Epidemiology

Noncoital sexual behavior, which includes mutual masturbation, oral sex, and anal sex, is a common expression of human sexuality. The National Survey of Family Growth found that 89% of females and 90% of males aged 25–44 years (1) and 48% of males and 45% of females aged 15–19 years have had oral sex with an opposite-sex partner (2). Data from the National Survey of Family Growth do not indicate any increase in the prevalence of oral sex or anal sex among adolescents and young adults over the past two decades (1–3). Compared with oral or vaginal sex, which is common in more than 90% of males and females by age 25 years, anal sex is less common and often is initiated later. Thirty-six percent of females and 44% of males aged 25–44 years and 10% of male and female adolescents and young adults aged 15–19 years reported anal sex with an opposite-sex partner (2).

Association of Noncoital Activity With Vaginal Sex

Noncoital sexual behavior commonly co-occurs with coital behavior. Data from adolescents show that oral sex and anal sex are much more common among those who have already had vaginal intercourse compared with those who have not (4). Likewise, the prevalence of oral sex among adolescents jumps dramatically in the first 6 months after initiation of vaginal intercourse, which suggests that both often are initiated around the same time and with the same partner. Small percentages of young people (15–24 years of age) report that they engage in only oral sex or vaginal sex; the percentage of men and women who report oral sex before vaginal sex is the same as the percentage of men and women who report vaginal sex before oral sex (1). Initiation of anal sex before initiation of coitus is rare, and the prevalence of anal sex increases slowly after initiation of coitus (4).

Perception of Safety in Noncoital Activity

Adolescents and young adults may engage in noncoital sex in order to avoid pregnancy or sexually transmitted infections (STIs). Although noncoital sexual behavior carries little or no risk of pregnancy, women who engage in noncoital sexual behavior are at risk of acquiring STIs. When engaging in oral and anal sex, most individuals, including adolescents, are unlikely to use barrier protection for a variety of reasons, including a greater perceived safety of noncoital sexual activity compared with vaginal sex. Clinicians should assess patient sexually transmitted infection risk and provide risk reduction counseling accordingly. Clinicians should encourage and counsel patients regarding the correct and consistent use of condoms, barrier protection during oral sex, and cleaning of sex toys. Patients who engage in noncoital sexual activity also commonly have vaginal sex and may require contraceptive counseling.
sex (5–9). In the 2002 National Survey of Family Growth, only 11% of females and 15% of males aged 15–17 years who had ever engaged in oral sex reported using a condom the most recent time that they had engaged in oral sex (6).

**Sexually Transmitted Infection Risk With Noncoital Activity**

Sexually transmitted infections may be transmitted during noncoital sexual activity. These infections can be spread through saliva, blood, vaginal secretions, semen, fecal material, and in some cases by skin-to-skin contact. Preexisting infections, open sores, abrasions, or any compromise of the epithelial tissue can increase the risk of transmission. Sexually transmitted infections that can be transmitted through noncoital sex include human immunodeficiency virus (HIV), human papillomavirus (HPV), herpes simplex virus (HSV), hepatitis virus (types A, B, and C), syphilis, gonorrhea, and chlamydial infection. All of these infections can be transmitted through oral and anal sex. Anal–penile sex appears to be associated with a greater risk of STI transmission when compared with vaginal–penile or oral–genital contact. Enteric infections also have been linked to oral–genital sex or oral–anal sex (10). The role of noncoital sexual activity in the transmission of other nonviral infections, such as vulvovaginal candidiasis, bacterial vaginosis, and trichomoniasis, remains unclear (10).

**Human Immunodeficiency Virus**

The risk of acquiring HIV through sex varies dramatically according to the specific sexual behavior, especially whether it is insertive or receptive. The U.S. Centers for Disease Control and Prevention estimates a 10-fold increase in risk from the safest to the least safe type of behavior (11). Receptive anal sex with a partner who is infected with HIV is the sexual behavior associated with the greatest risk of contracting HIV. The estimated probability of acquiring HIV from receptive anal intercourse without a condom is 50 per 10,000 exposures versus 10 per 10,000 exposures with receptive penile–vaginal intercourse (12, 13). Partners with higher viral loads are more likely to transmit HIV (11) and treatment with antiretroviral therapies greatly lowers transmission risk during noncoital and coital intercourse (14). Although saliva appears to have components that inactivate HIV, there are case reports of HIV acquisition in men who engaged only in oral sex with other men (10).

