectoparasitic:

- 12 lice, pubic
- 13 scabies

#### Fungal:

- 14 candidiasis, vulvovaginal

#### Protozoal:

- 15 amebiasis
- 16 cryptosporidium
- 17 giardiasis

18 trichomoniasis

**Viral:**

- 19 cytomegalovirus
- 20 Epstein Barr virus
- 21 hepatitis A
- 22 hepatitis B
- 23 hepatitis C
- 24 hepatitis D
- 25 herpes simplex virus (HSV-1 & HSV-2)
- 26 human immunodeficiency virus (HIV)
- 27 human papillomavirus (HPV)
- 28 human T-cell lymphotropic virus (HTLV-1)
- 29 molluscum contagiosum

**Reference:**

Holmes KK, Sparling PF, Mardh P, et al. Sexually Transmitted Infections. 3rd ed. New York, NY: McGraw Hill; 1999:vi-vii. (chapter headings). [www.medinstitute.org]

**How common are STIs?**

The United States has an epidemic of sexually transmitted infections (STIs). Over 70 million Americans currently have an STI.[1] 19 million new cases occur each year. Half of these are in people under 25.[2,3]

**What causes STIs?**

STIs can be caused by bacteria (eg, chlamydia, gonorrhea, syphilis), viruses (eg, HIV/AIDS, hepatitis, herpes, HPV), or parasites (trichomoniasis).

Chlamydia is the most common bacterial STI. Human papillomavirus (HPV) infection is the most common viral STI.[1,2]

**How do you get them?**

You get STIs during sexual activity.

This includes vaginal sex, oral sex[4-9] and anal sex.[9-12] A few—HPV and herpes—can even be spread by contact with infected skin. Others, such as HIV and hepatitis, can be spread through needle-sharing.

You can get STIs from someone who has no symptoms.

**What are the symptoms?**

Most people with STIs have no symptoms.

Even without symptoms, they can still pass on the infection. Some STIs cause symptoms such as an abnormal discharge from the penis or vagina, burning sensation when urinating and abdominal pain. Skin changes can also occur; these include rashes, ulcers and warts.

**What are the complications?**

In women, complications from infection include pelvic inflammatory disease (PID), tubal pregnancy, infertility and cervical cancer.

In pregnant women, STIs can lead to miscarriage, stillbirths, preterm delivery and birth defects. In men, HPV infection can cause penile cancer.[13]

Some STIs, such as HIV, can be life-threatening.

**How can you find out if you have one?**

Because most STIs cause no symptoms, they are not detected until complications develop. If you or your partner have had more than one sex partner or have ever injected drugs, talk to your doctor about getting tested.

**Can they be treated?**

Most bacterial STIs can be treated and cured with antibiotics. Treatment does not guarantee that complications have not already occurred. A few viral STIs can be treated and occasionally cured. These are hepatitis C and B.[14,15]

However, other viral STIs can be treated for symptoms, but not cured. These include HIV and herpes. Vaccine research on viral STIs is ongoing. Vaccination for hepatitis B is effective and widely available. An HPV vaccine has recently become available and another is being studied by the FDA.[16] However, these vaccines do not protect against all types of HPV that cause cancer and warts. How long it works is also unknown.[16,17]

**Can they be prevented?**

Yes, STIs can be prevented. Avoid all sexual activity if you are single or be faithful to one uninfected partner for life. This is the only way to avoid the risk of an infection.

There are also a number of ways to reduce the risk of infection. The fewer people you have sex with, the lower your risk of getting STIs. Correct and consistent condom use can also reduce (but not eliminate) your risk of getting most STIs.

**Waiting to have sex until you are in a faithful, lifelong relationship (such as marriage) is the only certain way to avoid being infected sexually.**

**References:**

1. Centers for Disease Control and prevention. Tracking the Hidden Epidemics: Trends In STDs In the United States, 2000. Atlanta GA: Department of Health and Human Services, CDC; 2000. Available from: <http://www.cdc.gov/std/Trends2000/default.htm>. Accessed: 2006 Nov 10.
2. Weinstock H, Berman S, Cates W Jr. Sexually transmitted diseases among American youth: incidence and prevalence estimates, 2000. *Perspect Sex Reprod Health*; 2004;36(1):6-10.
3. Eng TR, Butler WT, eds. *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*. Washington, D.C: National Academy Press; 1997.
4. Edwards S, Carne C. Oral sex and the transmission of non-viral STIs. *Sex Transm Infect*. 1998; 74(2): 95–100.
5. Hawkins DA. Oral sex and HIV transmission. *Sex Transm Infect*. 2001; 77(5):307–8.
6. Morris SR, Klausner JD, Buchbinder SP, et al. Prevalence and incidence of pharyngeal gonorrhea in a longitudinal sample of men who have sex with men: the EXPLORE study. *Clin Infect Dis*. 2006;43(10):1284-1289. Epub 2006 Oct 10.
7. Laskaris G. PL10 Oral manifestations of orogenital bacterial infections. *Oral Dis*. 2006;12(s1):2-3.
8. Jin F, Prestage GP, Mao L, et al. Transmission of herpes simplex virus types 1 and 2 in a prospective cohort of HIV-negative gay men: the health in men study. *J Infect Dis*. 2006;194(5):561-570.
9. Imrie J, Lambert N, Mercer CH, et al. Refocusing health promotion for syphilis prevention: results of a case-control study of men who have sex with men on England's south coast. *Sex Transm Infect*. 2006;82(1):80-83.
10. Jin F, Prestage GP, Mao L, et al. Transmission of herpes simplex virus types 1 and 2 in a prospective cohort of HIV-negative gay men: the health in men study. *J Infect Dis*. 2006;194(5):561-570.