Learning Objectives

• Understand how most sexually transmitted diseases are spread.
• Differentiate between STDs caused by different pathogens.

What does "safe sex" truly mean?
"Safe Sex." The thought of a sexually transmitted infection should be enough to make you think about and believe in this saying.

Sexually Transmitted Diseases

A sexually transmitted disease (STD) is an illness caused by a pathogen that is transmitted from one person to another mainly through sexual contact. Worldwide, as many as one million people a day become infected with STDs. The majority of these infections occur in people under the age of 25.
Common STDs include chlamydia, gonorrhea, syphilis, human immunodeficiency virus (HIV), genital herpes, hepatitis B, and genital warts. To be considered a STD, a disease must have only a small chance of spreading naturally in ways other than sexual contact. Many diseases that can spread through sexual contact are spread more commonly by other means. These diseases are not considered STDs.

**Pathogens that Cause STDs**

STDs may be caused by several different types of pathogens including protozoa, insects, bacteria, and viruses.

- The protozoa *Trichomonas vaginalis* causes an STD called trichomoniasis. This is an infection of the vagina in females and the urethra in males.
- Pubic lice, like the one in Figure 1.1, are insect parasites that can be transmitted sexually. They suck the blood of their host and irritate the skin in the pubic area.

![A magnified pubic louse (*Phthirius pubis*)](image)

Although these STDs are common, the majority of STDs are caused by bacteria or viruses. Several bacterial and viral STDs are described in the next two concepts. It is important to note that most bacterial STDs can be cured with antibiotics, whereas viral STDs do not have cures, although some can be prevented with vaccines.

**How STDs Spread**

Most of the pathogens that cause STDs enter the body through mucous membranes of the reproductive organs. All sexual behaviors that involve contact between mucous membranes put a person at risk for infection. This includes vaginal, anal, and oral sexual behaviors.

Many STDs can also be transmitted through body fluids such as blood, semen, and breast milk. For example, in the past, HIV and hepatitis B were transmitted through blood transfusions. This no longer occurs because donated blood is now screened for both pathogens. Use of shared injection or tattoo needles is another way in which blood and pathogens can be transferred from one person to another. A number of STDs can also be transmitted from a mother to her baby through her blood during childbirth or through her breast milk after birth.

STDs are much more common in young adults and teens than they are in older people. One reason is that young people are more likely to take risks and to think “It can’t happen to me.” They also may not know how STDs are spread. In addition, younger people may be more sexually active than older people.

**Preventing STDs**

The only completely effective way to prevent infection with STDs is to avoid sexual activity and other known risk behaviors such as using contaminated needles. Using condoms can decrease the risk of contracting STDs during some types of sexual activity. However, using condoms is not a foolproof method. Pathogens may be present on areas of the body not covered by condoms. Condoms can also break or be used incorrectly.
Summary

- Common STDs include chlamydia, gonorrhea, syphilis, human immunodeficiency virus (HIV), genital herpes, hepatitis B, and genital warts.
- To be considered an STD, a disease must have only a small chance of spreading naturally in ways other than sexual contact.
- Most of the pathogens that cause STDs enter the body through mucous membranes of the reproductive organs.
- Many STDs can also be transmitted through body fluids such as blood, semen, and breast milk.
- The only completely effective way to prevent infection with STDs is to avoid sexual activity and other known risk behaviors such as using contaminated needles.

Review

1. What diseases are considered STDs?
2. What kinds of pathogens cause the majority of STDs?
3. How are most STDs spread?

References