**Herpes Simplex Virus**

Herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2) usually enter mucosal or epithelial surfaces damaged by abrasions or trauma (15). Herpes infection is commonly transmitted through kissing and oral sex, vaginal sex, or anal sex. Historically, HSV-1 was associated with oral lesions, whereas HSV-2 was associated with genital lesions. However, HSV-1 and HSV-2 are capable of causing first episodes of genital herpes. Partners with a history of fever blisters (HSV-1 lesions) should recognize a risk of transmitting an HSV-1 infection to the genitals with oral–genital contact (16, 17).

**Human Papillomavirus**

Although the most efficient means of HPV transmission appear to be penile–vaginal sex or penile–anal sex, oral transmission can occur as well; oral sex is associated with oropharyngeal types of cancer (18). Skin-to-skin contact during sexual activity is associated with transmission of HPV-associated condylomas. Human papillomavirus in these cases likely requires some type of abrasion or inflammation for viral transmission. The digital spread of HPV is theoretically possible because genital HPV DNA has been detected on hands and fingernails (19, 20).

**Hepatitis Viruses**

Hepatitis B virus can be found in semen, saliva, and feces and commonly is spread through sexual contact. Hepatitis A is transmitted from fecal contamination of the oral cavity, thus explaining the increased incidence of infection in men who have sex with men who engage in oral–anal contact (21, 22). Sexual transmission of hepatitis C is uncommon but has been associated with co-infection of hepatitis B and HIV and with oral–genital contact (10).

**Nonviral Sexually Transmitted Infections**

During 1998–2002, a substantial number of primary and secondary cases of syphilis reported in Chicago were attributable to oral sex. Eighty-six of the 627 individuals with syphilis (13.7%) reported oral sex as the only sexual exposure that could account for their infection (23). Syphilis can be easily transmitted through unprotected anal intercourse (24).

Gonorrhea is associated with noncoital behavior, including anal and oropharyngeal contacts (5, 10). Urethral, cervical, anal, and oral infections are most often asymptomatic in women, which makes diagnosis more challenging (25).

Chlamydia also has been isolated from the anus and oropharynx in symptomatic and asymptomatic individuals (10, 26). *Haemophilus ducreyi* (chancroid), shigella, salmonella, and other enteric infections have been associated with anal sex, but also have been linked with oral–genital sex or oral–anal sex in a few case reports (10).

**Screening for Sexually Transmitted Infections**

There are no guidelines for STI screening in women who report anal and oral sex and who are asymptomatic (21). Currently, selected laboratory testing for oral and anal STIs should be based on clinical symptoms and behavioral risks. Refer to the American College of Obstetricians...
Most men and women who have reported same-sex encounters have been sexually active with the opposite sex at some point in their lives. It is incorrect to assume that lesbians are not at risk of STIs because these infections can be transmitted by sexual activity exclusively among lesbians. Therefore, lesbians and bisexual women should be screened for STIs based on the same risk factors as other women (31). Clinicians should be aware that adolescents who have had same-sex partners may self-report as heterosexual (29). A detailed sexual history may help to better clarify risk factors (See Box 1).

### Same-Sex Couples

An estimated 5.2% of males and 12.5% of females aged 15–44 years report ever having engaged in some form of same-sex sexual behavior (2). Adolescents with sexual partners of both sexes are more likely to have an earlier sexual debut, have more sexual partners, and report substance abuse, and are at higher risk of STI acquisition and pregnancy compared with their exclusively heterosexual counterparts (29, 30).

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**Box 1. Sexual History Questions to Ask Patients**

The clinician may adapt these questions as needed for specific populations, including adolescents.

1. **Sexual Partners**
   - When you have sex, do you have sex with men or women or both?
   - Have you ever had sex with men?
   - Have you ever had sex with women?
     - If a patient answers “both,” repeat the next two questions for male and female sex partners.
     - In recent months, how many male or female sex partners have you had? (Explore based on number and sex of partners. It is often helpful to establish the dates of starting and stopping with each partner.)
     - Overall, how many male or female sex partners have you had?

2. **Sexual Practices**
   - Because it is important to your health, I am going to ask you the kind of sex you have had over the past 12 months. This will help me to better understand if you are at risk of sexually transmitted infections (STIs).
   - What kind of sexual contact do you have or have you had: genital (penis in the vagina); anal (penis in the anus); oral (mouth on penis, vagina, or anus)?

3. **Protection From Sexually Transmitted Infections**
   - Do you and your partner(s) use any protection against pregnancy, STIs, or both? If so, what kind of protection do you use? If not, could you tell me the reason? Is your partner supportive of your using birth control? Are you comfortable asking your partner to use condoms?
   - How often do you use this protection? If “sometimes,” in what situations or with whom do you use protection?
   - Do you have any other questions, or are there other forms of protection from STIs that you would like to discuss today?

4. **History of Sexually Transmitted Infections**
   - Have you ever had an STI? When? How were you treated?
   - Have you had any recurring symptoms or diagnoses?
   - Are you currently having any symptoms that you think might be caused by an STI?
   - Have you ever been tested for human immunodeficiency virus (HIV) or other STIs? Would you like to be tested?
   - Has your current partner or have any former partners ever had an STI or been treated for an STI? Were you tested for the same STI(s)?
   - If yes, when were you tested? What was the diagnosis? How was it treated?

Abbreviations: HIV, human immunodeficiency virus; STI, sexually transmitted infection.


†Ideally, opt-out HIV screening should be performed, in which the patient is notified that HIV testing will be performed as a routine part of gynecologic care, unless the patient declines testing. See Routine human immunodeficiency virus screening. ACOG Committee Opinion No. 411. American College of Obstetricians and Gynecologists. Obstet Gynecol 2008;112:401–3.

Sex Toys

Sex toys, such as dildos and vibrators, are used commonly in partnered sexual activity as an alternative to vaginal or anal intercourse or as an enhancement to the sexual experience (32, 33). Bacterial vaginosis in women who have sex with women is associated with the failure to always clean an insertive sex toy before use (34). Routine cleaning of sex toys and use of male condoms on sex toys are uncommon practices (35). Sharing sex toys should be discouraged. If a sex toy is shared, it should be covered by a new condom for each use and cleaned between each use.

Patient Counseling

Clinicians should be aware that noncoital sexual behavior commonly co-occurs with coital behavior. Because people define sexuality in a variety of ways and may not report noncoital sexual activity, it is important that clinicians ask direct questions regarding sexual activity, including whether the patient has sex with men, women, or both; the number of sexual partners and her partners’ sexual behavior; and frequency of oral and anal sex and mutual masturbation. See Box 1 for examples of questions regarding types of sexual behavior. Clinicians may wish to adapt these questions for select populations, especially adolescents. Clinicians also should consider the patient’s history of STIs and patterns of barrier method use with each partner, as well as the local prevalence of STIs (available from local health departments).

Counseling about noncoital sexual activity should address the risk of STIs during noncoital sexual activity and encourage STI prevention efforts. Use of latex or synthetic condoms during anal–genital intercourse to reduce the risk of STIs should be encouraged (21, 36). Use of barrier protection during oral sex also should be encouraged. Latex sheets have been approved by the U.S. Food and Drug Administration for use to reduce the risk of transmission of STIs during oral sex; however, no effectiveness data are available. Dental dams (or oral dams), household plastic wrap, and condoms adapted to form a barrier sheet are other options for barrier protection for a variety of reasons, including a greater perceived safety of noncoital sexual activity compared with vaginal sex. Clinicians should encourage and counsel patients in the correct and consistent use of condoms, barrier protection during oral sex, and cleaning of sex toys.

• Patients engaging in noncoital sexual activity also commonly have vaginal sex and may require contraceptive counseling.

References


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